



ICSU

International Council for Science

International Council for Science (ICSU)

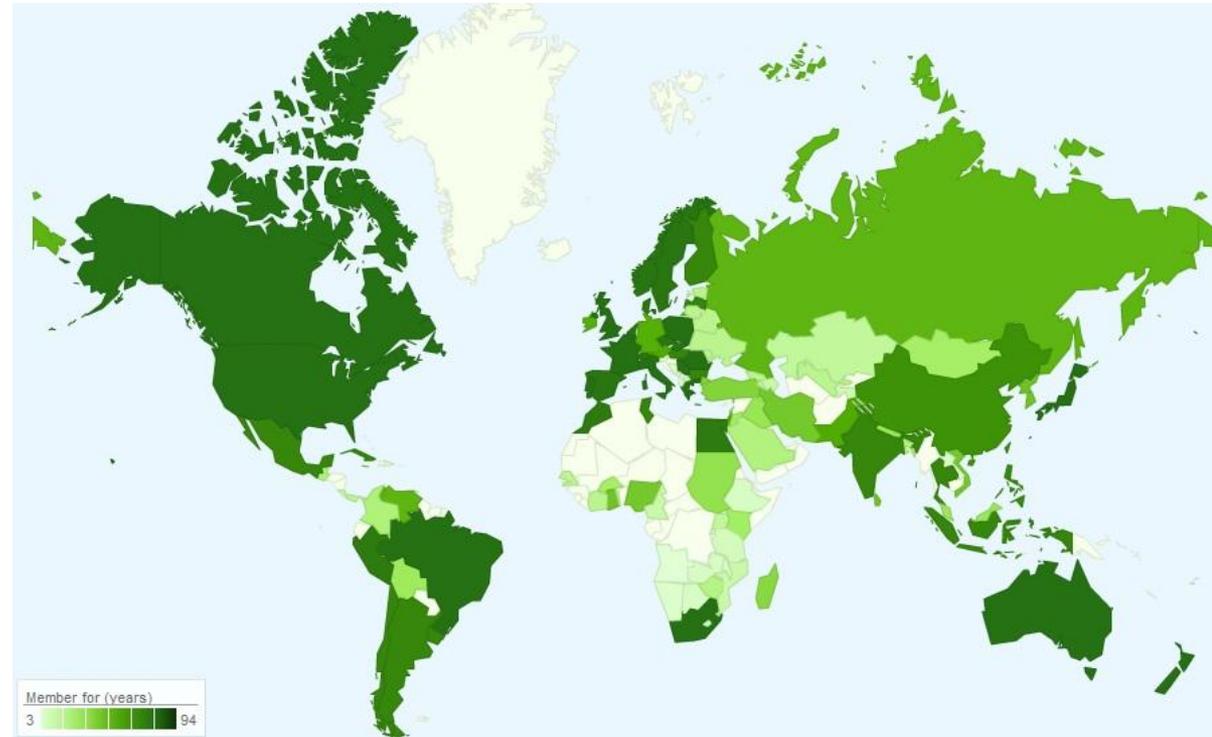


ICSU

International Council for Science

ICSU is...

a **non-governmental organization** with a global membership of national scientific bodies (120 Members, representing 140 countries) and International Scientific Unions (31 Members).





MISSION



ICCSU

International Council for Science

Mission

ICCSU's mission is to strengthen international science for the **benefit of society**.

Strengthening international science for the benefit of society





ICSU

International Council for Science

Mission

To do this, ICSU mobilizes the knowledge and resources of the international science community to:

- Identify and address major **issues of importance** to science and society.
- Facilitate **interaction** amongst scientists across **all disciplines** and from all countries.
- Promote the **participation of all scientists** in the international scientific endeavor.
- Provide independent, authoritative advice to stimulate **constructive dialogue** between the scientific community and governments, civil society, and the private sector.



VISION



ICSU

International Council for Science

Vision

The long-term strategic vision is for a world where science is used for the **benefit of all**, excellence in science is valued and scientific knowledge is effectively **linked to policy making**.





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International Council for Science

Vision

In order to achieve this vision, ICSU developed a Second Strategic Plan, 2012–2017 which identifies key priorities and associated activities.

These activities focus on three areas:

1. INTERNATIONAL RESEARCH COLLABORATION

2. SCIENCE FOR POLICY

3. UNIVERSALITY OF SCIENCE



ICSU

International Council for Science

Vision

1. INTERNATIONAL RESEARCH COLLABORATION

ICSU works with strategic partners to plan and coordinate international research programmes that address major issues of relevance to both science and society.





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International Council for Science

Vision

2. SCIENCE FOR POLICY

ICSU works at the intersection of science and policy, to ensure that science is integrated into international policy development.

ICSU promotes dialogue and shared understanding between the scientific community, policy makers and society more broadly.





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International Council for Science

Vision

3. UNIVERSALITY OF SCIENCE

Developing a truly global scientific community on the basis of equity and non-discrimination.

It incorporates issues related to the conduct of science; capacity building; science education and literacy; access to data and information and the relationship between science and society.



Principle of the Universality of Science (ICSU
Statute 5)



STRUCTURE



ICSU

International Council for Science

General Assembly

Main ICSU Secretariat

Executive Board

Policy Committees

Meets every three years

REGIONAL OFFICES

Africa

- sustainable energy
- hazards and disasters
- health and human wellbeing
- global environmental change

Asia & Pacific

- sustainable energy
- ecosystem approach
- hazards and disasters

Latin America & Caribbean

- sustainable energy
- natural disasters
- mathematics education
- biodiversity

Arab Region

In negotiations



ICSU

International Council for Science



ICSU was
funded in
1931



ICSU-ROA
was funded
in september
2005



ICSU-ROAP
was funded
in september
2006



ICSU-ROLAC
was funded in
april 2007



ICCSU

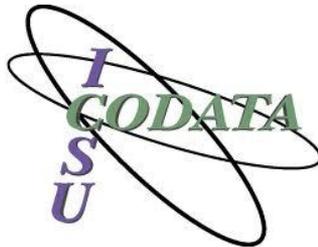
International Council for Science

17 Interdisciplinary Bodies



IHDP

International Human Dimensions Programme on Global Environmental Change

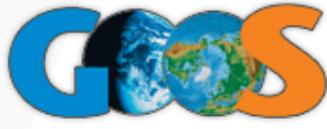


GCOS

GLOBAL CLIMATE OBSERVING SYSTEM



GLOBAL TERRESTRIAL OBSERVING SYSTEM



Global Ocean Observing System

GLOBAL IGBP CHANGE

International Geosphere-Biosphere Programme



PECS



IRDR

Integrated Research on Disaster Risk



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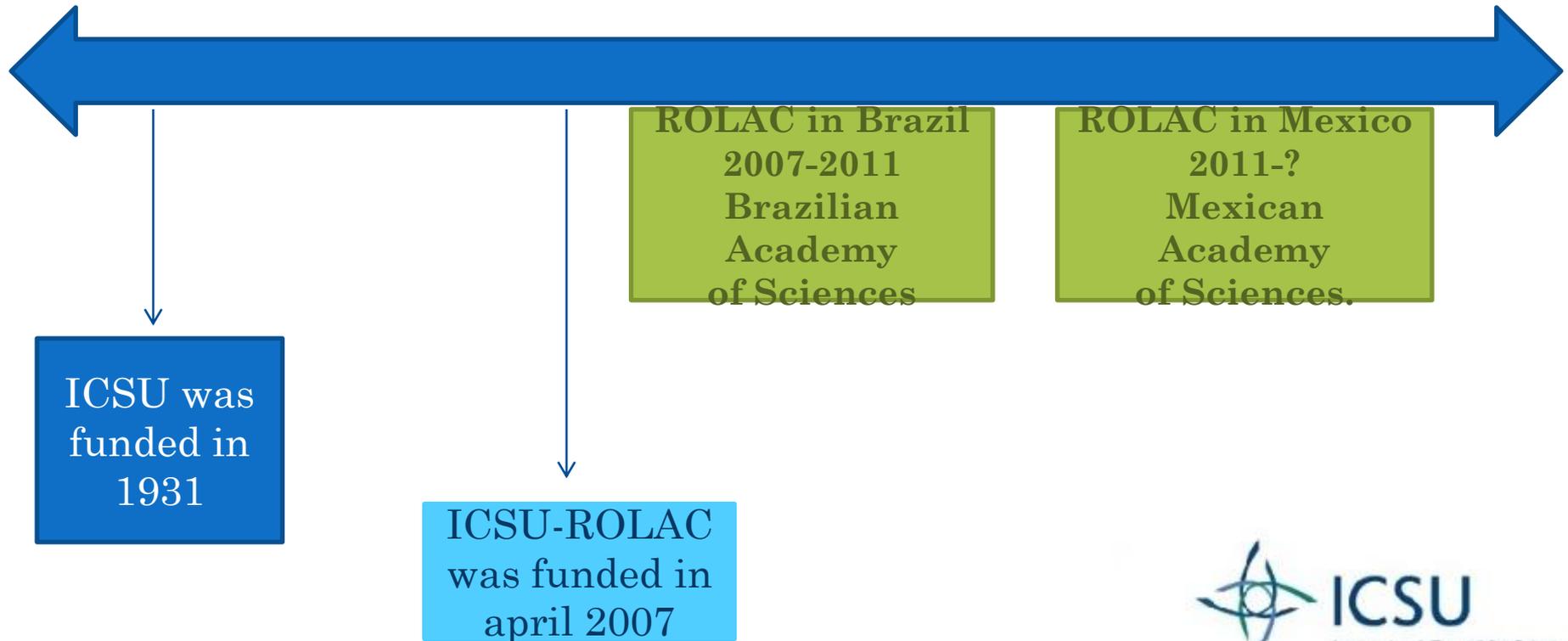
International Council for Science (ICCSU)

**REGIONAL OFFICE FOR LATIN AMERICA
AND THE CARIBBEAN (ROLAC)**



Regional Office
for
Latin America
& The Caribbean

Timeline





Goals

1. Help to ensure that the regional priorities are reflected in the international ICSU strategic development.
2. Enhance the participation of scientists and scientific organizations from the region, play a more effective role in strengthening science within the context of regional priorities.





Specific Actions

- Assists ICSU and its members in their strategic planning for activities in the region and ensures that it is well linked to the community, networks and organizations in the region;
- Identifies and elaborates science and policy priorities in the region. Facilitates the collaboration between ICSU and scientists and policy makers in the region to address them;
- Promotes and facilitates capacity building in the region;



Specific Actions

- Implements the science plans of the four ICSU ROLAC scientific priority areas.
- Strengthens the links between ICSU and its National Members and Regional Contacts of Scientific Union members in the region;
- Facilitates the expansion and active membership of ICSU to institutions in Latin American and Caribbean countries;



Specific Actions

- Assist in the integration of key regional scientists and institutions;
- Assures the integration of ICSU ROLAC's work into the global agenda of ICSU.

Name	Field of Expertise	Institution	Country
José Luis Morán	Physics	National University of Mexico (UNAM)	Mexico
Anthony Clayton	Sustainable Development	University of the West Indies	Jamaica
Patricio Felmer	Mathematics	Chilean Academy of Sciences	Chile
Juan Jaén	Physics, Chemistry	National University of Panama	Panama
Arturo J. Martinez	Botany, Agriculture	National Council for Scientific and Technological Research of Argentina	Argentina
Humberto Rodríguez	Physics	National University of Colombia	Colombia
Jerson Silva	Biophysics, biochemistry	Brazilian Academy of Sciences	Brazil
Lillian Avlarez	Physics	Cuban Academy of Sciences	Cuba

Ex-Oficio

Members

Name

Luiz Davidovich

Manuel Limonta

Jose Luis Moran-Lopez

Steven Wilson

Role

ICSU Executive Board Liaison

Regional Director

Chairman of the Regional Committee

ICSU Executive Director



Regional Office
for
Latin America
& The Caribbean

ICSU ROLAC secretariat

Hosted by the **Mexican Academy of Sciences** in Mexico City, Mexico and under the leadership of the Regional Director, the secretariat coordinates and implements the scientific activities of the Regional Committee. It also acts as liaison to ICSU headquarters in Paris.





Regional Office
for
Latin America
& The Caribbean

ICSU ROLAC secretariat

Director: Manuel Limonta, Prof. Ph.D.
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Science Officer: Gabriel Iturriaga, Ph.D.
gabriel.iturriaga@icsu-latin-america-caribbean.org

Administrative Officer: Lic. Camilo García
secretariat@icsu-latin-america-caribbean.org

Communications Officer: Angélica Bucio



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Barbados

Cayman Islands

Dominica

Grenada

Guadeloupe

Haiti

Martinique

Puerto Rico

St. Kitts and Nevis

St. Lucia

St. Vincent and the

Grenadines

Trinidad and Tobago

Turks & Caicos Islands

Virgin Islands



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The four work programs

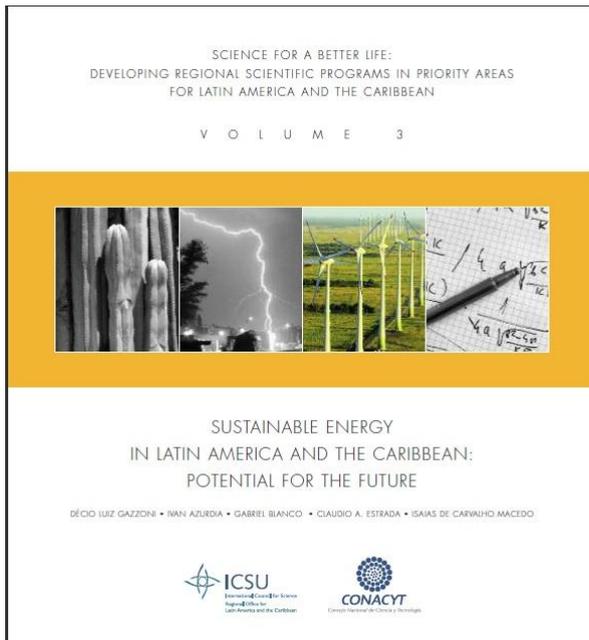
1. Sustainable energy
2. Natural disasters
3. Mathematics education
4. Biodiversity



Regional Office
for
Latin America
& The Caribbean

The four work programs

1. Sustainable energy



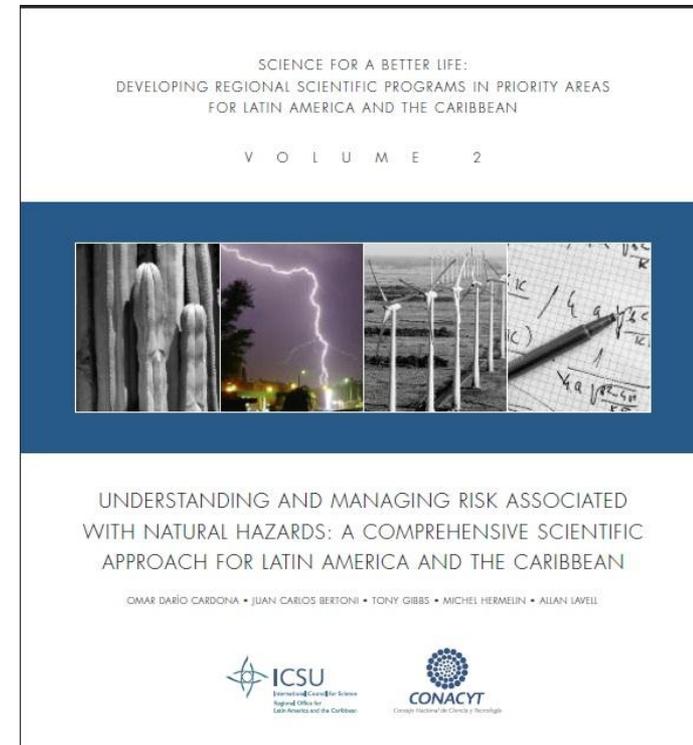


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The four work programs



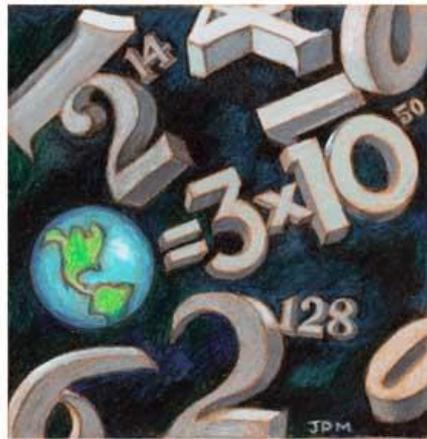
2. Natural hazards



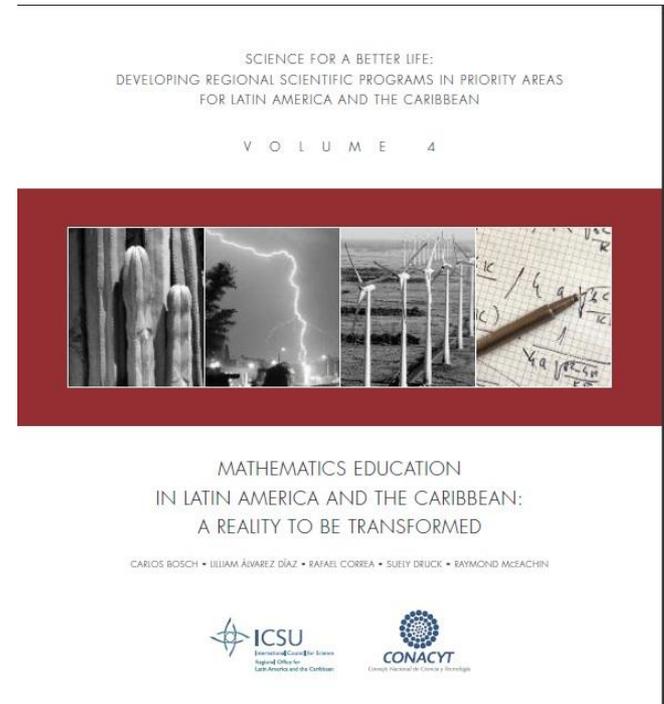


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The four work programs



3. Mathematics education



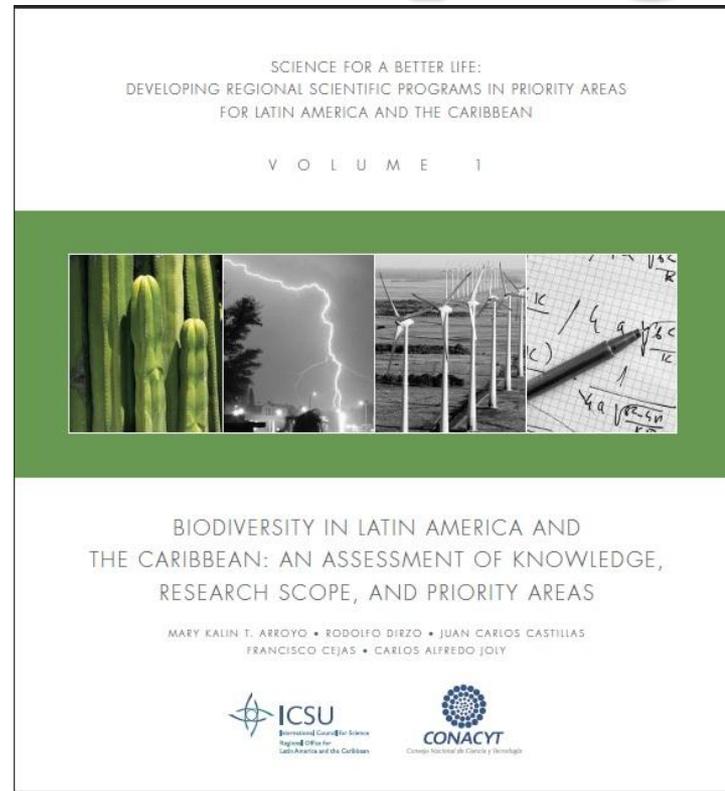


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Latin America
& The Caribbean

The four work programs



4. Biodiversity





SCIENCE FOR A BETTER LIFE:
DEVELOPING REGIONAL SCIENTIFIC PROGRAMS IN PRIORITY AREAS
FOR LATIN AMERICA AND THE CARIBBEAN

V O L U M E 2



Natural Hazard

UNDERSTANDING AND MANAGING RISK ASSOCIATED
WITH NATURAL HAZARDS: A COMPREHENSIVE SCIENTIFIC
APPROACH FOR LATIN AMERICA AND THE CARIBBEAN

OMAR DARÍO CARDONA • JUAN CARLOS BERTONI • TONY GIBBS • MICHEL HERMELIN • ALLAN LAVELL





Natural Hazards

Disasters associated with environmental hazards reflect and signify unmanaged risks, and may also be seen as representing unresolved development problems.





Natural Hazards

Disaster risk originates from socio-environmental processes; society generates disaster risk by transforming physical events into hazards through social processes that increase the exposure and vulnerability of people, their livelihoods, production and support infrastructure and services.



Natural Hazards

Disaster risk and disasters have been escalating constantly over the last five decades, and due to our current climate-change processes, they can be expected to increase even further in the future if concerted actions for risk reduction are not enacted.



Natural Hazards

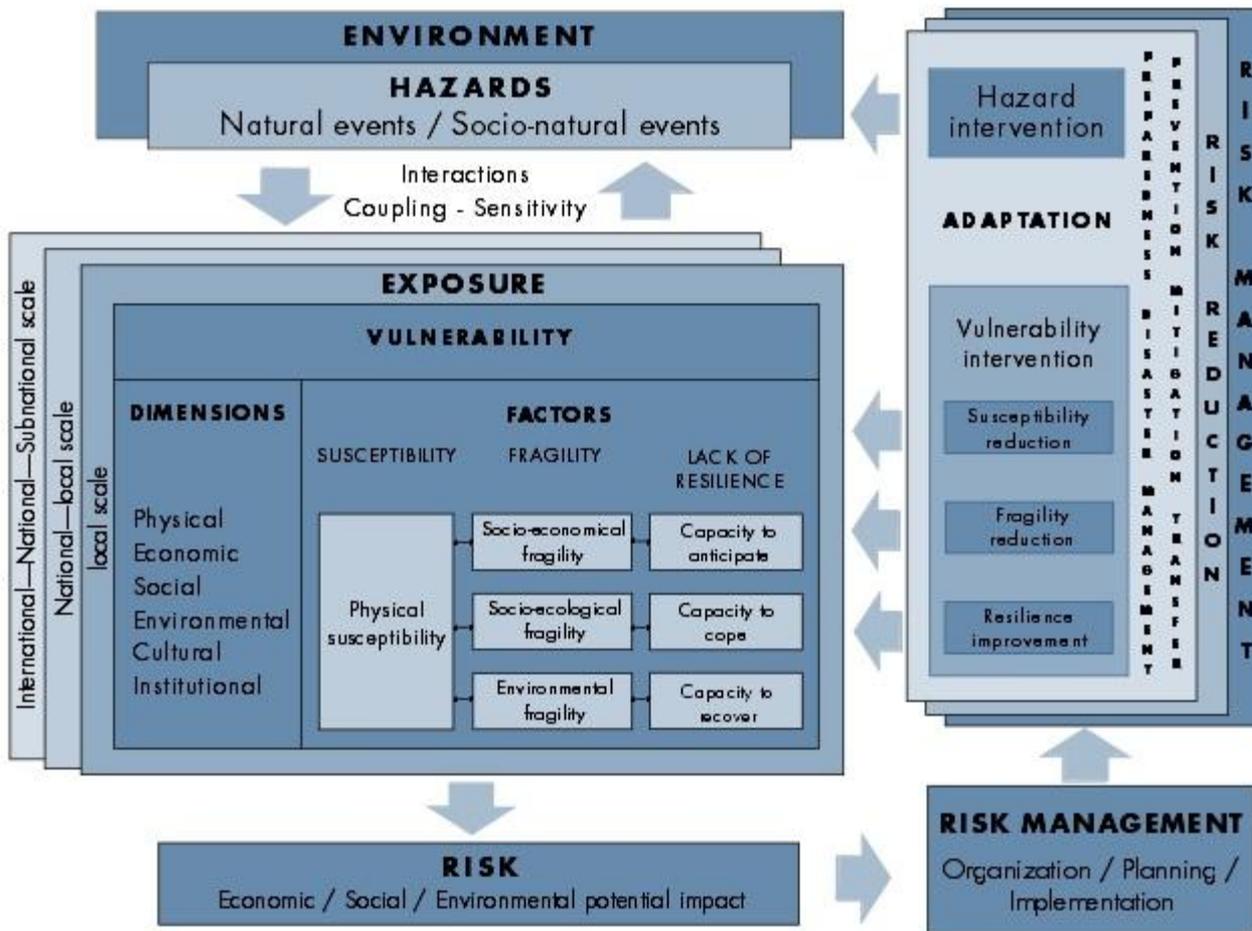
The disaster risk reduction requires the implementation of disaster risk management principles and practices which:

- reduce the existing risks, and
- control the development of new risks in the





Natural Hazards



Theoretical framework and model for an holistic approach to disaster risk assessment and management.

Adapted from Cardona (1999: 65), Cardona and Barbat (2000), IDEA (2005^a, b), and Carreño, Cardona, and Barbat (2007).



Natural Hazards

Specific goals:

- a) An interdisciplinary research on risk and disaster problems.
- b) A research that brings together studies, discussions and practices on climate change adaptation and disaster risk reduction.
- c) Methodologies for the integration of social and natural sciences turned into interdisciplinary research protocols.
Better interactions and understanding between
 - d) the scientific and governmental policymaking communities
 - e) between the scientific community and its beneficiaries.
- f) Research and capacity building efforts from a holistic perspective.
- g) Post impact multidisciplinary analysis and reviewing board with research capability.

Natural Hazards

Four research and action subjects in order to understand, design, and increase the effectiveness of the interventions:

1. The identification of significant natural hazard processes and patterns.
2. Understanding the factors and processes that contribute to the social construction of risks, and its distribution.
3. Identifying ways to evaluate measure or gauge risk objectively, and the ways in which risks is distributed.
4. Understanding decision making processes.



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