



Research Program on Law & the Environment



International Development Research Centre

Final Technical Report

re

RESEARCH AWARDS FOR YOUNG RESEARCHERS

2012

i) **Basic Project Information**

IDRC Research Output

**RESEARCH AWARDS FOR YOUNG SCHOLARS 2011
(ATTACHED)**

Adaptive Water Management: looking to the future”

By: Rômulo Silveira da Rocha Sampaio
Mariana Monjardim Barbosa
Alicia Iglesias Peralta

Report Type: Awarded research papers

Date: September 2011

Published by: FGV DIREITO RIO

Location: Rio de Janeiro, Brazil

ISBN: 978-85-63265-16-6

IDRC Project Number: 106600-001

IDRC Project Title: *Research Award for Young Scholars in Climate Change and Waters from Latin America and the Caribbean Region*

Country/Region: Brazil / South America and the Caribbean

Full Name of Research Institution: Research Program on Law and the Environment at Getulio Vargas Foundation School of Law in Rio de Janeiro

Praia de Botafogo, 190, 13º andar
Bairro Botafogo, Rio de Janeiro/RJ
Brazil
22.250-900

Name of Researcher/Research Team members:

Rômulo Silveira da Rocha Sampaio
Praia de Botafogo, 190, 13º andar
Bairro Botafogo, Rio de Janeiro/RJ
Brazil - 22.250-900 / rômulo.sampaio@fgv.br / +55 21 3799-5380

Mariana Monjardim Barbosa
Praia de Botafogo, 190, 13º andar
Bairro Botafogo, Rio de Janeiro/RJ
Brazil - 22.250-900 / mariana.barbosa@fgv.br / +55 21 3799-5300

This report is presented as received from project recipient(s). It has not been subjected to peer review or other review processes.

This work is used with the permission of FGV DIREITO RIO

Copyright 2011, FGV DIREITO RIO

Abstract: Among the range of crosscutting issues related to climate change and water, the **Research Awards for Yong Scholars** focused on the proposed topics for the International World Water Conference: i. Adaptive water management; ii. Water resources and global change; iii. Governance and water law; and iv. Knowledge systems. Within the scope of these themes the competition sought for innovative work addressing the “bottom-up” perspective in the following sense: what innovations that emerge from management; or in relations? The objective was to explore emerging drivers of water resources management related to climate change such as: local impacts and conflicts related to watershed management; challenges presented by transboundary aquifers underlying different countries or different states of the same country; economic analysis of water management and allocation and energy issues. The four awarded research papers presented in this publication, authored by young researchers from the Latin America and Caribbean Region, represent an important contribution to the body of knowledge on climate change, driven by researchers from developing countries.

Keywords: water management; water resources; global change; climate change; governance; water law; knowledge systems.

ii) The Research Problem

There was no specific problem in this project as it was designed to foster the research work of young researchers. The outcome was an award granted after a careful, peer and blind review of all research papers submitted. Papers were graded by a committee of experts from the LAC region.

iii) Objectives

As we enter an era of drastically heightened pressure on water resources combined with greater exposure to extremes (drought and floods), managers and decision makers (from users to agencies, to global water initiatives) must reconfigure conventional approaches that have assumed bounded variability in hydrologic, water demand, and institutional terms. This new conception of water management seeks to better integrate scientific, engineering, social, and institutional perspectives. It requires new understanding of multiple factors that influence how water is used and managed and of what we must do to innovate.

Considering this context, the objective of the World Water Congress (IWRA) is to provide a meeting place to share experiences, promote discussion, and to present new knowledge, research results and new developments in the field of water sciences around the world.

Given the link between the theme of the conference and IDRC core portfolio of work, its Climate Change and Water program considered the IWRA conference as a strategic opportunity to highlight the research results from relevant projects in the field that would contribute to and learn from the Congress discussions. The main objective of the competition is to foster multidisciplinary and innovative research on water issues and to encourage novel graduate research in the field of water related impacts of climate change.

iv) Methodology

Organizing a **competition** to support the participation of 4 (four) young researchers from Latin American and the Caribbean region whose work addresses the challenges of innovation in the field of impacts of climate change, in particular on the water sector, including water resources and water services and systems.

Among the range of crosscutting issues related to climate change and water, the **Research Awards for Young Scholars** focused on the proposed topics for the IWRA Conference:

- i. Adaptive water management;
- ii. Water resources and global change;
- iii. Governance and water law; and
- iv. Knowledge systems.

Within the scope of the proposed themes for the IWRA Conference highlighted above, the **Research Awards for Young Scholars** sought for innovative work exploring emerging drivers of water resources management, including climate change; the challenges presented by transboundary aquifers underlying different countries or underlying different states of the same country; local impacts and conflicts related to watershed management in light of the threats imposed by climate change; the concept of sovereignty and its relationship to water and climate change; economic analysis of water management and allocation and climate change; climate change, water and energy.

The project was designed for students formally enrolled in any undergraduate or graduate program (masters or doctoral programs) from Universities in the Latin American and Caribbean region, or those who graduated in the last two years, were eligible to participate in the Research Award for Young Scholars. Selected candidates were required to take care in their own of visa requirements to enter Brazil and that were able to demonstrate formal enrolment in a university program in order to be eligible for receiving the award.

PDMA was in charge of receiving the manuscripts from the candidates for the Research Award for Young Scholars. Prior to receiving the manuscripts, PDMA selected and formed a commission comprised of 5 (five) researchers and scholars from FGV and from different universities and research centres in Brazil with the sole purpose of guaranteeing expedite, independent, multidisciplinary and reliable review of the proposed papers. The commission was in charge of referring 4 (four) research papers for the award. The commission's recommendation was then presented to PDMA and IDRC for publication of the awarded names and preparation for the presentation during the IWRA Conference.

The project workplan was designed in five phases:

- Phase 1: Opening date for the public call for papers. Marketing and advertizing period begins.
- Phase 2: Period for submissions of manuscripts.
- Phase 3: Analysis of the papers and announcement of awarded candidates.
- Phase 4: Organization and preparation for the IWRA Conference.

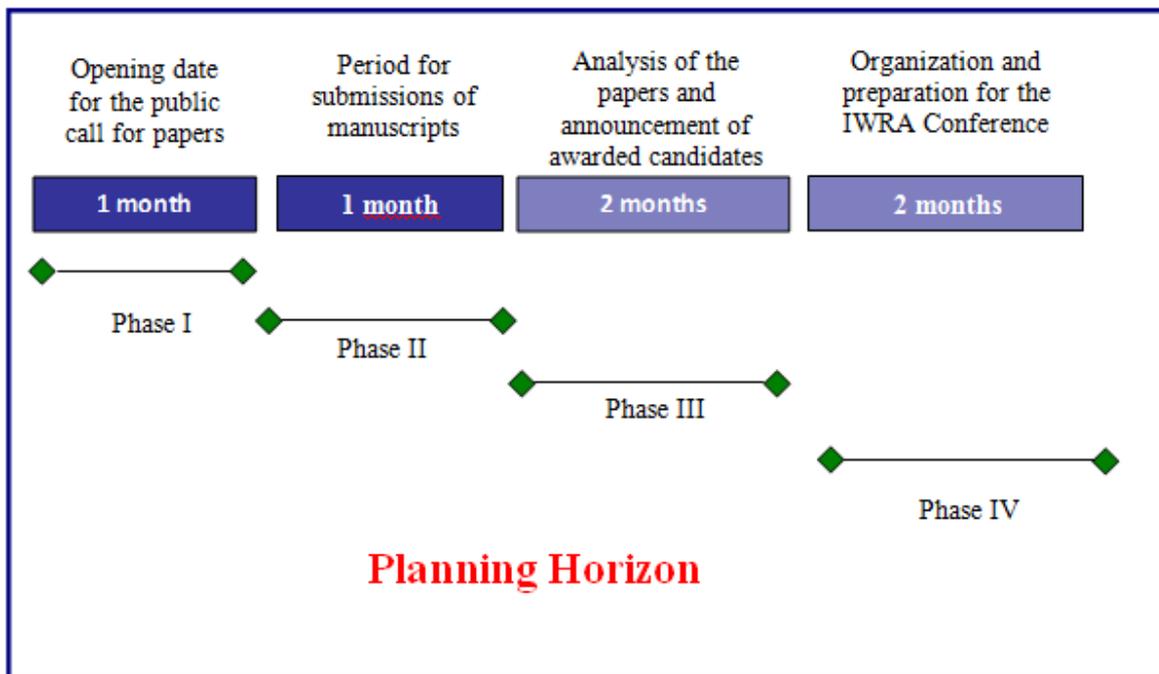
v) **Project Activities**

What was done with available resources? Describe the activities supported under the project and their timelines.

The Research Awards for Young Scholars (RAYS) was promoted and supported by a partnership between IDRC and PDMA. PDMA was responsible for organizing and publicizing the RAYR. IDRC was cosponsoring the project, and worked in partnership with PDMA in the selection of the awarded papers to be presented at the XIV World Water Congress. Specific activities conducted under the project included:

- 1) Developing the call for papers;
- 2) Translating the call for papers (English, Spanish and Portuguese);
- 3) Advertising the call for papers;
- 4) Addressing multiple questions concerning the call for papers;
- 5) Developing a web platform in the PDMA's website to support RAYR activities;
- 6) Selecting the members for the grading committees;
- 7) Reviewing grades from the grading committee;
- 8) Organizing payment for members of grading committee;
- 9) Communicating awardees and arranging for logistics to and from Porto de Galinhas;
- 10) Providing administrative support for activities held during IWRA in Porto de Galinhas;
- 11) Editing the four awarded papers for a book publication;
- 12) Advertising the book published with the compilation of the four awarded papers.

Timeline for the above described activities is summarized by the chart below:



Resources provided by IDRC assisted with hiring a part-time researcher, paying for members of the grading committee, travel expenses associated with bringing awardees and one of member of PDMA's team.

What was learned about the implementation and management of the project's activities? Were certain aspects of project management and implementation particularly important to the success of the project?

In such a short period of time from the opening the call for papers and the IWRA conference taking place in Porto de Galinhas, it was reassuring receiving many quality research papers. Having the opportunity to learn that many brilliant young minds are thinking at high quality level about how to deal with the threats imposed by climate change upon water resources was inspiring. Researchers from all over the world manifested interest in participating in the RAYS. However, due to the nature of the grant supporting this competition, we had to limit the awards to researchers from Latin America and Caribbean countries.

Main lessons learned include leaving more time for planning a competition for such an important conference. Twelve months seems like a reasonable and workable time to prepare all the administrative and marking requirements a competition like the one supported by this project demands. Limiting awards to a specific region may also constrain the quantity and quality of the work. Logistical and in site preparation may require greater administrative support than originally planned for this project.

vi) Project Outputs

The output of this project was the publication of a book compiling the awarded papers. The compilation included the following research papers:

- 1) Hidrossedimentologia de Ambientes Fluviais Naturais e sua Relevância em Estudos de Cursos D'água Artificializados: o Caso do Córrego Ponto Queimada – Belo Horizonte/MG
 - a. By Chrystiann Lavarini, Henrique Pesciotti, Lilian Coeli e Antônio Pereira Magalhães Jr.
- 2) Estudio Comparativo de Perturbaciones Micro Hidrológicas Causadas por la Extracción de Turba em Turbales de la Región de Magallanes, Chile
 - a. By Nelson Alejandro Bahamonde Aguilar
- 3) Hydrological Modeling to Assess the Link Between Water Availability and Vegetation Growth
 - a. By Ingrid Teich
- 4) Water Availability for a Growing Population in the Face of Climate and Land Use Change
 - a. By César Luis Garcia

The main specific achievement was to being able to compile the research papers of young scholars in a publication and make it available in hard copy and open accesses databases enabling, therefore, they have a vehicle to promote globally their important work conducted locally. If it was not for the RAYS important work in the areas of climate change and water might had not reach such a broad and qualified audience.

vii) Project Outcomes

A major outcome of this project was to foster young scholarly research for those who otherwise would not have a chance to participate and network with internationally renowned scholars. By supporting such initiative, IDRC and PDMA/FGV provided for young scholars a unique opportunity to show their work to senior scholars in a major conference such as IWRA.

viii) Overall Assessment and Recommendations

Financial and administrative assistance provided by IDRC made this project possible. The interest in multidisciplinary work called the attention of PDMA/FGV to collaborate in this project. PDMA/FGV is a research center focused on policy-oriented solutions to major environmental problems. The partnership with IDRC brought the necessary incentive and funding to complement PDMA/FGV's ability and funding, enabling this competition to happen.

This project contributed to development by promoting the work of young and underfunded scholars who, without the assistance provided by the partnership between PDMA/FGV and IDRC, would not been able to publicize their important local research and to network with some of the most important scholars in the field of water and climate change. It is not possible to attest, but some of the local solution those young scholars are construing might represent in the future a major contribution to solve some of the scientific and technical uncertainties facing water and climate change. All awardees were able to meet and exchange information with important scholars presenting at IWRA and had the opportunity to present their work during the conference in a special booth made available by IDRC at the conference site.

Had the competition ran for longer, it could attract more researchers in Latin America and the Caribbean. Few months for preparing such an important call for papers might have limited the competition to those who already had something well advanced. Those who were in the early stages of researcher might not had the time to finish a research paper for the RAYS. Expanding the competition geographically might attract more brilliant and young scholars to participate. PDMA had many inquires throughout the call from young researchers from around the world.

As per the value and importance of project relative to the investment of time, effort, and funding, we can attest it was worth doing it. The quality of the work received and the opportunity provided to the awardees were unique. Overall, it was a great opportunity to open to those who would otherwise not have access a chance to promote their local solutions. In that sense, the project fulfilled one of its main objective which was to incentivize "bottom-up" approaches to the challenges of water and climate change.