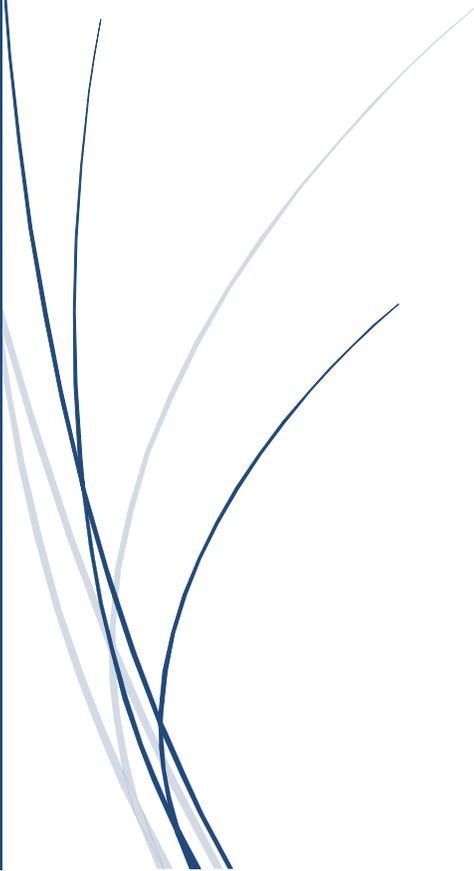




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Learning, Landscape and Opportunities for IDRC Climate Programming



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Acronyms

ACCFP	African Climate Change Fellowship Program
ACCRA	Advancing Capacity for Climate Resilience in Africa
AFS	Agriculture and Food Security
AGNES	African Group of Negotiators-Expert Support
ASSAR	Adaptation at Scale in Semi-Arid Regions
BRACED	Building Resilience and Adaptation to Climate Extremes and Disasters
BSR	Business for Social Responsibility
CARIAA	Collaborative Adaptation Research Initiative in Africa and Asia
CBA	Community-Based Adaptation to climate change (conference)
CCAA	Climate Change Adaptation in Africa
CCP	(IDRC) Climate Change Program
CCW	Climate Change and Water
CDKN	Climate and Development Knowledge Network
COP	Conference of the Parties (to the UNFCCC)
CSO	Civil Society Organization
DECCMA	Deltas, vulnerability & Climate Change: Migration & Adaptation
DFID	Department for International Development (UK)
GAC	Global Affairs Canada
FIAP	Feminist International Assistance Policy
FFLA	Fundación Futuro Latinoamericano
ICLEI	International Council for Local Environmental Initiatives
IPCC	Intergovernmental Panel on Climate Change
HI-AWARE	Himalayan Adaptation, Water and Resilience
LAC	Latin American and the Caribbean
LDC	Least Developed Country
M&E	Monitoring & Evaluation
MENA	Middle East and North Africa

NAP	National Adaptation Plan
NAPA	National Adaptation Program of Action
ND GAIN	Notre Dame Global Adaptation Initiative
NDC	Nationally Determined Contribution
NMHS	National Meteorological and Hydrological Services
PCR	Project Completion Report
PFAN	Private Financing Advisory Network
PI	Principal investigator
PRISE	Pathways to Resilience in Semi-Arid Economies
RPE	Rural Poverty and Environment
RQ+	Research Quality Plus
SANDEE	South Asian Network for Development and Environmental Economics
SDG	Sustainable Development Goal
TTI	Think Tank Initiative
UNFCCC	United Nations Framework Convention on Climate Change
WICI	Women in Cities International
UPE	Urban Poverty and Environment

Executive Summary

This report examines over a decade of IDRC experience in supporting action to address the impacts of climate change in developing countries, with the purpose of contributing to the IDRC Climate Change Program’s strategy development for the period 2020-2030. This analysis has been informed by both documentation review and 42 semi-structured interviews with IDRC program staff, project grantees, and global experts in the field of climate change. Reflecting on lessons learned from past and ongoing climate change projects, as well as wider trends in climate change research and policy, this report helps to identify strategic opportunities and potential future directions for the Centre. We highlight directions that have a high potential for impact, within the context of the size and type of investments made by IDRC.

The paper is divided into four main sections. The first provides a historical background of IDRC’s programming, as well as an overview of the evolution of climate change programming in developing countries. The second section provides a detailed thematic analysis of past projects, presenting lessons learned from six themes of IDRC’s climate work: climate change & cities; climate finance; climate change hotspots; climate science & services; leadership & capacity development; and gender & climate. It also summarizes cross-cutting lessons from across the portfolio. This is supported with the third section, which situates IDRC’s work in the global context and suggests areas that represent a potential ‘niche’ for the Climate Change Program. The fourth and final section of the report outlines a range of opportunities that the Program might explore for its 2020-2030 strategic period.

Key messages were identified from the six thematic areas reviewed (Section 2):

Theme	Key Messages
Climate change & cities	<ul style="list-style-type: none"> - Climate and cities is expected to be a theme of strong global interest in the coming decade. - There is a wealth of past IDRC experience from investing in urban adaptation, and the need for continued investment into this space is widely recognized. - Evaluations of IDRC work on cities called for increased emphasis on partnership, co-production, and cross-program learning. These priorities were echoed by thematic experts. - IDRC can play an important role in supporting action-oriented research in partnership with emerging cities of the South, by investment into local institutional leadership through regional universities and strategically-placed NGOs.
Climate finance	<ul style="list-style-type: none"> - IDRC has played a key role in building capacity in the Global South for analyzing environmental issues from an economic perspective. - Climate finance will remain a key area of concern in this field and there are significant knowledge gaps that IDRC can contribute to. - Field building work that combined a range of individual and network support enabled the establishment of fields of study in disciplines where capacity was previously low. - The new skills required relate to climate finance - from obtaining and using finance to accounting and reporting on targets - in the Global South need to be strengthened. - Past programming provides insight on effective modalities for field building and capacity strengthening. - There are significant challenges working with the private sector, and a range of opinions regarding IDRC’s role in engaging it.
Climate change hotspots	<ul style="list-style-type: none"> - Hotspots provided an important organizing principle in recent years, both in terms of investment and evidence generation. - Working beyond national boundaries enabled new partnerships, research questions and methodologies to be used. - The large-scale collaborative approach undertaken using the hotspot approach was time and resource intensive, yet produced significant and novel outcomes.

	<ul style="list-style-type: none"> - A number of the achievements related to the hotspot work were not specific to hotspots <i>per se</i>, but other design and support components that operated in tandem.
Climate science & services	<ul style="list-style-type: none"> - While climate science and services have not been a central focus of Climate Change Program investments, IDRC has made important contributions to capacity strengthening, use of scientific evidence in decision-making, and strategic knowledge production in climate hotspots of the Global South. - IDRC's focus on use-oriented research aligns strategically with the priorities identified for this theme by external experts, presenting an opportunity for impactful work moving forward. - Future opportunities lie in strengthening the science-policy interface with support to emerging climate scientists to work in decision-spaces, and support to cities and countries for integrating climate information into development planning for risk reduction. - The tendency to work with a recurrent set of researchers, (capital) cities, and countries creates a need to identify and focus on underserved actors and locations.
Leadership & capacity development	<ul style="list-style-type: none"> - IDRC's investments are seen to be making headway towards building a critical mass of climate leaders in government and academia in the Global South. - Further reflection on the distinctions between leadership development and capacity building, and how each fits in future strategy on climate change is important. - Creating a progression of leadership development across different levels may aid in building local capacity in the long term. - Other than traditional approaches to 'leader' development, exploring non-traditional modalities of support in 'leadership' development is recommended.
Gender & climate	<ul style="list-style-type: none"> - The integration of gender in IDRC's climate change work has yielded several notable and positive results, but to date has been unevenly applied across the Program. - IDRC has the opportunity to build capacities in the field of gender and climate change, both through the funded projects and for its own staff. This can be achieved through different mechanisms including dedicated capacity funds, and a cross-cutting working group on gender and social inclusion. - There are strong international signals that work in this area is becoming increasingly important. IDRC-funded research can strengthen methodologies and application of intersectional research including but not limited to the intersection of gender and climate. - Moving forward, the IDRC can help to build the evidence base of why integration of gender & social difference into climate change efforts is crucial for the achievement of climate and developmental goals, with a focus on scaling and influencing policy and practice.

Looking across these six themes, we highlight four cross-cutting areas of learning that emerge from this analysis:

- **Continued emphasis on use and decision-oriented research**

The global adaptation research agenda has moved towards a focus on enabling and understanding the implementation of climate actions. This is being driven by the increased urgency for action as set out in the IPCC's 1.5C report and international commitments enshrined in the Paris Agreement and the UN SDGs. IDRC's commitment to supporting use-oriented research provides a natural alignment with these trends, giving the Centre an important strategic opportunity for supporting impactful research on climate change in the coming decade.

- **Increased focus on integrative or systems-level research**

The shift in focus from describing the nature of climate impacts toward putting responses into practice means structuring research in line with the complex linkages found in real-world social and governance structures rather than neat disciplinary categories. One of the most commonly-noted means of meeting this challenge is through the use of innovative partnerships.

- **Opportunities available through shifting programming modalities**

The profile of future grantees, the way that they are selected, and the partnership configurations in which they work all have ramifications for the program outcomes that might be achievable. Respondents stressed the value of investing in strategically-placed research partners that have established track records of working in the decision contexts they aim to inform. Supporting locally-led transdisciplinary partnerships with knowledge brokering and translation functions across scales and contexts can address concerns of relevance, capacity development and higher-order impact.

- **A cross-cutting focus on inequality and social justice in adaptation**

Continued emphasis on equity and social justice across all of the areas of programming was seen as important, particularly in addressing the limited evidence on moving beyond the rhetoric of social justice to putting socially-just adaptation into practice. The SDGs' call for leaving no one behind brings these questions of equity and justice to the forefront of dialogue, and they are seen as a natural fit with IDRC's values and priorities.

Looking at the wider landscape of action (Section 4), this analysis yielded key issues and scales of focus, as well as recommended modalities for future research.

Issues and scales of focus:

- **Sustaining and operationalizing the international climate regime:** We currently face the threat of a retreat from the commitments of the Paris Agreement, and growing urgency to put the agreement into action in order to achieve the SDGs.
- **Defining low-carbon, climate resilient development pathways for cities and nations:** Building on the international urgency of taking forward global climate and development ambitions in tandem, there is a need to support both cities and countries in defining, implementing and monitoring strategies for low-carbon, climate resilient development.
- **Leveraging finance for action:** A third priority is scaling up financing for climate action from international, domestic, and private sources with attention to how this finance serves the most marginalized. There remains a lack of evidence on the benefits and opportunities of investment into adaptation, and the relative risks of investment across contexts.
- **Resource scarcity:** The impacts of climate change and development on land, food and water is a clear example of integrative research challenges. To date decision-makers have failed to take meaningful steps toward translating the evidence on climate change into forward-looking policies in these areas. IDRC's centre-wide experience in this area provides an opportunity for impact.
- **Ensuring responses are equitable and socially just:** The 'leave no one behind' objective of the SDGs and the rise of feminist international assistance policies such as Canada's call for a better understanding of the intersectional nature of inequalities and vulnerabilities and a prioritization of investment toward the social groups and regions in greatest need. This is an area where limited research is available to-date.
- **Targeting the most vulnerable:** There is a mismatch between investments in adaptation and levels of national vulnerability, where investments are disproportionately spent in lower and lower-middle income countries. A better bridging of humanitarian and climate communities and strategies is seen

as important to addressing this disparity and avoiding the risk of highly vulnerable countries falling even further behind.

- **Urban adaptation to climate change:** There is a need for continued support to emerging cities, which are critical sources of action and innovation for climate adaptation and mitigation. Supporting the momentum of existing networks already working within this space and building bridges between research, civil society and governance communities at city-scale are important areas of action.

Modalities for equitable and impactful action:

- **Adaptation action as a collaborative enterprise:** The need to catalyze networks and partnerships, and support knowledge co-production and collective learning processes were among the most consistently cited priorities. This includes actively engaging partners in decision-spaces.
- **Supporting new capacities and leadership in the Global South:** Capacity development remains a perennial challenge, though the nature of the capacity being called for has evolved. Emphasis now rests on capacity to support decision-making, knowledge brokering, and on building capacity at the scale of organizations and networks, not just individuals. Supporting organizational leadership roles for Southern institutions to lead multi-partner initiatives is also seen to be a priority.

With these future priorities identified, we examined what were seen to be IDRC’s niche areas that could support the above. We highlight three areas of IDRC ‘niche’ and two suggestions of what the Climate Change Program might avoid working on.

Niche areas for IDRC climate change programming

Mission & Vision: Building on past strengths and core values in programming.

Respondents signaled that IDRC’s work is most impactful when focused on the Centre’s core values and areas of focus, namely supporting Southern capacity to address local development challenges with emphasis on vulnerability, poverty and inequality. For the Climate Change Program this means ensuring that new programs retain their strong focus on the dynamic interface of climate and development.

Connection: Leveraging IDRC’s networks and ‘brand’ to engage with diverse partners in the South.

IDRC is seen as an ‘honest broker’ able to convene conversations and partnerships to bring evidence, policy, and practice into dialogue in challenging contexts. This kind of collaboration across languages and across natural and social sciences, including with partners beyond the academy, is hard to fund and to implement. Continuing to leverage the Centre’s in-house know-how to broker partnerships, help to build trust, and sustain dialogue, represents a key opportunity.

Action in decision spaces: Serving as a partner and convener for engagement with national/sub-national governments.

IDRC is strategically placed for working with national and sub-national government representatives through capacity strengthening, evidence-building on how to implement and monitor resilience building activities, and experimenting with different models of policy implementation. IDRC can support experimentation and provide a knowledge exchange and

learning component to these local experiments to ensure experiences are translated upward as insights and lessons learned.

Areas for IDRC climate change programming to avoid

Two areas to avoid for IDRC are the commissioning of more ‘upstream’ academic and science-based research, and efforts at mobilizing international and corporate finance. IDRC might instead look to establish partnerships to work on these issues.

The final section of the report offers seven opportunity areas based on the previous sections. Although these opportunities build on IDRC’s established practice on climate change, they propose areas where IDRC can make novel and important headway.

IDRC opportunity areas for climate change programming

Clarify IDRC’s climate ‘offer’ and mandate: This will provide an organizing structure and convening platform, and will support decision making on coherent investments into future programming.

Adopt a “risk portfolio” approach to program design: This can help the Climate Change Program make strategic decisions around where to assume greater risks while ensuring that a good portion of the program’s investment remains in important but tested actions.

Deepen and expand program engagement in evidence generation to support decision making: Focus on ‘right-scale’ partnerships between in-country research partners with a proven engagement capacity, and partners from decision spaces committed to engaging in co-production. Support synthesis across projects and knowledge brokering at higher scales through regional/international partners and IDRC Program Officers.

Build key capacities for more resilient systems by undertaking a strategic reorientation of capacity building toward important emerging individual and organizational challenges.

Invest in IDRC’s role as a broker, convenor, and enabler of learning from practice: IDRC is uniquely placed to convene networks, decision-makers, and partnerships to learn from the shift toward the implementation of adaptation policy.

Scale up work in high-vulnerability low-engagement regions lest these people and countries get left behind. In contexts where climate action is not the priority, consider collaborating where climate change is intersecting with higher-priority development and humanitarian concerns such as conflict, disaster risk, or food/water security.

Exploration and experimentation on future problems and transformation/transformational research: Retain some investment in the problems of the future, and research that may change the way we think and act. This is a ‘high risk, potential high return’ type of investment, wherein a high rate of ‘failure’ is expected.

1. Introduction

This report examines over a decade of IDRC experience in supporting action to address the impacts of climate change in developing countries. In support of the IDRC Climate Change Program's strategy development for the period 2020-2030, it looks at wider trends in climate change research and policy to identify strategic opportunities and potential future directions for the Centre. We highlight directions that have a high potential for impact, within the context of the size of type of investments made by IDRC.

This report does not represent an evaluation of all past programming; however, it draws upon available documentation and insights from IDRC staff and grantees, as well as external experts, to identify lessons from past investments. The second section of this report provides a detailed thematic analysis of past portfolios. This is supported with the third section, which situates IDRC's work in the global context. Opportunities are outlined in the final, the fourth, section of this report.

1.1 Terms of reference

This report aims to support the Climate Change Program in determining its direction for the coming decade, and specifically in presenting these ideas to IDRC's Board of Governors and management. While this report draws upon the experiences and lessons of IDRC since 2006, the focus is on the 2015-2018 period. This emphasis acknowledges that past lessons have influenced programming over time, and that the majority of unique insights will be drawn from the most recent investments.

The report is guided by three areas of inquiry set out in the Terms of Reference:

1. **Learning:** Identifying lessons learned from IDRC's past programming regarding understanding or enabling climate action in developing countries, and commenting on the significance of these lessons.
2. **Landscape:** Situating IDRC's contribution within the evolving global context of actors and needs for climate action since 2015. Commenting on emerging needs and opportunities, and key fora or mechanisms where investments in knowledge and research can contribute to climate action.
3. **Opportunities for IDRC:** Identifying salient issues on the global agenda for climate and development that represent opportunities for future programming, whether building on past investments or rooted in issues not addressed by IDRC to date.

The results of the analysis of the learning and landscapes sections both contributed to the insights presented in Section 4 on Opportunities, as set out in Figure 1 below.

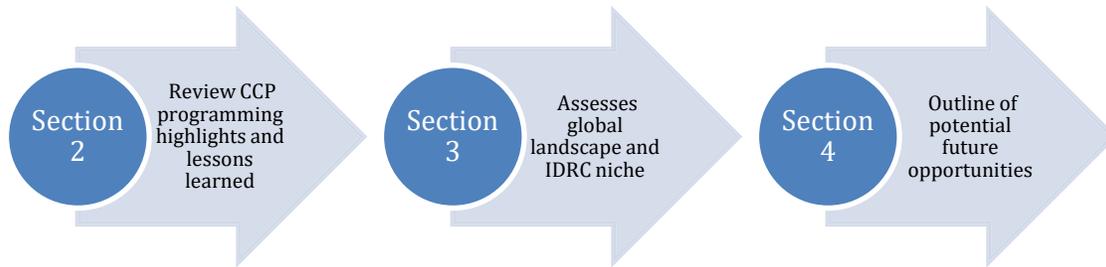


Figure 1: Areas of Inquiry and Report Sections

The report is informed by a documentation review (project reporting and publications) and limited set of individual interviews with IDRC staff, former grantees, thematic experts from around the world, and resource persons with broad views of the climate change adaptation landscape. The authors began data collection in December (2018) and presented an initial draft to IDRC in January (2019). A final report was submitted to IDRC in February (2019). The authors have worked closely with IDRC, and wish to acknowledge the support provided by IDRC management and staff. This collaboration has enabled the production of this report within a short period of time.

1.2 Scope and limitations of the study

We note that the rapid nature of this review and analysis, set out in the Terms of Reference, limited the data collection and analysis that could be undertaken. Our analysis relies primarily upon a time-constrained review of existing documentation and a limited set of interviews (42 in total). In order to draw more robust conclusions based on the past lessons learned and to understand the contributions of investments made by IDRC, a more comprehensive evaluation would be required. We believe that systematic reviews of both peer reviewed and ‘grey’ literature are worthwhile endeavors that we encourage IDRC to undertake in order to strengthen the foundation of information available in determining the directions of the investments of the Climate Change Program for the coming decade. Upon determining a set of potential directions, these additional studies might be narrower in scope and provide more specific guidance.

One of the potential challenges of drawing extensively upon existing documentation and interviews with IDRC staff, is that the report may reiterate current thinking of the Climate

Change Program. In order to broaden the scope of our inquiry, we have engaged in two different processes:

- We have broadened the review to include a wider analysis of relevant academic and grey literature, as outlined in Section 3.
- We have interviewed thematic and subject matter experts outside of IDRC, including respondents from relevant funding agencies, leaders of non-governmental organizations, academics as well as thought-leaders in the Global South. We have also interviewed current and former IDRC grantees for their perspectives.

Finally, we emphasize that this review was not intended to be evaluative in nature, neither of the quality nor the impact of IDRC's programming. It is also not intended to evaluate where IDRC might hold a 'competitive advantage' over specific funders of adaptation research. These points are best served by dedicated independent evaluations and scoping studies of international investments on adaptation respectively.

1.3 Background: Historical overview of IDRC programming

IDRC was one of the first bilateral funding agencies to fund research programs with a specific focus on climate change adaptation, and particularly research on understanding and enabling appropriate responses to support vulnerable people in the Global South. Investments on climate change adaptation built upon past work on natural resource management and broader concerns related to the environment, and focus areas have evolved over time (see Figure 2 below).

The emergence of climate-oriented programming began with the Urban Poverty and Environment (UPE; 2005-2010) and Rural Poverty and Environment (RPE; 2005-2010) portfolios. These initiatives had a technical focus and technically-focused outputs, wherein infrastructure was central. What followed RPE was a jointly-funded program with the UK's Department for International Development (DFID) featuring an explicit focus on climate change adaptation: Climate Change Adaptation in Africa (CCAA; 2006-2012). The 41 projects funded through CCAA primarily used Participatory Action Research as a research approach, were largely Southern-led, and had capacity building as a central focus, including through the support IDRC provided in working alongside grantees. The portfolio had a local focus and largely had impact at that scale.

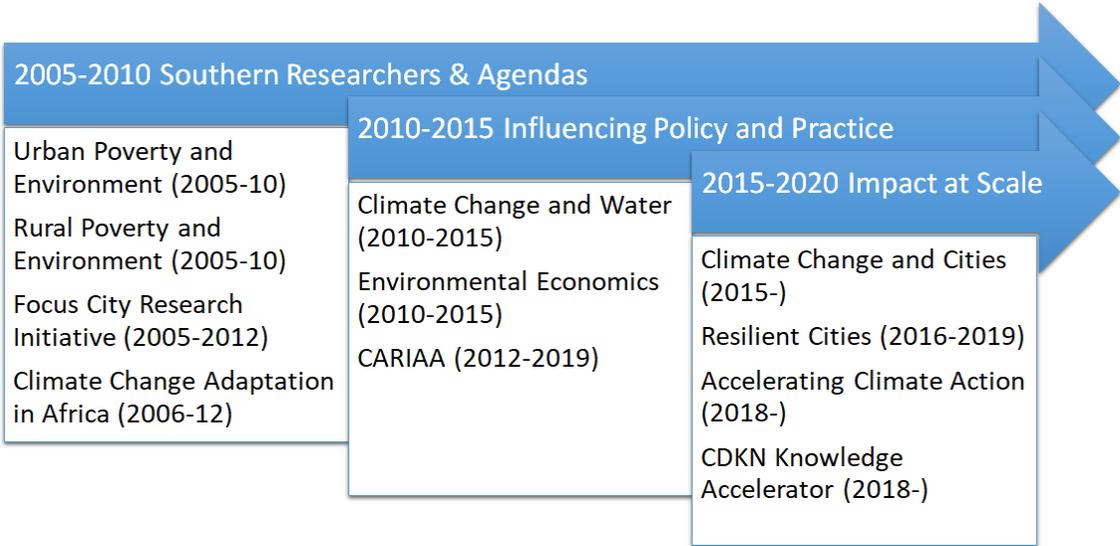


Figure 2: Climate Change Programming in IDRC, 2005-2020

The next set of projects were funded under the Climate Change and Water (CCW; 2010-2015) portfolio. These investments had a focus on improving service delivery and water resource management, where strengthening policy and practice were central aims. During the same period, IDRC launched its second joint climate change initiative with DFID, the Collaborative Adaptation Research Initiative in Africa and Asia (CARIIA; 2012-2019). CARIIA adopted a ‘hotspot’ approach – focusing on regions where high vulnerability to climate change coincides with large populations – and funded four multi-partner consortia working in three climate change hotspots. Beginning in 2015, IDRC staff and activities under the CCW and CARIIA programs were brought together under the umbrella ‘Climate Change Program’ which currently serves to group together all climate-specific programming within IDRC.

The changes of portfolio foci since 2005 reflect broader shifts at IDRC and in the international climate research agenda. During the 2005-2010 period, a central priority of IDRC was to support Southern researchers and Southern-led agendas. This aligns with the investments that fell within the UPE, RPE and CCAA portfolios. During the next five-year period, from 2010-2015, IDRC took an increasing interest in influencing policy and practice, which is reflective of investments under CCW as well as parts of CARIIA. During the 2015-2020 period, IDRC prioritized having impact at scale. This latter shift aligns with the methodological approaches and mechanisms undertaken by CARIIA. Whereas in UPE, RPE, parts of CCW, and CCAA, the focus was on local-level research, CARIIA sought to foster international collaboration, funded research covering cross-scalar research at a much larger scale (often beyond the nation-state), and actively engaged in international agendas.

While IDRC’s leadership plays an important role in providing signals to the program areas about which direction investments ought to take, the leadership is also influenced by the collective experience of investments. We have summarized the program-specific and IDRC-wide changes

as we believe it provides useful context regarding past strategic directions, and thus insight into the potential directions for future strategic directions.

1.4 Background: The evolving nature of research on climate change in developing country contexts

As noted above, we observe parallels between the evolutions in IDRC’s programming focus on climate change and the wider research and policy agenda on climate adaptation and development. Building on Klein et al. (2017), Figure 3 describes four generations in the evolution of adaptation research from the 1990s to present. These evolutions are cumulative rather than sequential (i.e. we continue to explore and refine questions from previous generations), and have been directly informed by trends in the international climate policy arena as we describe below.



Figure 3: Four Generations of Adaptation Research (Adaptation Watch, 2017)

Research in this field started with adaptation as a relatively marginal issue within the international research and policy space, where the focus was on *describing* the impacts of climate change in local contexts in order to identify adaptation options. The second generation coincided with the third assessment report of the Intergovernmental Panel on Climate Change (IPCC) in 2001, and the launch of National Adaptation Programmes of Action (NAPAs) in the context of the UNFCCC. It sought to establish the *normative dimensions* of successful adaptation and adaptive capacities. The third generation, which coincided with the approval of the UNFCCC’s Cancun Adaptation Framework and the Green Climate Fund (2010), brought about a focus on the development of *financing and policy instruments* for adaptation. Finally, the fourth and current generation of research brings additional focus onto the implementation of climate adaptation at a global scale. This focus is driven by the Paris Agreement’s 2015 adoption of Nationally Determined Contributions (NDCs), which bring together countries’ adaptation and mitigation ambitions, as well as the “global goal on Adaptation” that seeks to strengthen synergies with the UN’s Sustainable Development Goals (SDGs) and the Sendai Agreement on Disaster Risk Reduction (Klein et al, 2017; Pauw et al, 2018). This focus on translating research

into ‘useable’ policy prescriptions has prompted an increased focus on knowledge co-production between research, policy and practice (Harvey et al. 2019). Co-production can be understood as “the collaborative process of bringing a plurality of knowledge sources and types together to address a defined problem and build an integrated or systems-oriented understanding of that problem” (Armitage et al. 2011: 996). It is worth noting how IDRC investment into climate change research has evolved in close alignment with these trends over a similar timespan, including the current interest in supporting research that integrates climate adaptation and mitigation, and sustainable development agendas at the level of policy and practice.

2. Lessons learned from key themes of IDRC's climate work

IDRC's Climate Change Program identified six thematic areas of interest for drawing out lessons learned for this report. The selected thematic areas were: (1) Climate change and cities, (2) Climate finance, (3) Climate change hotspots, (4) Climate sciences and services, (5) Leadership and capacity development, and (6) Gender and climate. Each of these thematic areas are covered in sub-sections that follow. The objective of these brief overviews is to identify lessons learned and to highlight the significance of the thematic area of work and respective lessons. A last, seventh sub-section presents cross-cutting lessons and challenges. These sections are intentionally brief. Many of the thematic areas of work have already been published as summaries, evaluations and syntheses. The goal is not to replicate those efforts, but to draw out lessons that provide insight for the programmatic level and for informing the direction of future investments.

2.1 Climate change and cities

Key messages:

- 'Climate and cities' is expected to be a theme of strong global interest in the coming decade.
- There is a wealth of past IDRC experience from investing in urban adaptation, and the need for continued investment into this space is widely recognized.
- Evaluations of IDRC work on cities called for increased emphasis on partnership, co-production, and cross-program learning. These priorities were echoed by thematic experts.
- IDRC can play an important role in supporting action-oriented research in partnership with emerging cities of the South, through investment into local institutional leadership, regional universities and strategically-placed NGOs.

Context

Research on the impacts of climate change on cities and urban areas of the Global South has been a longstanding area of focus for IDRC. Between 2005 and 2018, IDRC supported more than 40 research projects in 42 countries with a focus on urban and peri-urban contexts, with a total investment of at least CA\$34.5 million (IDRC, 2018c.; Espinoza & Pacha, 2018). Research on climate change and cities has spanned nearly all of IDRC's programming initiatives on climate change, including the Focus City Research Initiative (2005-2012) and the current Climate Change Program running to 2020.

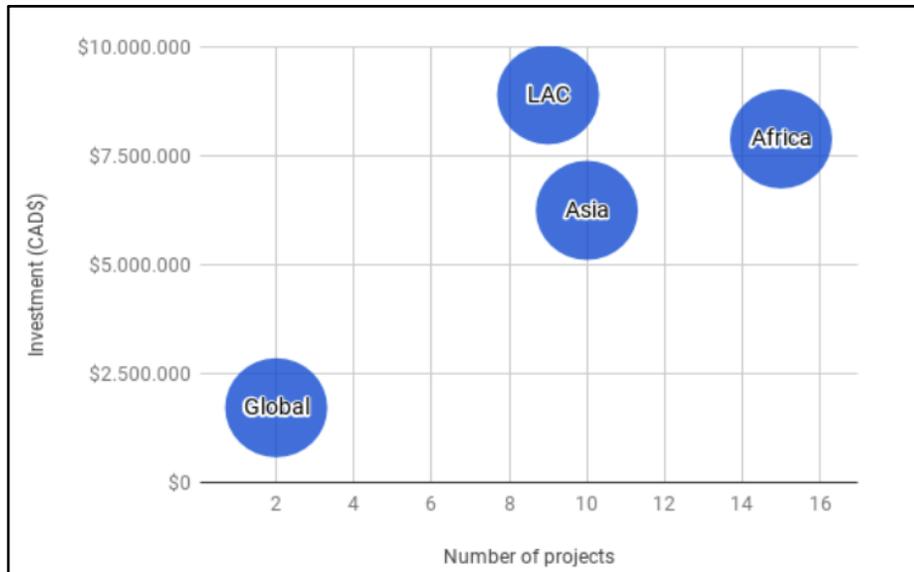


Figure 42: Size and geographical distribution of IDRC programming on climate and cities (Espinoza & Pacha, 2018)

While the focus of these projects has varied in line with the program initiatives that have hosted them, strong areas of focus have included: developing profiles of urban vulnerability across a range of contexts; informing local policy processes (including urban adaptation plans); improving basic urban services (particularly water) in the context of climate change; and strengthening resilience to climate-related shocks and stresses. In many cases, these efforts sought to enhance resilience and reduce disaster risk, such as through flood prevention and evidence-informed planning.

Lessons

Espinoza and Pacha's recent review of IDRC programming (2018) identified four main areas of impact from the portfolio of projects that they examined. These were (in order of frequency):

- Raising awareness of city-specific climate-related vulnerability or impacts amongst citizens and governments (e.g. supply of water and power, managing heat stress on health and systems, transportation and infrastructure decision making);
- Changes to local participation and governance practices;
- Changes to local adaptation practices - in relation to peri-urban agriculture, water management, urban infrastructure, health, and more; and
- Impacts on local policies were noted in 5 of the 36 projects they studied.

We note close parallels between these areas of impact and the generations of adaptation research set out in Section 1 above.

A number of lessons on good practice have been highlighted by reviews of programming on this theme (e.g. Espinoza & Pacha, 2018; IDRC, 2018c), and by IDRC staff and grantees. These include:

- Balancing analysis of the impacts of climate change with an understanding of the underlying drivers of social vulnerability and local political economy. This may require supporting work that cuts across thematic areas (for example at the intersection of cities and finance), and across timescales;
- Generating recommendations that can be translated into shorter-term actions as well as longer-term research agendas;
- Engaging with decision-makers by collaborating throughout the research process (co-producing the research), effectively communicating findings, and strengthening existing networks and deliberative spaces; and
- Supporting learning and knowledge exchange between cities and networks and platforms at global and regional scales (including with other IDRC projects).

An area of broader learning from this theme that is likely to be of relevance across the Climate Change Program's portfolio relates to the identification of partners and partnership configurations. Experience to date suggests that projects on cities and climate have been particularly impactful when led by strategically-placed grantees who have long-term investments in city-level initiatives and partnerships. Examples cited were local universities and well-positioned local NGOs, whose sometimes limited capacities can then be supported through international partnerships (as in the case of the Jagori Women's Resource Centre in India) or through direct capacity support by IDRC Program Officers through the Centre's 'Grants Plus' programming model. City-scale partnerships that include international partners or networks like ICLEI (perhaps working across a number of local projects concurrently) can offer the added benefits in terms of scaling up, sharing, and brokering of research findings and recommendations in ways that might otherwise not be possible for local initiatives. Such a configuration may also permit investing in more, smaller-scale (e.g. CA\$200,000-\$300,000) and shorter-duration grants that are attractive for smaller institutions while still generating a wider set of generalizable results. However, these cases also underscore the importance of assessing the strategic positioning of grantees to create impact at the scale of action, something that hasn't always featured prominently as a criterion for selection in grant-making.

Reviews and feedback from interviewees also highlight some gaps in project and program delivery that have limited the potential impacts of programming in this area. These include:

- Limited efforts to implement or scale-up piloted solutions;
- A lack of consistent evidence of research projects being informed by policy demand, which constrains buy-in to the emerging recommendations;
- Poor links between local-level project implementation and the international policy processes on climate and development that IDRC has a stated aim of informing; and

- A weak integration of gender considerations into the project design and implementation.

Responses from key informants suggested links between the first two of these gaps, calling for future programming that has a distinct focus on locally-led solutions to urban challenges.

Another area for improvement noted by IDRC staff and external evaluators is the limited progress in promoting learning and knowledge sharing across projects and contexts. There are, however, examples of this sharing taking place within ‘portfolio projects’ such as the joint FFLA (Fundación Futuro Latinoamericano), CDKN (Climate and Development Knowledge Network), and IDRC Climate Resilient Cities in Latin America project, which supports six projects in small and medium-sized cities.

Looking forward

Several future opportunities were identified. The focus on cities and climate change in the international arena is expected to maintain, or even grow in prominence in the coming years.

There are discussions of a special IPCC report on cities for the 7th Assessment Report reporting cycle due to start in 2022-2024, and keen interest in looking at the relevance of evidence from the recent 1.5C Special Report for cities (SUP, 2018). At the same time, the integrated nature of climate and development challenges at the urban scale, and with the mechanisms for responding to it at that scale, may require a more holistic analysis of the interplay between adaptation, mitigation and economic and social development agendas for cities. These will require significant investments into capacity development and technical support, particularly in small and medium-sized cities, and in the local institutions that are well positioned to provide ongoing support. Some respondents have suggested that this need is particularly acute in West Africa. Success within these operational spaces will with enhance adaptive capacity and reduce risk.

To this end, we see an important role for cross-scalar partnerships to help cities access, interpret and use evidence (including climate information) for defining climate resilient development pathways. Experts we spoke with noted that even in comparably large and well-equipped cities such as Cape Town this remains a challenge. IDRC is seen to be strategically placed to support the convening of this kind of work, as well as knowledge sharing on the emerging results in conjunction with networks like ICLEI or the C40 cities initiative. The Centre is also seen as well-placed in bringing other funding and policy actors on board to support this kind of action.

2.2 Climate finance

Key messages:

- IDRC has played a key role in building capacity in the Global South for analyzing environmental issues from an economic perspective.

- Climate finance will remain a key area of concern in this field and there are significant knowledge gaps that IDRC can contribute to.
- Field building work that combined a range of individual and network support enabled the establishment of fields of study in disciplines where capacity was previously low.
- The new skills required related to climate finance in the Global South - from obtaining and using finance to accounting and reporting on targets - need to be strengthened.
- Past programming provides insight on effective modalities for field building and capacity strengthening.

Context

The projects in this program area revolved around building capacity and field-building in environmental economics. This work primarily sought to build the capacity of researchers in the Global South to conduct economic analyses, resource evaluations and cost-benefit analyses, but had limited direct links to immediate policy influence or impact. This work started in the 1990s, and would later evolve into addressing programming related to climate finance, and more specifically work done in the most recent decade has focused upon climate adaptation. As a collective area of economic- and finance-related work, the Climate Change Program has made significant investments. An IDRC assessment estimates that over the past three decades approximately \$65 million has been invested into this area of work, taking place within 31 different countries.

While there was not a strategic aim to create networks that would function over the long-term, in some cases that has happened organically as the value of these networks was demonstrated. The first network in South-East Asia (EEPSEA) proved very effective, and established a model that was expanded to support the development of networks in other regions of the world (South Asia, Latin America and the Caribbean, Africa, the Middle East and North Africa). IDRC's support to 'field building' activities in the Global South to strengthen capacity has also been quite successful. The field is now well established in most regions and many of the individuals supported and involved in these networks have moved into high level positions in governments and universities. A key lesson here is that in some instances, evidence generation and policy influence may need to be a long-term objective, which first requires large, diverse capacity building activities to strengthen capacities in the Global South such that evidence generation and policy influence is possible.

As climate adaptation began to take a greater priority in IDRC programming, capacity building has continued as a key approach. This was viewed as important, as in-country capacity for the required skills tended to be insufficient. One example of this is the Adaptation Finance Fellowship Programme, building capacity via a newly launched graduate program, and short-term trainings. Global experts who provided input suggested that this is the case for climate finance. With the emergence of new funding options, the challenge is how to best utilize those opportunities. Many in the Global South rely upon higher-capacity partners, such as UNDP and UNEP, in order to take advantage of the emerging opportunities related to climate financing.

Given the new, and specific, skills and capacities required within climate finance, IDRC may need to approach this field with a long-term vision, as it did with its work in the 1990s regarding environmental economics.

Lessons

A significant pool of evidence has been generated from the capacity building and network support investments (EPPSA, 2017; Horbulyk, 2010; Watkiss and Cimato, 2016; Whittington, 2010). Evaluations were carried out on a number of these activities, presenting some important learning, such as how capacity building has led to relevant job positions (Cruz and Thao, 2012) and understanding of research-policy linkages (Vincent, 2008; 2012). As many of the network investments have come to a close in recent years, it seems a fruitful time for reflection on the design of capacity building initiatives in future programming. Supporting field building work as well as individual and institutional capacity building would be strengthened with explicit linkages between objectives, activities, outcomes and impacts (there are synergies in this regard with leadership investments, see Section 2.5 below). Some opportunities for capacity building might include considering how e-learning modalities can be institutionalized, ensuring broader and sustained engagement. This would reduce the reliance upon individuals, and strengthen the capacity of institutions and systems to ensure relevant capacity is being strengthened on an on-going basis.

The Climate Change Program has also invested in private sector engagement, particularly with companies that are self-aligned with a strong environmental and social responsibility ethos. This has included work on understanding climate risks to commodity value chains, addressing climate change impacts on supply chains, and how small- and medium-sized enterprises in Africa are responding to repeated climate shocks. Working with the broader private sector has posed a number of challenges. There has been success working with some private sector entities (e.g. in Panama and Chile); however, in these instances the private sector partners were a relatively narrow segment of the sector, being basic service providers. In these instances, it appeared that three factors attracted the private sector to work with external partners, namely: (1) a problem with a high degree of risk and uncertainty; (2) a sector that requires significant infrastructural investment for long-term use; and (3) a degree of vulnerability as a basic service provider to civil society and individual activism. Even in these instances, private sector entities were invited to participate in a partnership with an IDRC grantee, rather than seeking out such support. One gap raised by experts and IDRC staff is the challenge for private sector entities to access emerging climate finance options. One potential entry point is creating a database where the funders and eligibility criteria can direct seekers to the most suitable options. This might provide a way for IDRC to have broad impact, with a relatively small investment.

Looking forward

There are numerous challenges in broadening private engagement (as identified by IDRC’s Private Sector Working Group). Global experts pointed to specific knowledge gaps, particularly related to the ‘how’ questions of working with diverse actors with different perceptions of risk and incentive. While there may be specific opportunities, based on past portfolio learning, it remains unclear how IDRC should interact with the broader private sector. The past portfolio of work suggests there are three types of private sector engagement related to climate adaptation: (1) upside engagement, for things like infrastructure (as was in Chile and Panama, mentioned above); (2) downside engagement, as a risk reduction measure (understanding climate risks in value and supply chains); and (3) charity, in the form of corporate social responsibility. Some global experts forward that IDRC’s niche in this space is government engagement to improve planning. In this regard, IDRC may consider partnering with national governments, playing a brokering and convening role to ensure the required capacity is available to best utilize available funding. This aligns with limited capacity and the need for capacity strengthening across scales of government - particularly the planning and use of funds. Along these lines, there is a need to move beyond the traditional partners (e.g. Ministry of Environment) and engage new ones (e.g. Ministry of Finance) to influence a broader set of decisions (planning, resource utilization and management, basic services, etc.).

Other experts suggested that IDRC may seek to influence the private sector through alternative avenues. For example, there may be certain entry points suitable for IDRC not with the private sector directly, but with the broader environment within which it operates. This might include targeting the development banks (African Development Bank, Asian Development Bank, World Bank, International Monetary Fund, etc.) for shifting the standards regarding resilience and adaptation for funding. This, however, was viewed by some as being beyond the niche of IDRC, and an area that other actors are already working on. What was viewed as a key knowledge gap that IDRC might play an important role contributing to, is not access to financing per se, but the knowledge required around operationalizing it. This includes how private-public partnerships operate, including specifics on different funding arrangements based on levels and types of risk involved (e.g. loans, concessionary loans, grants, blended options). This may also include specific capacity building and technical support to enable institutions in the Global South to effectively attract, manage and report on climate financing. We explore future opportunities in greater detail in Section 4.

2.3 Climate change hotspots

Key messages:

- Hotspots provided an important organizing principle in recent years, both in terms of investment and evidence generation.
- Working beyond national boundaries enabled new partnerships, research questions and methodologies to

be used.

- The large-scale collaborative approach undertaken using the hotspot approach was time and resource intensive, yet produced significant and novel outcomes.
- A number of the achievements related to the hotspot work were not specific to hotspots *per se*, but other design and support components that operated in tandem.

Context

The climate change hotspots thematic emerged as a key part of the organizing design of CARIAA. Grantees developed collaborative proposals around the concept of hotspots, which IDRC defined as “an area where a strong climate change signal is combined with a large concentration of vulnerable, poor, or marginalized people” (De Souza et al, 2015: 748). As CARIAA was a long-term (seven-year), large-scale investment (over CA\$70 million, co-funded with DFID) that covered fifteen countries and involved over 40 implementing organizations and 450 researchers and practitioners, the hotspot approach was one of the most important of IDRC’s recent investments (Cochrane et al, 2017). In CARIAA, hotspots had specific geographic areas of focus, defined in line with programming priorities/limitations for both IDRC and DFID; however, the approach could be used for expansion, replication and application in other geographic areas.

Lessons

The use of hotspots as an organizing structure for a portfolio of projects encouraged collaboration across scales (local, sub-national, national and regional) and across disciplines (fostering a point around which interdisciplinarity could function), as well as across sectors (researchers, policy makers, practitioners, private sector actors) (Gonsalves, 2014; Cochrane and Cundill, 2018). Multiple examples within this process show how researchers and decision makers can collaborate to co-produce research that is relevant, timely and well-situated. However, it also required significant time and resource investments to support those collaborative efforts. IDRC selected four high-capacity multidisciplinary consortia based in multiple countries, to implement the CARIAA program. Enabling and supporting large-scale, international collaborations of this nature is a complex process (Cochrane and Cundill, 2018). Of the key lessons from CARIAA’s experience is that common framework, conceptual approach (hotspots) and objective (adaptation), also require investment in the time-consuming, but critical, role of moving beyond connecting toward establishing trust and long-term relationships (CARIAA, 2018a; Cundill et al, 2018). This included annual in-person meetings of large groups, from a range of countries, who have experience in diverse socio-political contexts, and who work in a number of languages.

The impacts of this organizing structure have been diverse, though distinguishing between the influence of CARIAA’s hotspot focus and its collaborative consortium-based implementation model can be difficult at times. According to those who employed the theme, as IDRC staff or grantees, the use of hotspots as an organizing concept necessitated systems thinking and use of

complexity approaches to inform planning, policy and decision making. These approaches have resulted in new perspectives on how to approach climate-related challenges, including a paper that has been accessed nearly 20,000 times and cited over 100 times in two years (Rasul and Sharma, 2016). In terms of overall output, CARIAA enabled a great deal of productivity, with over 250 peer reviewed outputs (over 100 of which were journal articles) produced before the close of the funding cycle. This is significantly more than the comparably-sized CCAA (see Annex 3) and was likely enabled by funding high-capacity researchers and institutions. Taking a regional focus, as opposed to more localized ones as was done in CCAA, supported the identification of variations of vulnerability over geographic and socially differentiated spaces (Khan et al, 2018). One limitation of having high-capacity lead organizations was that many were based in the Global North, as opposed to prioritizing leadership from the Global South, as was done in CCAA. Aside from individual capacity building that was a significant outcome of CARIAA, this approach may limit the longer-term benefits of institutional capacity strengthening in the South, particularly in organizations' capacities to lead larger partnerships.

From the collaborative model used by CARIAA to examine hotspots, it was also notable that unlikely allies emerged as strong partners. For example, neighbouring nations are sometimes protective of certain types of data, such as data related to water management of cross-boundary water resources. In CARIAA's DECCMA consortium, the hotspot approach (as opposed to a national approach) facilitated collaboration on issues that might otherwise have been difficult to cover, such as working together on questions related to transboundary water rights, migration, and remittance flows in South Asia. In this instance, this might have been the first time that researchers from India and Bangladesh have been able to collaborate, share data, and mutually engage stakeholders in such a way. The collaboration improved the reliability of the evidence, thereby reducing uncertainties for decision makers. The impact from this particular CARIAA collaboration have been significant, providing decision-support tools that were used in the development of the Bangladesh Delta Plan, a long-term strategy (to 2100) to reduce climate-related risks and enhance the resilience of services in the country, particularly water provision. In addition, the collaborations resulted in sustained cross-border partnerships, including some follow-on collaborative projects that have already been funded.

Taking a hotspot approach enabled methodological innovations, particularly in shifting towards a systems approach informed by complexity thinking and adaptive approaches to management (Ramalingam, 2013). The opportunities for learning across consortia within CARIAA, such as through its Annual Learning Reviews and monitoring, evaluation & learning processes, part of the intentional program design to foster cross-consortia learning, allowed emergent insights to be shared across the program. This was further strengthened through a window of funding created for emerging opportunities and synergies in multiple consortia. A key example emerged when researchers from different consortia recognized a common interest in better understanding gendered climate vulnerabilities, developed an application for supplementary funding, and

conducted an unplanned comparative analysis of 25 different cases to better understand this issue. This work is ongoing, but outcomes have the potential for significant global influence, as more attention is being given to different types of vulnerability - led by the 2030 SDG objective of ‘leaving no one behind’.

Looking forward

CARIAA contributed significant insight into how to enable collaborative research, highlighting not only the ‘what’ of hotspot research from CARIAA, but also the ‘how’. Hotspots played an important role in some of these lessons, providing a common framing for engagement and motivation for collaboration. However, it was not just hotspots that enabled collaboration. Clear expectations were established from the outset of the program that research was to have impact on policy and practice, and this was driven by a cross-consortia working group on putting ‘research into use’ (CARIAA, 2018a). As some global experts noted, it is not necessarily ‘hotspots’ that enabled these outcomes per se, but rather a broad thematic under which everyone collaborated. IDRC’s CARIAA team made significant investments in annual reflective and sharing learning events and played a leadership role in identifying, promoting, and financially supporting opportunities for collaboration. Had these not been made, the outcomes aligned with the hotspot approach would look different. As a CARIAA evaluation found, the process was costly, time consuming and difficult, but offered unique benefits (Adaptive Resource Management, 2017; Baastel, 2018). It may also point to an evolution in the role of IDRC Program Officers, shifting from technical experts and subject area specialists supporting grantee capacity, to knowledge brokers and intermediaries tasked with creating an enabling environment for innovation to emerge.

2.4 Climate science and services

Key messages:

- While climate science and services have not been a central focus of Climate Change Program investments, IDRC has made important contributions to capacity strengthening, use of scientific evidence in decision-making, and strategic knowledge production in the Global South.
- IDRC’s focus on use-oriented research aligns strategically with the priorities identified for this theme by external experts, presenting an opportunity for impactful work moving forward.
- Future opportunities lie in strengthening the science-policy interface with support to emerging climate scientists to work in decision-spaces, and support to cities and countries for integrating climate information into development planning for risk reduction.
- The tendency to work with a recurrent set of researchers, (capital) cities, and countries creates a need to identify and focus on underserved actors and locations.

Context

Consistent use of climate science and climate information services as a resource for anticipating and managing the current risks and projected impacts of climate change is still an emerging

practice in many developing countries. This is due to a range of factors including: the levels of uncertainty in climate projections; limits to the ‘skill’ and resolution of current climate models; challenges related to availability and sharing of data, particularly in Africa; and capacity gaps within national meteorological and hydrological services (NMHSs) and national academic institutions. However, recent developments in both the fundamental science and the strategies for mobilizing climate information for decision-making are opening up new opportunities for climate information to inform development planning and thereby enhance the capacity to adapt and reduce risk (Singh et al, 2018). At present, however, much of the work brokering the use of climate information between producers and users remains in the piloting stage of development (Singh, Urquhart and Kituyi, 2016).

As a funder focused on use-oriented research, IDRC has not invested significantly in basic climate science (such as model development) or climate services (such as weather monitoring infrastructure) through stand-alone projects in recent years. The CCAA program’s emphasis on action research with local collaborating institutions yielded some emphasis on building institutional capacity to produce and use climate information in Benin, Kenya, and Senegal, among other countries, as well as some innovative and internationally recognized work on the integration of indigenous and scientific forecasting (Ziervogel & Opere, 2010; Newsham & Guthiga, 2011). It also sought to build researchers’ capacities in the area of climate science, though the external evaluation of CCAA (including the first phase of the African Climate Change Fellowship Program) concluded that climate science ranked lowest amongst areas of perceived capacity development, emphasizing that “CCAA’s legacy is not measured in terms of new technologies or sophisticated models, but by its contribution to establishing [...] spaces for social learning” (Lafontaine et al, 2012: 18). IDRC’s partnership with the Government of Canada on Fast-Start climate finance (2011-2014) also included investments into climate science and services as part of its focus on identifying and/or testing adaptation solutions.

In the period for which we conducted this review, IDRC’s support for climate science and services have tended to fall under one of three types of project:

- Capacity building support to Southern researchers, including on climate science;
- Support to strengthen the broader use of evidence in decision-making on climate change; and
- Climate science research as a sub-component of a wider research agenda, as found primarily in the scoping (Kilroy, 2015) and implementation of components work of three CARIAA consortia (e.g. Lutz et al, 2016; Nkemelang, New & Zaroug, 2018).

One exception to this categorization was support for a three-year project aimed at improving the communication of seasonal forecasts using information and communication technologies as part of the CCW program.

Lessons

Despite the relatively limited investment dedicated to this theme, IDRC has seen some good evidence of impact from its support for climate science and services. CARIAA's summative evaluation concluded that this research 'has contributed extensively to the science of climate change, in particular with regards to understanding its impacts and magnitude for new environments (e.g., deltas, semi-arid lands, and the Himalayas) or in connection with socio-economic issues (e.g., links between migration, gender and climate change adaptation)' (Baastel, 2018: 14). Experts we spoke with who contributed to international reports cited CARIAA outputs as important sources of evidence. The CARIAA consortia were also able to leverage insights from their climate modeling work to contribute to the IPCC's work on climate change of 1.5C and a final synthesis study will target the IPCC's 6th Assessment Report (see CARIAA, 2018b). In addition, support to African negotiators in the UNFCCC Climate Talks, through the African Group of Negotiators (the AGNES initiative), helped to establish evidence-informed positions on gender and agriculture that ultimately influenced the negotiations process. Finally, investment into building the capacity of young climate researchers through doctoral and post-doctoral studies in Africa (and elsewhere) has supported a significant number of individuals as described below.

Looking forward

Several areas of future opportunity have been identified for the area of climate science and services. What stands out from discussions with thematic experts in this field is the degree of alignment between IDRC's current investment focus areas set out above and the priorities being expressed. Respondents highlight a persistent need to invest in individual, institutional, and systemic capacity strengthening, particularly in relation to the interface between climate science and decision-making. Specific examples cited included investing into early career researchers' capacity to work in the 'decision space' where advances in modeling and basic climate science have yet to be put to their best use. One respondent flagged the absence of a network of emerging scholars/practitioners on climate science that contributes to their limited visibility and a tendency from the international community to continually call on a small cadre of 'usual suspects' climate science collaborators in the Global South. In addition, respondents highlighted the need to invest in the national partners (including universities and NGOs) where researchers might be based to work at this decision interface, and in government capacity to translate evidence into plans for action that can be implemented. A specific example raised was on leveraging climate information to support risk screening and risk-proofing of government investments. This is an issue of interest to governments, but one requires the capacity to conduct and use comprehensive risk assessments that integrate climate science, economic analysis, and development planning agendas, looking across near-term and longer-term timescales. One expert proposed embedding researchers within decision making agencies as a means for mutual capacity strengthening.

The calls for a re-focusing of work from the refinement of underlying science toward a decision-driven framing of climate science research is one that caters directly to IDRC’s strategic interests. Such a shift does point to some specific challenges. These are related to grantees’ capacities to work strategically and be responsive to emerging demands and windows of opportunity, and to the use of novel partnerships to link climate science with social, political and economic forms of analysis, and with local decision-making spaces, to avoid the continued ‘siloing’ of the science.

2.5 Leadership and capacity development

Key messages:

- IDRC’s investments are seen to be making headway towards building a critical mass of climate leaders in government and academia in the Global South.
- Further reflection on the distinctions between leadership development and capacity building, and how each fits in future strategy on climate change is important.
- Creating a progression of leadership development across different levels may aid in building local capacity in the long term.
- Other than traditional approaches to ‘leader’ development, exploring non-traditional modalities of support in ‘leadership’ development is recommended.

Context

Since its inception, IDRC has worked towards building capacities of the developed and developing world for large-scale positive change (IDRC, 2017b). Central to IDRC’s mandate is the understanding that meaningful change requires investing in the people whose knowledge, skills, and influence are brought together to create innovative solutions to complex problems. The emphasis of developing a new generation of researchers in developing countries can be found in program documentation well before 2015 (IDRC, 2018b). The motivation has been to develop leaders—both current and emerging—in making a positive contribution to development priorities.

A more conscious commitment to “building leaders” is manifested in the Centre’s priorities for its 2015–2020 Strategic Plan, of which the second priority is to ‘build the leaders of today and tomorrow’. With its vision to ‘produce knowledge, support innovation, and generate solutions to improve lives and livelihoods in the developing world’ (IDRC, n.d.), this strategic objective particularly emphasizes the development of Southern leaders in government, academia, and business who can advance and apply scientific knowledge for developing and implementing adaptation interventions. In the context of climate change programming, the projects have placed special attention to enhancing the effectiveness of the science-policy-practice interface for long-term climate resilience (Vincent et al., 2018). Importantly, a strong emphasis on positioning women as future leaders in the public and private sectors was also observed.

According to data provided by IDRC, since 2010, programming under CCW and the Climate Change Program alone has supported: capacity building for 660 graduate students (MSc, PhD and Post-doctoral); training and professional development activities for 1,144 researchers; and an additional 131 researchers are currently engaged in ongoing leadership projects. For the purpose of this report, a total of nine IDRC-funded projects were reviewed for this thematic area (see Annex 2). The average duration of the projects was 35 months, supporting awardees from over 40 countries across Africa, South Asia, and Latin America and Caribbean regions. These grantees include early to mid-career policy advisers, academics, and practitioners who have the potential to influence decision-making or bring solutions at local, national, and international scales. In total, the Climate Change Program has dedicated over CAD \$8.7 million to projects with leadership as a central focus, with this figure not including the wide range of initiatives where leadership and capacity strengthening feature as one of several aims (such as large investments into the CDKN Knowledge Accelerator and CARIIA).

Lessons

Strategies for leadership and capacity development have varied across grantee backgrounds. Projects targeting emerging and early-career leaders, such as the African Climate Change Fellowship Program (ACCFP), have tended to focus on enhancing their research quality and productivity, and connecting their research to decision-making and evidence use in the contexts where they are engaged. At the other end of the spectrum, support to established leaders through programs like AGNES and the Africa Climate Leadership Program (ACLP) offer opportunities for broadening leaders' networks, profile, and policy impact, with the goal of supporting them to shape policy and research agendas in their countries and in international fora.

Although most reviewed projects are in the early stages of implementation and have not yet yielded concrete results, past efforts in leadership and capacity development have demonstrated positive impacts. As of September 2018, CARIIA provided at least 233 researchers and practitioners with capacity support, yielding significant outcomes, including a number of early and mid-career researchers participating in the IPCC authoring process for the first time. The case of AGNES support for African negotiators working on agriculture and gender (see Section 2.4) is another example. One grantee of CCAA and ACCFP projects attributed the new establishment of the AfriCLP (<https://africlp.or.ke/outcomes-outputs/>) to IDRC's support in capacity building over the past decade. With the capacity developed through the past IDRC-funded climate programs, AfriCLP continues the effort of supporting emerging researchers, policymakers and practitioners in order to further integrate relevant knowledge and implement climate action for the local communities. Although the grantee we interviewed noted that more local leaders are still needed, IDRC's investments are seen to be making headway towards building a critical mass of leaders on climate action in the Global South.

Looking forward

In conducting this review and comparing programming with existing literature on leadership and capacity, some recurring challenges and concerns were observed. This analysis points to opportunities for thinking about a future climate change strategy for leadership development.

- *Distinctions between leadership and capacity:*

While some IDRC staff consider the relatively recent strategic priority of building leaders as a shift to a specific model of ‘leadership development’, some view it only as a more appealing framing to describe IDRC’s long-term effort of enhancing individual capacities. Nonetheless, developing leaders/leadership differs from capacity building. While developing leadership often includes capacity building, not all capacity building efforts include a focus on dimensions of capacity that relate to the leadership of an organization, country, or region. Considering the distinctions between these approaches, which dimensions of leadership capacity IDRC and its Southern partners view as important, and how each fits in the future of IDRC’s strategy on climate change is therefore important.

- *Operationalizing and measuring:*

Given the fuzzy distinctions between leadership and capacity development (both at IDRC and within the wider literature), the following uncertainties emerged:

- Targeting support: Programs have tended to focus on both ‘emergent’ and ‘established’ individual leaders and support strategies appear to be well tailored to these different groups, though opportunities for progression across these levels remain limited (see below). We see much more limited evidence of focus on leadership networks in investments to date (see also IDRC 2017b).
- Monitoring and Evaluation: Projects and partners still tend to rely on output-oriented criteria used to track the success of the projects (e.g., number of recipients, research outputs), with limited metrics for measuring the dimension of grantee development in line with their initial career stage. There is great scope for more complex measures of emergent leadership and capacities. A similar challenge is in tracking longer-term trajectories of these investments and understanding the contributions of IDRC support to grantees’ long-term development.
- Forms of support: Current forms of support tend to include ‘tried and true’ approaches including scholarships, networking opportunities, mentorship, and training in research and/or complementary skills. Experience from the CARIAA program and views from respondents highlighted the potential of non-traditional approaches such as innovation or challenge funds, secondments, and more (see Figure 5). The content and modalities of support can also be mapped out to create a developmental pathway for leadership across different levels, i.e. progression. Further reflection on distinguishing between support on leadership development vs. capacity development may also prove useful.

While these challenges are complex, IDRC is not alone in dealing with them. Some organizations that previously supported leadership programs are no longer doing so, partially because the impact is difficult to measure (Jigsaw Consult, 2015). Others (e.g., Rockefeller Foundation) have tried to integrate leadership as a cross-cutting theme in their programs. One way of addressing these challenges is to move beyond the ‘heroic’ framings of individual leaders, and conceptualize *leadership as an emergent event* and an outcome of relational interactions among people. In other words, we propose to consider leadership within the framework of a complex adaptive system (Lichtenstein et al, 2006).

Several future opportunities have been identified on leadership. There is a growing realization that effective leadership does not necessarily reside within the leaders as individuals or individual leadership actions (Lichtenstein et al, 2006; Uhl-Bien, 2011; Vignola et al, 2017). Instead, it emerges through dynamic interactions among people within and beyond an organization. While traditional approaches to ‘leader’ development emphasize individuals’ skills, traits and behaviours, this extended view of ‘leadership’ focuses on the entire team and its influences. By focusing on how leadership can occur in people’s interactions, this new perspective engages all members to be leaders by responding to the needs of the situation using different forms of leadership function (e.g., positional, enabling, connective, directional).

This framing of leadership can be helpful to the Climate Change Program’s work toward transforming complex systems because it shifts the thinking from ‘how can we duplicate what a leader does’ into ‘what functions are required within a team, an organization, or a system that would allow for changes to happen.’ In the context of climate adaptation, the changes may include, but are not limited to, a shift of power dynamic at international negotiations, national adaptation policy formulation and implementation, new processes or partnerships for solving multidimensional sustainability problems, and increasing exchange and collaboration across public, research, and private sectors. Therefore, leaders are not only the direct source of change, but also those that enable and facilitate the change process to occur in individual, institutional, or national scales.

Building Blocks of Leadership Development for Climate Change Adaptation



Note: Types of support not currently included in the reviewed IDRC projects were indicated with an asterisk.

Figure 5: Building Blocks of Leadership Development for Climate Change Adaptation

By identifying certain functions of leadership that are essential for the development of local capacity, we can then create a leadership development program with different levels of learning outcomes depending on the local needs. Projects can also be evaluated by considering the influence of grantees on their organizational practice (e.g., development of new knowledge and assets, changes in ways of working, or new social relations), ensuring that change can be sustainable even if an individual leader leaves the position. While a critical mass of leaders is developed over time with diverse forms of leadership skills (see Figure 6), their influence would lead to the development of local adaptive capacity.

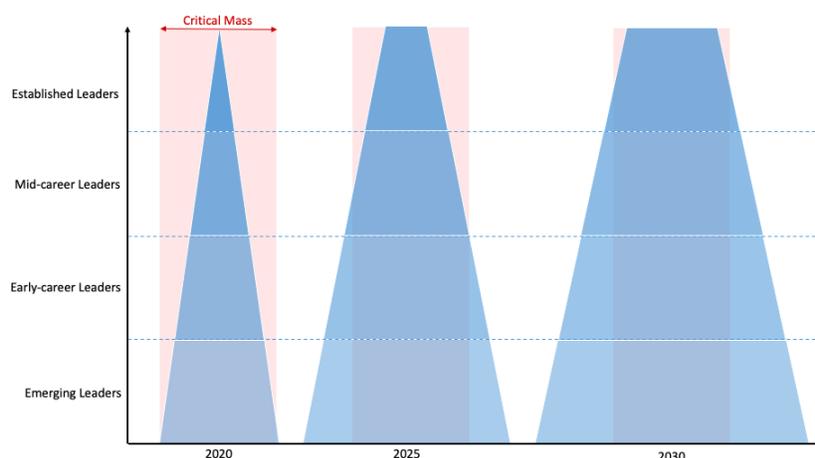


Figure 6: Capacity Building through Creating a Critical Mass of Leaders Over Time

2.6 Gender and climate

Key messages:

- The integration of gender in IDRC’s climate change work has yielded several notable and positive results, but to date has been unevenly applied across the Program.
- IDRC has the opportunity to build capacities in the field of gender and climate change, both through the funded projects and for its own staff. This can be achieved through different mechanisms including dedicated capacity funds, and a cross-cutting working group on gender and social inclusion.
- There are strong international signals that work in this area is becoming increasingly important. IDRC-funded research can strengthen methodologies and application of intersectional research including but not limited to the intersection of gender and climate.
- Moving forward, the IDRC can help to build the evidence base of why integration of gender & social difference into climate change efforts is crucial for the achievement of climate and developmental goals, with a focus on scaling and influencing policy and practice.

Context

IDRC has a long history of gender programming and research, dating back to 1990, and in the past has been seen as one of the global leaders in the field (Sisters Ink, 2018). A recent analysis of IDRC’s gender and climate change work has shown that over the past decade, there has been

an increasing shift to integrate issues of gender and social inequities into the program’s climate change research (Nordehn and Rubin, 2018). From 2016, IDRC began implementing a gender typology for categorizing projects, on a continuum from gender-blind to gender-transformative (see Figure 7). This represents an important step in IDRC’s renewed commitment towards gender programming and mainstreaming at an institutional level (Sisters Ink, 2018, IDRC, 2018a), and also resonates with the changing nature of climate change programming as well as a growing emphasis on gender in Canada’s international assistance policies.

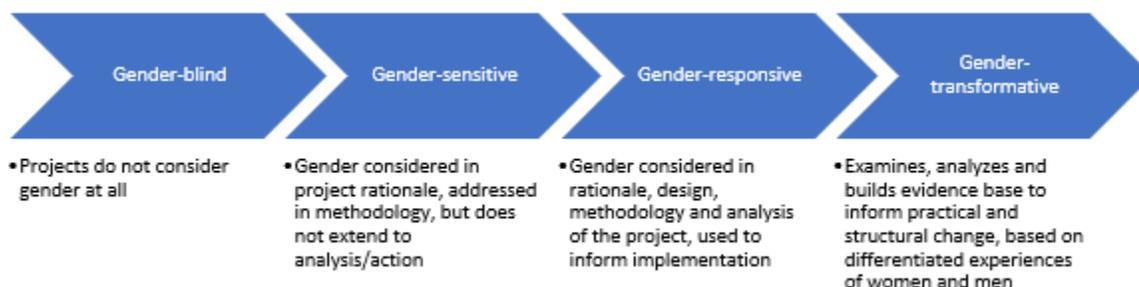


Figure 7: Gender Integration Continuum (adapted from IDRC, 2017a)

Within the Climate Change Program portfolio, gender was not previously a primary focus, although there were some positive outliers from earlier programs. Over the period 2005-2018, over half of the Climate Change Program’s 170 projects aimed to address gender inequalities (Nordehn and Rubin, 2018), while the current portfolio of active climate change projects has approximately 60% of all projects (a total funded value of almost \$25 million CAD) that address gender to some extent. This commitment to integrating gender into climate change programming is further evident in the choice of theme for the 2018 call for project proposals ‘*Accelerating Climate Action: Social Equity and Empowerment of Women and Girls*’, which has ensured that newly funded projects take an intentional gender lens, and strive to be gender-transformative. Following this call, which received 500 applications, six new projects have been selected and will run for the next three years, focusing on issues ranging from disaster resilience to migration and water management in selected study sites in Africa, Asia and Latin America. The aim is for these projects to form a ‘cohort’ where learning can happen across the portfolio to help facilitate scaling; at the same time, gender capacities of the research teams as well as IDRC climate change staff will be enhanced through targeted activities over this three-year time period.

Lessons

As IDRC has been putting an increasing Centre-wide emphasis on gender in all programming, the Climate Change Program has been both responsive and proactive. Since 2010, there has been a clear improvement in climate change projects’ integration of gender, with many of them categorized as gender-responsive (see Figure 8). Several projects in the portfolio have also evolved over different phases to include greater emphasis on gender as a primary objective or lens (e.g. projects on climate change negotiations and leadership in Africa). Many of the

previous lessons learned on gender were integrated into the CARIIAA program from the outset, through different mechanisms such as a cross-cutting gender working group and gender focal points within consortia. These mechanisms allowed novel insights to be developed on the gendered nature of climate change adaptation (Gonda, 2017, CARIIAA, 2018c) and some have been cited as examples of best practice on gender-transformative research through a summative evaluation (Baastel, 2018) and also noted by interviewees for this paper.)

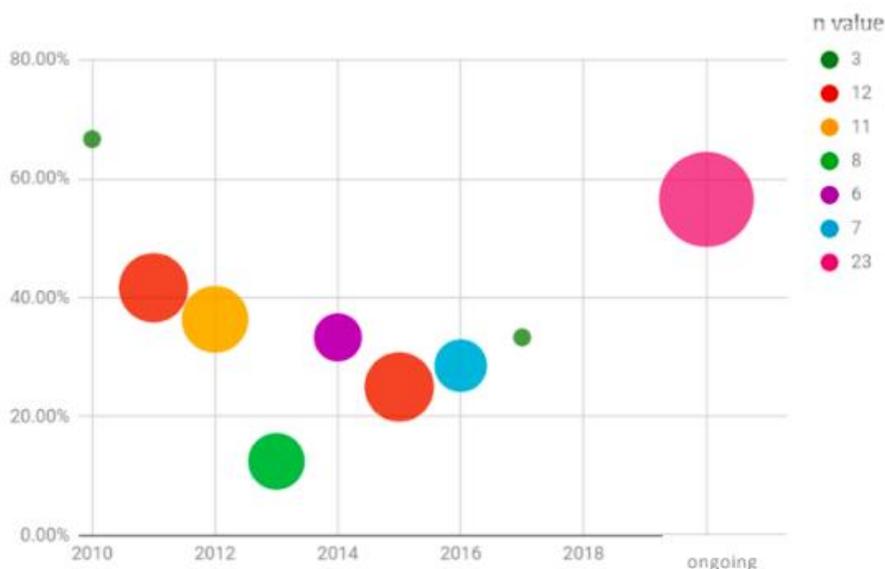


Figure 8. Percentage of CCP projects with gender-responsive objectives, by project completion date (Nordehn and Rubin, 2018).

Some examples of significant outcomes related to gender and climate change in the recent portfolio of projects include:

- In CARIIAA, the DECCMA consortium was able to get a new chapter on gender added to the Odisha State Action Plan in India (see animated [story of change](#) for details) through pursuing different partnerships and based on new research results. Through the ASSAR consortium, vulnerability and risk analysis training given to district government personnel in Botswana, including gender as a key component, was so well received that it is being rolled out nation-wide. This represents an important way for integrating gender into the development of district development plans.¹
- The ongoing African Climate Change Leadership project, drawing on lessons learned on building capacity of climate change researchers, policy makers and practitioners, has emphasized building the capacity of females as a primary objective as they have generally not been well represented in similar capacity development programs.

¹ Additional information is available at:

<http://www.assar.uct.ac.za/news/taking-vra-national-level-botswana>

<http://www.assar.uct.ac.za/news/assar-botswanas-national-vra-training-workshop-resounding-success>

Looking forward

Interview respondents cited the importance of the above work, particularly emerging from CARIAA, which has provided a greater evidence base for the importance of considering gender and social difference within climate change adaptation work. Expanding this evidence base, building capacities of those working in the adaptation field (that tend to be more technically-focused) on integrating gender and social issues, and more purposely bringing men into the conversations around gender were all identified as areas that IDRC and the Climate Change Program can leverage to create greater research impact.

Beyond gender alone, there is an increasing recognition within the field of international development that social inequities and vulnerabilities are affected by many complex and interrelated factors. Climate change affects different people in different ways, and individuals' and communities' adaptive capacities also differ depending on various factors including access to resources and information and decision-making powers. There is a growing understanding that to adequately address climate change, and to achieve the SDG goal of 'leaving no-one behind', there is a need to develop ways to include marginalized and traditionally 'hidden' groups, including women and girls, who are often left behind by global development efforts (Mullinax et al, 2018). Yet, research has also shown that addressing gender alone is not enough to adequately address inequalities (Cochrane and Rao, 2018) and in particular climate change adaptation efforts.

Intersectionality, which is the interaction between gender and other social categories such as age, location, economic class, and ethnicity, is increasingly seen as a more effective approach than looking at gender as a stand-alone factor (Nordehn and Rubin, 2018). While it creates another layer of complexity in research programs, this can also be seen as an opportunity. One noted example is that the language of 'social differentiation' may be an easier entry point to dissect structural injustices as opposed to a 'gender only' approach that can be met with deep mistrust in many societies, and that typically tends to be interpreted as looking at women alone instead of the complexity of gender roles in society. The importance of intersectionality has been a key outcome of the work undertaken by the ASSAR consortium, with important lessons that can be applied to climate change programming more broadly - both within IDRC and external users of the research results - if truly 'transformative' research is to be pursued.

While gender has been identified as a priority area, with IDRC being seen as a leader in the field in past years, recent assessments have shown that it has been integrated unevenly across the Centre (Sisters Ink, 2018). In the Climate Change Program, the inclusion of gender has tended to be the result of personal interest or efforts by staff as opposed to an institutionalized practice (Nordehn and Rubin, 2018). The Program is now making increased efforts to improve staff capacity and better mainstream gender into newly-funded projects for example as a result of the above-mentioned call for proposals., there is an identified gap beyond the program level that

IDRC at the institutional level lacks in-house, dedicated gender expertise that can help to improve outcomes in this area. The recent hiring of a part-time gender expert for the Climate Change Program and the upcoming capacity initiatives for both staff and grantees is a positive step towards this gender mainstreaming effort, but would benefit from greater clarity and commitment from IDRC as a whole.

It is also important to interpret the aspirations for being gender-transformative in a realistic fashion, and for the Climate Change Program’s efforts in this area to be aligned with greater institutional clarity from IDRC. The Gender Integration Continuum (see Figure 5 above) is useful in that it can help to identify research projects that may be gender-blind or only gender-sensitive, and encourage redressing these issues from the design phase of a project. However, this needs to be seen as a tool for analysis and guidance, and not every project should aim to be gender-transformative: “it is important that... research is done well but the use of transformative or feminist is not overstated but precisely used so that everyone can distinguish and learn from it” (Sisters Ink, 2018). There is therefore a need for IDRC to develop clearer guidance for programming on the goals and aspirations for gender-transformative research, and how this links to the importance of intersectionality.

Several ongoing and future opportunities have been identified for continuing work on gender and climate change. Beyond the growing recognition of the importance of integrating gender and social difference into climate change programming, and improving IDRC’s capacities and outcomes in this area, are strong signals at the national and international levels that justify continued efforts. Canada’s Feminist International Assistance Policy, the UNFCCC Gender Action Plan, as well as the SDG 2030 Agenda, among others, all point towards the need for improving our understandings of how the most marginalized and vulnerable members of society can improve their adaptive capacities in response to climate change. IDRC and the Climate Change Program can play an important role in this arena, and have the potential to influence programming towards “promoting research that reduces vulnerabilities and increases inclusion” (Cochrane and Rao, 2018). Doing so means taking a broad perspective on social inequalities and their structural drivers. The SDGs and the ‘Leave No One Behind’ agenda demand it (*ibid*). The table below outlines some practical opportunities for how this can be done within the Climate Change Program, in parallel to the IDRC-wide needs identified above.

Opportunities for integrating gender & social difference into climate change programming	
Design Phase	<ul style="list-style-type: none"> - Provide incentives for grantees (as opposed to minimum requirements), e.g. funding conditions, capacity building. - Create clear guidelines that go beyond ‘minimum standards’ for inclusion of gender & social differentiation expertise and practice.
Research Phase	<ul style="list-style-type: none"> - Requirement for vulnerability/gender assessments, gender disaggregated data collection. - Intersectional analysis.

	<ul style="list-style-type: none"> - Identify M&E best practices. - Research-into-use that has gender/social inequity considerations. - Encourage knowledge sharing among grantees/projects.
Program Management	<ul style="list-style-type: none"> - Formalize internal knowledge sharing, e.g. through a gender and social inclusion working group (modelled on CARIAA). - Gender reporting requirements (Project Completion Reports).

2.7 Lessons and considerations cutting across the themes

Having now reviewed six key themes of focus within IDRC’s climate change programming it is possible to identify some broader trends that cut across this portfolio and may therefore be of broader relevance to strategic thinking. Four interrelated areas of focus emerge from our analysis (Figure 9) and are explained in more detail below.

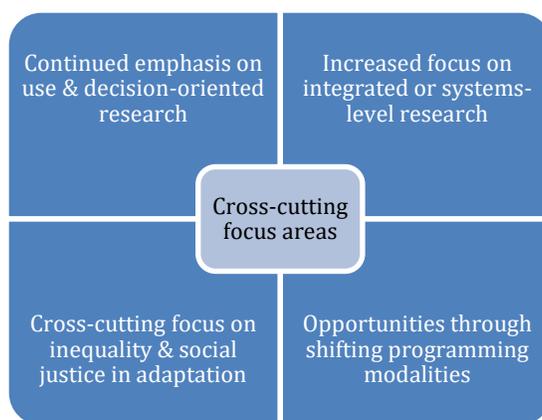


Figure 9: Cross-cutting areas of focus for climate change programming

- **Continued emphasis on use and decision-oriented research**

As described at the outset of this report, the global adaptation research agenda has moved steadily towards a focus on enabling and understanding the implementation of actions on climate change. This is being driven by the increased urgency for action as set out in the IPCC’s 1.5C report and elsewhere, as well as international commitments to action enshrined in the Paris Agreement, the UN SDGs and national commitments made through NDCs, NAPs and other national or subnational strategies. IDRC’s commitment to supporting use-oriented research provides a natural alignment with these trends, as highlighted in a number of the thematic reviews. This gives the Centre an important strategic opportunity for supporting impactful research on climate change in the coming decade. Respondents also noted that support for co-production and co-design in research calls may provide an important avenue for enhancing research use, as would investment into improved metrics and methods for assessing the impacts

of use-oriented research. The growing emphasis on evidence use and implementation provides a lens through which one can consider the three points that follow, taking into account how the thematic structure of programming, grantee profiles, and selection processes and partnership models ultimately influence how research is positioned for use. A further point of reflection is on who the expected usership of these research results will be. While policy-makers across a range of scales (though particularly national and city-level) were the predominant focus of respondents' attention, we must also recognize communities, civil-society, individuals, and private sector actors as decision-makers and potential users of information.

Finally, it is also necessary to acknowledge the potential limits of calls for problem-driven approaches to research design, namely that they may tend to focus on near-term manifestations of much deeper systemic challenges. One grantee reported on the enthusiasm expressed by project partners when their research team adjusted their inquiry to address a more practical community concern related to water availability, and then prototyped rainwater harvesting tools. The trade-off, she reflected, was that in doing so their focus on deeper concerns about the influence of governance and corruption on adaptive capacity were deprioritized. Other experts also noted that decision-support approaches may entrench 'business as usual' modalities, at the expense of more disruptive, transformative work, which will be necessary if climate action goals are to be met. Keeping sight of both practical and more systemic or transformative actions in responsive research is thus critical for lasting impacts, and can be supported by anchoring programming and project calls to higher order visions and strategies, including alignment with international agendas such as the SDGs.

- **Increased focus on integrative or systems-level research**

Related to the focus on decision contexts is a recognition that constraining research to strict thematic foci (water, gender, climate science, etc.) may limit its utility. The shifts in focus from describing the nature of impacts and responses towards putting responses into practice means structuring research in line with the complex linkages found in real-world social and governance structures rather than neat disciplinary categories. Research on universal access to clean energy in the SADC region, for instance, may require analysis drawing on water resources, land use, climate projections, socio-economic development scenarios, and policy analysis on both adaptation and mitigation. As momentum around linking climate change and development policy and actions grows, the push for more integrative research will only increase. Respondents from both inside and outside IDRC pointed to challenges in structuring research this way, though there are some lessons to be drawn from CARIAA's consortium model, and some of the novel collaborations found in projects on cities and climate. One respondent did caution against seeking to over-complicate research design, or "doing systems work for the sake of doing systems work", but we see perhaps a greater concern in the continued siloing of research activities within specialized communities with a failure to account for the interlinked nature of climate challenges and responses. One area where this was perhaps most clearly highlighted was

in relation to climate science, where concerns were raised about cities' capacities to integrate climate information into decision-making, countries' capacities to draw more holistic interpretations of what climate models are projecting in terms of social and economic futures, and climate scientists' capacities to navigate the science-policy interface. One of the most commonly-noted means of meeting this challenge is through the use of innovative partnerships, as we discuss below.

- **Opportunities available through shifting programming modalities**

A recurrent issue tied to calls for systemic and decision-oriented research has been the form and nature of funding offered by IDRC. This included reflections on the profile of future grantees, the ways in which they are selected, and the partnership configurations in which they work. Respondents inside and outside of IDRC repeatedly stressed the value of investing in strategically-placed research partners that have established track records of working in the decision contexts they aim to inform. The need for informed action on climate change is now so widespread (and increasingly urgent) that it cannot be met solely through experts or institutions based in national capitals, nor are there necessarily the levels of trust established with these actors to put research results into action. This may mean selecting recipients with lower international profiles (such as regional universities), and who require support in translating and communicating research results to higher scales of action. The clear benefit this approach offers, however, is in broadened gains in institutional capacity that can result from moving beyond supporting grantees that have repeatedly received funding.

The above points were illustrated by a recent grantee studying climate change impacts in small cities of the Amazon Basin. She attributes the project's impacts, which featured very high levels of community and policy engagement and adoption of the innovations they developed, to the deep trust and connections between the project's Principal Investigator and community leaders. She also credits IDRC and FFLA (who managed sub-grants to this and five other projects and played a strong knowledge brokering and capacity support role) with enhancing the team's capacity and providing international exposure for their findings. She cites the opportunity to present findings at COP24, and to connect with the community that regularly attends Development and Climate Days at the conference as personally transformative, opportunities that are taken for granted among many high-profile scholars and practitioners working in this field.

As our comparison of portfolio impacts between CARIAA and CCAA illustrates, the prioritization of international high-capacity, national high-capacity, or national emerging institutions is likely to involve trade-offs between research productivity and capacity strengthening, as well as between *types* of impact. IDRC analysis of research impact that uses metrics such as citation rate and impact factor may privilege scholars in the North, but the legitimacy and positioning for use of research from the Global South should be understood as important markers of research quality (Lebel and McLean, 2018). These considerations should

inform the ways grantees are identified (open competitive calls may disadvantage smaller Southern organizations) and selected (a focus on research productivity and publication outlets overlooks strategic positioning and local engagement). This may signal a need for more creative ways of grant-making (see Jones et al, 2018) and of partnership support.

Lastly, we reiterate the emphasis placed on transdisciplinary partnerships bringing together actors from research, policy and practice with support structures that can broker and translate findings across scales and contexts. These forms of collaboration are seen as key to addressing the concerns of use and focus raised above and are seen as important not only for the implementation of projects, but in terms of building longer-term Southern resilience and capacity to engage proactively in climate action. The Climate Change Program's experience in supporting 'multi-project' or 'portfolio' programs with a dedicated cross-cutting knowledge sharing, learning, and communication function shows promise for balancing context specificity with higher-order engagement (Buffardi, Harvey & Passanen, 2019). However, the challenges of designing and implementing such a model of research have been well documented through the CARIAA experience, and grantees working within such partnerships also noted challenges with administrative and regulatory alignment across multiple levels of grant management.

- **A cross-cutting focus on inequality and social justice in adaptation**

A final point cutting across a number of themes were calls for continued emphasis on equity and social justice across all of the areas of programming. While this focus is inherent to work on gender and social differentiation, respondents also pointed out the limited evidence for how to move beyond the rhetoric of social justice to putting socially-just adaptation into practice. The SDGs' call for 'leaving no one behind' brings questions of equity and justice to the forefront of discussions across a range of scales, from the international forums around the distribution of responsibilities and the agenda on loss and damage, down to city-scale reflections on how equity considerations must be factored into adaptation - a challenge illustrated during the 2018 Cape Town drought. These concerns are seen by a number of respondents to be a natural fit with IDRC's values and priorities, as well as the Centre's capacity support to both academic and civil society actors.

3. The current landscape of climate action

Having taken stock of IDRC's recent work on climate change in six thematic areas, we now shift to a more forward-looking assessment of the current landscape of climate action. To do so we draw upon a review of recent literature and interviews with 14 experts working at the intersection of climate change and international development agendas. These interviews yielded a wide range of perspectives, some of which overlap with the themes discussed above. We see these points of duplication as instructive, pointing to areas where consensus is particularly strong and there is a good alignment between IDRC's past work and priorities on the horizons of climate action.

3.1 Global priorities for research and action

First looking broadly at trends in the global agenda on climate action, respondents highlighted trends in terms of the issues of focus, regions and scales of focus, as well as modalities for equitable and impactful action. These were not solicited or assessed for relevance to IDRC's mandate and should therefore not all be seen as calls for IDRC engagement. We explore that question in Section 3.2 below.

Issues in focus:

- **Sustaining and operationalizing the international climate regime:** Respondents highlighted the concurrent threat of a retreat from commitments made in the Paris Agreement and the urgency to put the actions of the agreement into action. The recent IPCC report on 1.5C, launch of a new Global Commission on Adaptation, and forthcoming 2019 UN Climate Summit, have all put adaptation at the centre stage. Meanwhile, the push to meet 2030 targets set under the UN's SDGs have created demand for evidence on how the SDG and climate agendas can converge operationally within specific countries and regions to create 'climate resilient development pathways' that address poverty, hunger, energy, and health priorities alongside the climate agenda. Related to this priority is a need for improved approaches on tracking progress made on adaptation which can help us identify if adaptation is happening and whether it has been effective.
- **Exploring low-carbon, climate resilient development pathways for cities and states:** Building on the international urgency of taking forward global climate and development ambitions in tandem, there is a need to support both cities and countries in developing and implementing strategies for low-carbon, climate resilient development. These must take into account local circumstances around energy, economy, and equity, as well as an understanding of projected climate trends that may shape what is possible in the future. This

focus offers an added benefit of linking climate adaptation and mitigation concerns and looking at pathways that offer co-benefits. Innovations in energy systems were seen to offer some of the most high-potential opportunities for taking action. This space is not new to IDRC reflections (see Drexhage, 2016) but to date has not been an area of specific focus.

- **Leveraging finance for action:** A third and related priority is scaling up the financing available for climate action. The refrain of moving ‘from billions to trillions’ was one that several respondents made reference to, but views on how to mobilize these resources were divergent. Several respondents highlighted the need to better mobilize private sector finance on adaptation, whether through commercialization of business cases in adaptation, public private partnerships, or more general private sector adaptation and risk mitigation. Leveraging domestic finances in regions like Latin America was also seen to be an important part of the solution – for some a critical component of reaching our goals due to limited public funding. Identifying the appropriate finance models for adaptation based on investment priority, context, and capacity was also seen as area where further work is needed. One challenge to be overcome in leveraging finance, several respondents argued, is the lack of solid evidence on the benefits and opportunities of investment into adaptation and the relative risks of investment across contexts. An important caution was also raised about the enthusiasm for private sector leadership in adaptation, namely that we must pay close attention to who gets left behind in private sector approaches, and whether these approaches serve the poorest. Farmers, for example, will need to be organized and networked to take advantage of private sector approaches, or risk being undermined by them. Research with and support for local civil society and movements is important in this regard. Several also noted that despite it being an issue of global importance, engagement with the private sector and development banks to leverage adaptation finance may not necessarily where IDRC’s ‘competitive advantage’ lies, and that other actors have been engaged in this area for long periods. Other potential avenues for IDRC engagement are outlined in Section 4.
- **Resource scarcity:** The impacts of climate change and development on land, food and water are examples of the challenges in integrative research identified by respondents. Concerns were raised about both extreme events as well as the longer term impacts of climate trends on food security, rural employment, health, energy, and infrastructure. One of the challenges in these sectors, several noted, is the failure of line ministries such as agriculture to take meaningful steps toward translating the evidence on climate change into forward-looking policies. One respondent challenged that both ministries and international agencies working on agriculture are doing little more than paying ‘lip service’ to climate change instead of pushing for deeper structural transformation (given that Agriculture and Food Security has a strong network with these partners, the Climate Change Program might leverage internal collaborations by building bridges between these non-traditional partners). At city-scale the capacity gaps we have cited can make these challenges even more acute, as the 2018 Cape

Town drought demonstrated. IDRC's significant past investments in the areas of food, agriculture and water may provide an opportunity to build on existing recognition and networks to have a greater impact, but it may also require deeper coordination of efforts across the Centre's different programming areas.

- **Ensuring responses are equitable and socially just:** As previously noted, social differentiation and inequalities are increasingly on the global, national, and local research agendas, including through the 'leave no one behind' objective of the 2030 Agenda for Sustainable Development (Stuart et al, 2016; UNDP, 2018) and the rise of feminist international assistance policies such as Canada's. These priorities not only call for a better understanding of the intersectional nature of inequalities and vulnerabilities across scales and contexts, but also for a prioritization of investment toward the social groups and regions in greatest need - yet this is an area where limited research is available to-date (Leach et al, 2018). Examining these concerns through a rights-based lens (Ensor et al, 2018) and ensuring the participation of non-state actors, specifically civil society, is seen as critical for achieving meaningful action.

Regions and scales of focus:

- **Targeting the most vulnerable:** There is a growing recognition of the mismatch between investments in adaptation and levels of national vulnerability, where climate finance - and particularly research funds - are disproportionately spent in lower and lower-middle income countries. IDRC itself, has minimal programming presence in the twenty nations at greatest risk to climate change² many of which are fragile and conflict-affected states. Similar concerns have been raised about programming in Agriculture and Food Security, and the issue was raised in a recent Centre-wide internal report.³ While there are clear challenges to operating in fragile and conflict affected countries, lessons can be drawn from other large-scale programs that have been able to do so, such as the DFID-funded Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) program. A better bridging of humanitarian and climate communities and strategies is seen as important to this end. While there is a call to ensure a greater representation of these most vulnerable and lowest capacity nations in the Climate Change Portfolio, there is also a recognition that in some places climate action may not be the current priority (and therefore an area where the CCP may find avenues to support other program areas to ensure climate action and considerations are taken into

² The 20 countries at greatest risk (combining vulnerability and capacity to adapt), are: Somalia, Chad, Eritrea, Central African Republic, Democratic Republic of Congo, Sudan, Niger, Afghanistan, Haiti, Guinea-Bissau, Burundi, Liberia, Madagascar, Zimbabwe, Yemen, Mali, Myanmar, Burkina Faso, Ethiopia and Angola (ND-GAIN Index 2018). According to the IDRC's Nov. 2018 A&E Annual Report to the Board, the A&E program has projects in only 6 of these 20 nations.

³ See: The "Beyond 2020: Shaping IDRC's Next Strategy" (Nov 2018) report for a Centre-wide reflection as well as here: https://youtu.be/_sC2JSDexU

account in these contexts). Other IDRC portfolios and teams, such as Governance and Justice, might be better suited to deliver on those priorities, such as supporting conflict resolution and peacebuilding. With this said, neglecting these countries risks seeing them fall further behind in terms of vulnerability and development, and runs counter to the 2030 Agenda objective of prioritizing those in greatest need first (UNDP, 2018). BRACED has put forward some decision making criteria to help guide where investment might be directed, which includes building on past work, working with established actors in the countries, ranking potential impact as limited, and some ‘quick wins’ (BRACED, 2016). This program’s experience also highlights the need for flexibility, tailored approaches to accepting and managing risk, and establishing inclusive and trust-building processes for setting agendas for action.

- **Urban adaptation to climate change:** While urban areas have received attention from research and policy guidance (e.g. SUP, 2018), numerous respondents identified the need for continued support to emerging cities in the Global South. Cities are deeply connected to both climate and development trajectories in the South, and are seen by many as critical sources of action and innovation for climate adaptation and mitigation. The recent assessment report ‘Climate Change and Cities’ of the Urban Climate Change Research Network highlights five pathways to urban transformation which aligned with many of the points raised by respondents and highlighted in our thematic review above:
 - Pathway 1 – Integrate Mitigation and Adaptation;
 - Pathway 2 – Coordinate Disaster Risk Reduction and Climate Adaptation;
 - Pathway 3 – Co-generate Risk Information;
 - Pathway 4 – Focus on Disadvantaged Populations;
 - Pathway 5 – Advance Governance, Finance, and Knowledge Networks.(Rosenzweig et al., 2018)

These pathways point to the integration, co-production, knowledge brokering, network-building, and partnership priorities we have raised in Section 2 above, as well as the need for a sharper focus on inequality, marginalization, and vulnerability. Supporting the momentum of existing networks already working within this space and building bridges between research, civil society, and governance communities at city-scale are important elements of this. Calls for emphasis on urban contexts also imply a focus on mobilizing evidence that can inform practical responses in terms of resilience building and risk reduction within infrastructure development, service provision, and models of financing adaptation.

Modalities for equitable and impactful action:

- **Adaptation action as a collaborative enterprise:** In a systematic review of literature on climate change vulnerability, Ford et al (2018), suggest that the next generation of research should catalyze collaboration across disciplines and link research to decision

making. The need to catalyze networks and partnerships, and support knowledge co-production and collective learning processes to better understand climate impacts and responses in line with development priorities were among the most consistently cited priorities. Of note is the view that these collaborations should seek to engage partners in decision-spaces (cities, ministries, businesses, etc.) not as ‘targeted beneficiaries’ of collaborations but as active partners. Evidence from large programs including the DFID-funded ACCRA program (Jones et al, 2017) has demonstrated the potential impact of this model of collaboration, which can be supported through exchanges, secondments, and other means of strengthening the interfaces between research, policy, and practice. Lessons on how to enable such place-based collaboration and how to manage its inherent challenges should guide future investments to promote collaborative and use-oriented research (Ayala-Orozco et al, 2018). Exploring how to recognize and reward collaborative research, as it diverges from many of the incentives within traditional research settings, also offers the potential for deeper transformation (Irwin et al, 2018).

- **Supporting new capacities and leadership in the Global South:** Perhaps unsurprisingly, one of the areas that has had the most long-standing focus in IDRC’s programming is almost universally seen as a top priority. With this said, the nature of the capacity being called for has evolved as discussed in Section 2. At the individual and institutional levels respondents noted that significant progress has been made in developing technical capacities, and the emphasis now rests on mobilizing that capacity to support decision-making. One respondent was emphatic in calling for a new cadre of experienced knowledge brokers in the Global South, as well as for supporting networks through longer-term investment that helps to establish trust. IDRC’s experience in building networks on environmental economics and climate finance could be instructive here. There was caution against seeking to set up new networks unless necessary, instead prioritizing smaller-scale and strategic investments into existing processes. There was also caution, given the scale of needs and urgency of action, against relying solely on traditional individual academic capacity building programs (e.g. PhD scholarships and fellowship programs), which can be high-cost and may not enable the mobility of expertise. Instead respondents encouraged IDRC to consider out-of-the-box options that enable the scaling of capacity building, and systems change (e.g. tailored training, which becomes mandatory for all personnel of an agency).

A related area of capacity need is in supporting organizational leadership roles for Southern institutions, particularly in larger multi-partner initiatives. If we are to take seriously the idea of expanding support for locally-led multi-partner research that can engage with policy processes, this becomes an important area of action. Finally, wider systemic capacity support is also seen as needed, and is enabled through the forms of collaboration described in the point above. One note of caution to be made in regard to

capacity support, however, is that the needs are uneven in the Global South, with some countries receiving very limited flows of investment and thus running the risk of falling even further behind. Ensuring that investments prioritize capacity ‘hotspots’ is therefore a challenging yet important concern.

3.2 IDRC’s niche in the climate and development landscape

Having taken stock of lessons and good practices emerging from past programming, and trends on the horizons of action on climate, we now focus specifically at areas of alignment between priorities and what are perceived to be IDRC’s (and the Climate Change Program’s) strengths and image internationally. Nearly all respondents reported having a good or very good knowledge of IDRC’s past work, with the majority having worked directly with the Centre as grantees, funding partners, or former employees.

- **Mission & Vision: Building on past strengths and core values in programming**
Respondents signaled that IDRC’s work is most impactful when focused on the Centre’s core values and areas of focus, namely supporting Southern capacity to address local development challenges with an emphasis on vulnerability, poverty and inequality. This continues to be an important niche, particularly as the global community seeks to find avenues for aligning climate and development agendas in line with international frameworks. Global experts view IDRC as a leader with a strong reputation in these areas of work, and believe IDRC should build upon these core aspects of its work. For the Climate Change Program this means ensuring that new programs retain their strong focus on the dynamic interface of climate and development. This could mean looking, for instance, at the non-climatic drivers of the impacts of weather-related events, such as the interactions between infrastructure and flooding in rapidly-urbanizing settings. As climate signals intensify globally, research will also be needed to understand the cascading nature of risks, and the thresholds for vulnerability that might be exceeded, and what these will imply for countries’ development pathways. In both of these areas, IDRC’s commitment to ensuring that gender and social difference are central dimensions of inquiry remain essential.

Maintaining IDRC’s long-standing focus on capacity development in this work means, as we have stated above, ensuring that the leadership in defining and mobilizing strategies to respond rests with well-placed partners in the Global South. IDRC’s convening role can serve to amplify, translate, and support this model of working through North-South and South-South partnerships. IDRC’s presence ‘on the ground’ through regular project monitoring visits, its regional offices, and its team of high-capacity Program Officers are identified as unique and important assets to enabling this support for emerging capacities.

- **Connection: Leveraging IDRC's networks and 'brand' to engage with diverse partners in the South**

IDRC is seen as an 'honest broker' able to convene conversations and partnerships (in French, English and Spanish) to bring evidence, policy and practice into dialogue in challenging contexts. This kind of collaboration across languages and across natural and social sciences, including with partners beyond the academy is hard to fund and to implement. The processes do not necessarily unfold smoothly due to epistemic differences, as well as differences in priorities and in timescales of focus. This creates a need for process-based support including a brokering function to help people to work and learn across these boundaries. Leveraging the in-house know-how from IDRC's Program Officers to broker partnerships, help to build trust, and sustain dialogue is a key opportunity. This could also include drawing in participation and complementary investment through IDRC's international networks of bilateral donors, philanthropic foundations, and intergovernmental agencies, as well as raising broader awareness of the importance of collaborative models of research. The scale of this need likely exceeds the Climate Change Program's own capacity to perform this convening on its own. This makes investments into partners who are able to work in this same spirit (such as the recent CDKN program and the FFLA work on cities in LAC) an important part of IDRC's niche moving forward.

- **Action in decision spaces: Serving as a partner and convener for engagement with national/sub-national governments**

Building on the previous point, IDRC is seen to be strategically placed as a trusted intermediary for working with national and sub-national government representatives. This provides scope for supporting capacity strengthening within governments and with policy makers. Respondents observed that, despite the growing investments into international climate finance, there remains weak capacity within many of the countries most impacted by climate change to plan and use funds effectively. Capacity development is needed to help governments across all scales (national to local) to implement and monitor the effectiveness of resilience building. The evidence on how this can be done in practice remains weak, and must be the product of local-level piloting and experimentation. IDRC is uniquely placed to support this model of experimentation with a dedicated knowledge exchange and learning function to ensure local experiences can be translated upward into a broader set of insights and lessons learned. Through its past experience establishing and sustaining these models of partnerships, the Centre has also developed insights on the challenges and transaction costs they bear. Doing so means leveraging the local and global partnerships noted in the point above to support this planning agenda.

- **Areas to avoid:** Particularly helpful in the insights shared by respondents were suggestions on areas that IDRC would be advised *not* to engage in. This suggests limits amid a potentially limitless range of entry-points for action. Two areas highlighted were the commissioning of more ‘upstream’ academic and science-based research, and efforts at mobilizing international and corporate finance. Other institutions are seen to be better positioned to play these roles, and they are not seen to be as well aligned with IDRC’s niche or values. IDRC might instead look to establish partnerships, for instance with Canada’s research councils. Recent DFID experience through the Future Climate for Africa and Science for Humanitarian Emergencies and Resilience programs may offer a helpful model.

4. Opportunities for IDRC

What stands out from the feedback of respondents about IDRC’s programming on climate change is a strong message not to try ‘reinvent the wheel.’ Rather, respondents said, IDRC should build on the niche it has already established for itself over the past 48 years. IDRC has a strong, positive reputation as a partner of choice. This is probably why many of the lessons and opportunities we have highlighted do not seem to be strong departures from past strategic reflections. The temptation to follow trends, as opposed to following an established mission and vision, some respondents noted, may result in activities that are difficult to bring together and present in a cohesive way. Despite the firm anchoring of these ideas in established IDRC practice, there are nonetheless specific areas of contribution where IDRC can make novel and important headway. We outline these opportunities in the table below. The opportunities we have set out below represent a synthesis of proposals from respondents and are presented as a set of options that could be selected, refined, or combined in line with IDRC’s strategy development.

Opportunity area	What it means	What it might look like	Fit in IDRC portfolio
Clarify IDRC’s climate ‘offer’ and mandate.	Initial thinking in the draft strategy highlighted key directions for the Climate Change Program (CCP). Building upon this, further work needs to establish and communicate a clear CCP vision, mission and mandate (informed in part by IDRC’s overall vision) to partners, prospective grantees, and other IDRC programming areas. This will provide an organizing structure and convening platform, and will support decision making on coherent investments into future programming.	As highlighted in Sections 2.7 and 3.2: Respondents emphasized elements of IDRC’s core mandate (poverty, inequality, gender and social difference, use-oriented research), as well as the CCP approach (focus on novel partnerships and collaboration across disciplines and contexts) as elements that could constitute this mandate.	Informs all aspects of the portfolio. Central to the points below.
Adopt a ‘risk portfolio’ approach to program design	Choices around investing in established vs. emerging grantees, regions, or ideas are inherently linked to decisions around risk. As a public institution, IDRC has a duty to exercise due diligence but this should not be at the expense of investing where needs are the greatest. Adopting a risk portfolio approach can help CCP make strategic decisions around where to assume greater risks while ensuring that a well-balanced portion of the	As highlighted in Section 3.1: Building on existing models we propose the following options to consider: <ul style="list-style-type: none"> Determine an optimal mix of ‘core’, and ‘exploratory’ or ‘risky’ programming based on where, how, and with whom programs are implemented. This might be a ‘70/15/15’ split, for instance. 	Informs all aspects of the portfolio. Central to the points below.

	<p>program’s investment remains in important but tested actions.</p>	<ul style="list-style-type: none"> ● Mitigate high-risk locations through more established grantees, or vice-versa. A risk rating system could help with this assessment. ● Plan for higher rates of failure in the risky elements of the portfolio. Aim to learn from the process from the outset. ● If IDRC’s internal risk management systems present barriers, consider investing via strategic partners. 	
<p>Deepen and expand program engagement in evidence generation to support decision making</p>	<p>For demand-led programming, start with the decision spaces and their needs. Focus on ‘right-scale’ partnerships between in-country research partners with a proven engagement capacity, and partners from decision spaces committed to engaging in co-production (finding a balance between collaborations that are too large and those that are too localized). Provide capacity support for synthesis across projects and knowledge brokering at higher scales through regional/international partners and ‘grants plus’ support from Program Officers (this may have implications for project selection, Program Officer tasks and the role of regional offices). These partnerships add value as contributing robust evidence and clear communication, into global and national platforms. A shift towards this model may mean moving away from open calls in some contexts, returning to crafting smaller context-specific partnerships and grant opportunities, as well as rebalancing selection criteria to avoid excessive bias towards research outputs.</p>	<p>As highlighted in Sections 2.1, 3.1 and 3.2, some of the relevant decision themes and spaces included:</p> <ul style="list-style-type: none"> ● Low-carbon climate resilient development pathways for mid-size and secondary cities; ● Business case development and financing models for adaptation and low-carbon development; ● Resilient services (energy, water, waste) and value chains; ● Vulnerability thresholds (e.g. heat stress) and their implications for development outcomes; ● Bridging adaptation and mitigation (low-carbon, co-benefits). Energy highlighted as a critical sector. <p>Across all of these, continue to focus on disaggregation of vulnerability, impacts, and opportunities by gender and other categories of social differentiation.</p> <p>Achieving this outcome may require creative models of research-policy-practice integration. Examples could include embedding Southern researchers in decision-spaces, secondments of decision-makers to local research/ practice-oriented partners, or supporting learning processes that accompany the implementation of</p>	<p>Core component of CCP portfolio. Investments operate with relatively low risk and expectations of strong evidence relevance and uptake.</p>

		climate-resilient programming funded through other avenues (e.g. World Bank, Green Climate Fund, etc.).	
Build key capacities for more resilient systems.	IDRC can continue its emphasis on capacity building, but with a strategic reorientation to important emerging individual and organizational challenges. By looking beyond one-off supports to individuals, the longer-term impact of these investments can be enhanced. IDRC can also support leadership development pathways for individuals. There is no one-size-fits-all options; this work should be a product of context, partners, needs and priorities (e.g. existing support to Think Tanks).	<p>As highlighted throughout the lessons learned and global landscape: Extend capacity strengthening beyond the individual to organizations and networks. This might occur through different modalities, such as embedded e-learning or technical support for staff of a Ministry, as opposed to supporting a single champion.</p> <p>Support to individual researchers/scientists may still be useful, but focus can shift from technical capacity to strategic capacities for knowledge mobilization in decision-spaces, and engagement in transdisciplinary action.</p> <p>Capacity support <i>to</i> decision-spaces via IDRC grantees could help cities improve their ability to identify priorities, access and manage climate finance, and use those funds towards impactful planning.</p>	Operating alongside core evidence generation and decision making engagement work. The experimental ideas may be higher risk, but have the potential to affect systems change, rather than focusing on the individual level.
Invest in IDRC's role as a broker, convenor and enabler of learning from practice.	IDRC is uniquely placed to convene networks, decision-makers and partnerships working in developing country contexts to learn from the shift toward the implementation of adaptation policy. This emphasizes IDRC's brokering role, both in national contexts, and across scales as lessons are documented, compared and communicated to international fora (IPCC, UNFCCC's COP and other relevant processes). This builds on the CCP's long tradition of supporting action research. Establishing and nurturing these partnerships may have high transaction costs.	<p>As highlighted in Section 2.7: A range of options exist to support this area of opportunity:</p> <ul style="list-style-type: none"> ● Support research to learn alongside implementation of large-scale adaptation actions, monitoring processes and outcomes of interventions evidence on what works may be lacking. ● Use IDRC's reach to convene reflections on key areas of programming (e.g. cities) with foundations, funders, and networks to advance the state of knowledge. Continue to promote grantee visibility in these spaces. ● Facilitate cross-portfolio learning by bringing together grantees working on 	This remains central to the work and furthers this as a core value of what IDRC stands for and is known to work on.

		<p>similar issues across contexts, or on different issues in similar contexts.</p> <ul style="list-style-type: none"> • Ensure program design and financing have horizon-scanning, learning and responsive functions built into them. These can identify upcoming key issues, and support mobilization of grantees in response to these windows. 	
Scale up work in high-vulnerability low-engagement regions	<p>The CCP has limited involvement in the countries with the greatest vulnerability and lowest capacity to respond to climate change. Many of these countries are fragile and conflict affected states. While recognizing the risks involved, IDRC should explore opportunities, lest these people and countries get left behind. In contexts where climate action is not the priority, CCP might consider where climate change is intersecting with higher-priority development and humanitarian concerns like conflict, disaster risk, or food/water security.</p>	<p>As highlighted in Section 3.1, there are opportunities in experimental humanitarian contexts (e.g. using satellite data). This may have the potential to create new ways of working in difficult contexts. There are other ideas of supporting South-South partnerships for regional capacity building, enabling collaboration within regions to support fragile and conflict affected states (e.g. Uganda and South Sudan; Ethiopia and Eritrea). This might involve drawing upon the expertise and networks within partners in the regions to identify high-potential South-South collaborations, lessening the demand on Program Officers to conduct horizon scanning in countries where the CCP does not have past partners, or identifying potential South-South collaborations. Given the risk profile involved, this may require innovative approaches to programming.</p>	<p>Higher risk segment of the portfolio, may be experimental or exploratory.</p>
Exploration and experimentation on future problems and transformation / transformational research	<p>One of the limitations of the ‘core’ work of evidence generation and decision support is that it revolves around well-defined questions in the current problem space. This approach has two important limitations: 1) it overlooks ill-defined and potential future problems; and; 2) decisions-for-today tend towards incremental adjustments rather than proposals for deeper transformation (Kates et al, 2012). Given these challenges, IDRC should retain some investment in the problems of the future and research that may change the ways we work and think. This is a ‘high risk, potential high return’ type</p>	<p>Experts raised a wide range of potential areas, not all of which feature in Sections 3.1 and 3.2 in detail. Rather than summarizing, we highlight ideas that emerged and can be considered within an exploratory or experimental segment of the portfolio:</p> <ul style="list-style-type: none"> • Beyond 2030: near- vs long-term limits to adaptation, maladaptation and transformation. 	<p>Smaller and higher-risk portion of the portfolio.</p>

	<p>of investment, wherein a high rate of ‘failure’ is expected. The exact nature of these investments should be informed and driven by the CCP mandate.</p>	<ul style="list-style-type: none"> ● Social-psychological research toward enabling transformative change; ● Advancing a new discourse for climate justice that might gain political traction. ● Advancing climate action in the face of weakening multilateral institutions. ● Pathways for transitioning to low-carbon economies. ● Simplifying access to and delivery of climate finance. ● Assessing modalities for private-public partnership across different contexts ● Connecting the private sector’s ‘autonomous venturing’ with programmed interventions. <p>In areas where basic and field-building research is a core component, IDRC might consider partnering with Tri-Council Canadian agencies (SSHRC/NSERC/CIHR) to link more fundamental research practice with piloting, application and knowledge sharing functions.</p>	
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Annex 1. Interviewees

External Interviewees

Name	Affiliation
Bruce Campbell	CGIAR Climate Change Agriculture and Food Security Programme (Director)
Purnamita Dasgupta	Institute for Economic Growth (Professor)
Angie Daze	International Institute for Sustainable Development (Associate)
Ken DeSouza	UK Department for International Development (Research Manager, Research & Evidence Division)
Jonas Fleer	Frankfurt School of Finance (Programme Coordinator)
James Ford	Leeds University (Professor)
Christine Gruening	Frankfurt School of Finance (Senior Project Manager)
Robert Hofstede	Former IDRC (Associate Director - Climate Change)
Saleem Huq	International Center for Climate Change and Development (Director)
Sophia Huyer	CGIAR Climate Change Agriculture and Food Security Programme (Gender and Social Inclusion Research Leader)
Rachel James	Oxford University (Research Fellow)
Guy Jobbins	Overseas Development Institute (Research Fellow)
Richard Klein	Global Center on Adaptation (Head of Research)
Caroline Larivee	Ouranos (Team Leader, Vulnerability, Impacts & Adaptation)
Ana Lima	Independent Scholar
Eva Ludi	Overseas Development Institute (PRISE Principal Investigator)
Nathanial Matthews	Global Resilience Partnership (Program Director)
Kerry Max	Global Affairs Canada (Deputy Director, Climate Finance Governance)
Heather McGray	Climate Justice Resilience Fund (Director)
Thaven Naidoo	Private Financing Advisory Network
Mark New	University of Cape Town (ASSAR Principal Investigator)
Diane Pruneau	University of Moncton (Professor)
Aromar Revi	Indian Institute for Human Settlements (Director)

Meggan Spires	ICLEI Africa (Senior Manager: Climate Change, Energy & Resilience)
Gemma Tanner	UK Department for International Development
Madaka Tumbo	University of Dar es Salaam (Associate Director and Lecturer, Institute of Resource Assessment)
Maarten van Aalst	Red Cross Climate Centre (Director)
Rosalind West	UK Department for International Development (Climate Science Advisor)
Gina Ziervogel	University of Cape Town (Associate Professor)

IDRC Climate Change Program Interviewees

Name	Theme
Walter Ubal	Cities, Finance
Heidi Braun	Cities
Bhim Adhikari	Finance
Lowine Hill	Finance
Michele Leone	Hotspots
Marie-Eve Landry	Hotspots
Edith Ofwona	Climate science
Sandra Gagnon	Gender
Georgina Cundill-Kemp	Gender, Leadership
Alicia Iglesias	Leadership
Melanie Robertson	Leadership
Bruce Currie-Alder	Landscape, Opportunities
Lisa Hiwasaki	Landscape, Opportunities

Annex 2. Reviewed Projects

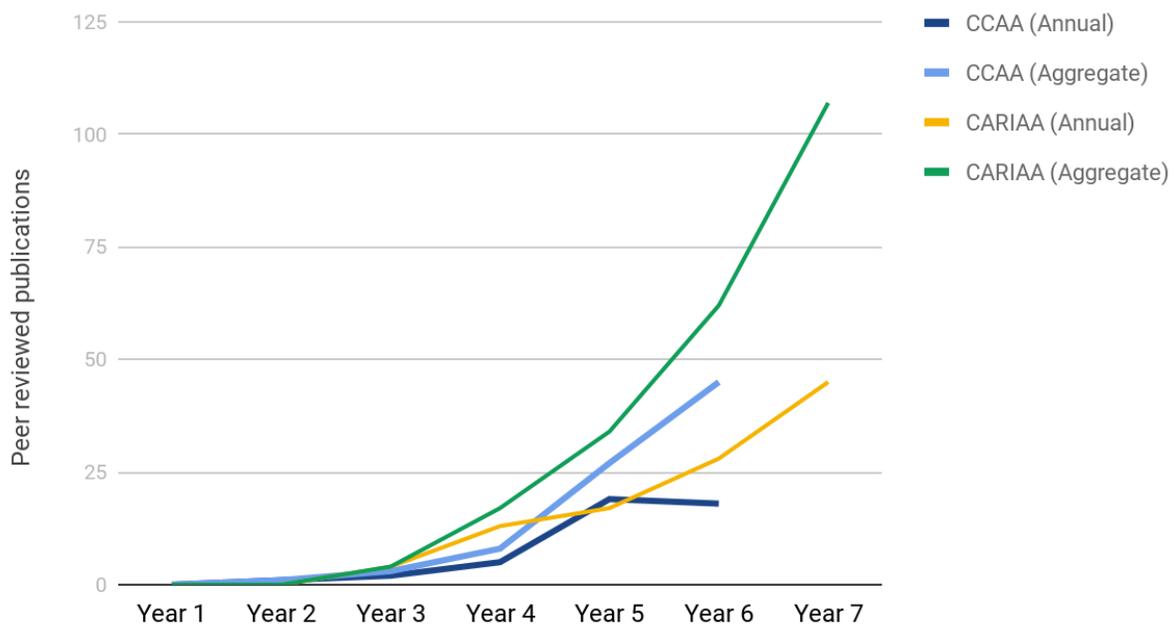
Theme	Project #	Project Name
Leadership	104391	African Climate Change Fellowship
Leadership	106391	African Climate Change Fellowship Phase II
Leadership	107334	African Climate Change Fellowship Phase III
Leadership	108481	Climate Leadership Program Building Africa's Resilience through Research Policy and Practice
Leadership	108441	South Asian Water (SAWA) Leadership Program on Climate Change
Leadership	108443	Building leadership for LAC cities in a changing climate
Leadership	108536	Supporting Climate Change Leaders
Leadership	108058	Adaptation Finance Fellowship Program
Leadership	108754	CDKN Knowledge Accelerator for Climate Compatible Development
Cities	108193	Resilient Cities Initiative on Climate Change in LAC
Cities	108224	Integrated Rural-Urban Water Management for Climate Based Adaptation in Indian Cities (IAdapt)
Cities	108453	Climate Adaptive Action Plans to Manage Heat Stress in Indian cities
Cities	108212	Climate Adaptive Water Management Plans for Cities in South Asia
Cities	107640	Adaptation at Scale in Semi-Arid Regions (ASSAR)
Cities	108230	Adapting South African Settlements to the Impacts of Climate Change
Finance	108074	Mobilizing Private Sector Investment in Adaptation to Climate Change
Finance	107643	Pathways to Resilience in Semi-Arid Economies (PRISE)
Finance	107351	Mobilizing the Private Sector for Adaptation Finance
Finance	108270	Climate Change Risks and Opportunities for B Corporations in Latin America
Finance	108754	CDKN Knowledge Accelerator for Climate Compatible Development
Finance	108058	Adaptation Finance: Linking Research, Policy and Business
Climate science	108693	Strengthening Scientific Evidence and its use to inform policy negotiation and climate implementation in Africa
Climate science	106533	Platform for Exchange between African Research Scientists and Policy-Makers on Climate Change Adaptation
Climate science	108713	Strengthen the use of scientific evidence to inform climate policy, negotiations and implementation in Latin America

Climate science	106594	Using Information and Communication Technologies (ICTs) to Address Water Challenges in Uganda
Gender	107640	Adaptation at Scale in Semi-Arid Regions (ASSAR)
Gender	107642	DEltas, vulnerability & Climate Change: Migration & Adaptation (DECCMA)
Gender	107641	Himalayan Adaptation, Water and Resilience (HI-AWARE)
Gender	108481	Climate Leadership Program Building Africa's Resilience through Research Policy and Practice
Gender	108809	Generating evidence on gender sensitive Climate-Smart Agriculture to inform policy in Central America
Gender	108665	Improved municipal planning in African CiTies – IMPACT for a climate resilient future
Gender	108693	Strengthening Scientific Evidence and its use to inform policy negotiation and climate implementation in Africa
Gender	107644	Adapting to climate change through improved watershed management and payment for environmental services in Morocco's Tensift Basin
Hotspots	107217	Climate Adaptation Research Initiative in Africa and Asia (CARIAA)

Annex 3. Publication data timelines

The Climate Change Program's CCP experience of two large partnership programs (CCAA and CARIAA), highlights some important learning about programming. The publication production timeline emphasizes the importance of longer-term investments, as the investments produce significant output in the latter years. It also shows that there are some decisions that influence the kinds of impacts, this figure highlighting outputs. CARIAA has a number of global experts and high-capacity Northern institutional partners, which facilitated some of higher production of outputs. On the other hand, CCAA placed a greater emphasis on capacity building and Southern leadership. We do not believe this is an 'either-or' decision for the Climate Change Program CCP in the 2020-2030 period, as many new Southern partners have now emerged as important generators of high-quality evidence (Lebel and McLean, 2018).

Peer Reviewed Publication Production Timeline, CCAA and CARIAA



Note: Data includes peer reviewed articles and book chapters. Data drawn from: CARIAA M&E Dashboard, with the last publication entry being 20 Oct 2018; and compiled from the CCAA reports and other available compilations. We are less confident that all CCAA outputs are included in this dataset, as tracking and reporting was not as strong as in CARIAA.

Annex 4. Interview protocols

Section 2: Thematic analysis – IDRC staff

[NAME – THEME – DATE]

- Preamble: Quick overview of the purpose of the study: Recap of the overview/key lessons captured to date to check on accuracy.
- Can you provide a brief background on programming in this thematic area
 - Size of portfolio, number of grantees, duration
 - Objectives (e.g. piloting, building evidence, influencing policy)
 - Why was this focus taken? Drivers?
 - How was this pursued in IDRC’s programming in this area?
 - [Significance] Outcomes and impacts (2 examples of stories of impact)
 - What led to this being impactful?
 - Measurement of success?
 - Lessons learned
- What are the future opportunities in this thematic area?
 - What is IDRC’s potential contribution?
- What are the biggest challenges for research in this area moving forward?
 - Within this thematic area of work?
 - Funding specific - How might IDRC overcome these?

Section 2: Thematic analysis – External thematic experts

[NAME – THEME – DATE]

- Preamble: Quick overview of the purpose of the study
- What are the future opportunities in this thematic area?
 - What is IDRC’s potential contribution?
- What are the biggest challenges for research in this area moving forward?
 - Within this thematic area of work?
 - Funding specific - How might IDRC overcome these?

Section 3: Global landscape

[NAME - ORG - DATE]

3.1 Global action on climate change:

- *What will be the ‘big issues’ facing global climate action in the coming 5 years? Are there specific types of evidence that are lacking to address these areas? (Paris Agenda, SDGs, NDC/NAPs, climate finance, resilience building, etc.)*
- *What are the key fora and mechanisms where investments in knowledge and research can contribute to climate action now & over the coming years?*

3.2 Climate action in the global South

- *How are the opportunities for, and needs of, developing countries evolving?*

- *In particular, is the production and use of evidence on climate change/climate policy evolving in significant ways?*

3.3 IDRC's niche

- *To what extent is IDRC positioned to address the above fora & opportunities? (e.g. Do these fall within areas of strength, represent areas of IDRC potential, or areas IDRC is not well positioned to address?)*