

# *An Experience Designing a National Research Agenda on Disasters Risk Reduction*

*Alejandro Linayo*

*Disaster Risk Management Research Center . CIGIR*

*Mérida – Venezuela*

*alejandrolinayo@gmail.com*

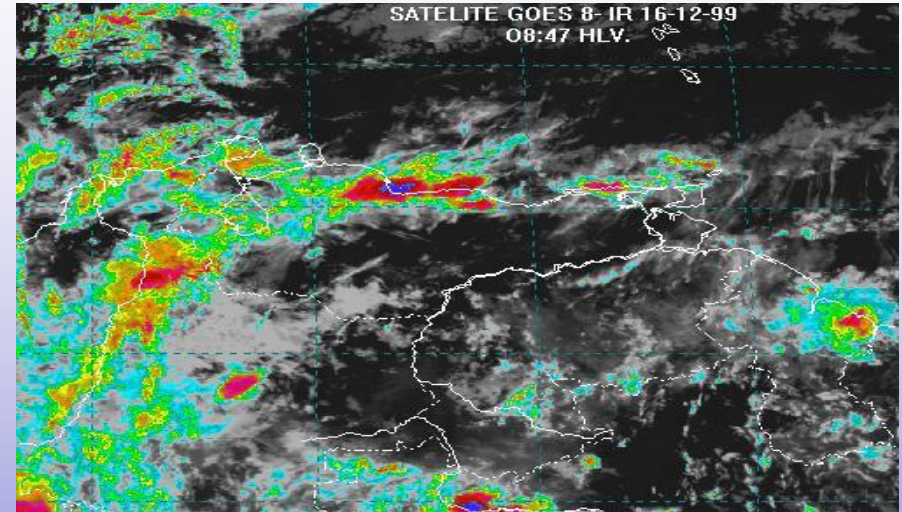
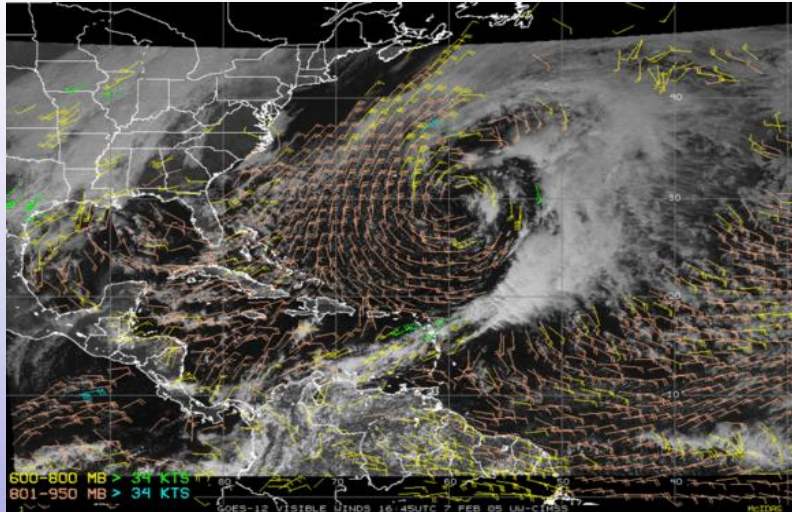
## ***BACKGROUND***

*In year 2000 the recently created Ministry of Science and Technology of the Bolivarian Republic of Venezuela promoted the creation of an Applied Research National Program on Disaster Risk Reduction. This program was created under the guidance and participation of some of the most relevant academics and specialists in DRR of the country.*

*Two crucial circumstances allowed this initiative:*

- The occurrence in Dec 1999 of one of the worst social-natural disaster in the history of the country.*
- The consolidation of a new politic for scientific development in the country, that will be leaded by a brand new Ministry of Science and Technology under the slogan of “Science and Technology for the People”*

## ***DISASTER OF VARGAS – DECEMBER 1999***



Carmen de Uria, enero 2000

... las lluvias le abrieron al Ávila los canales para desahogarse

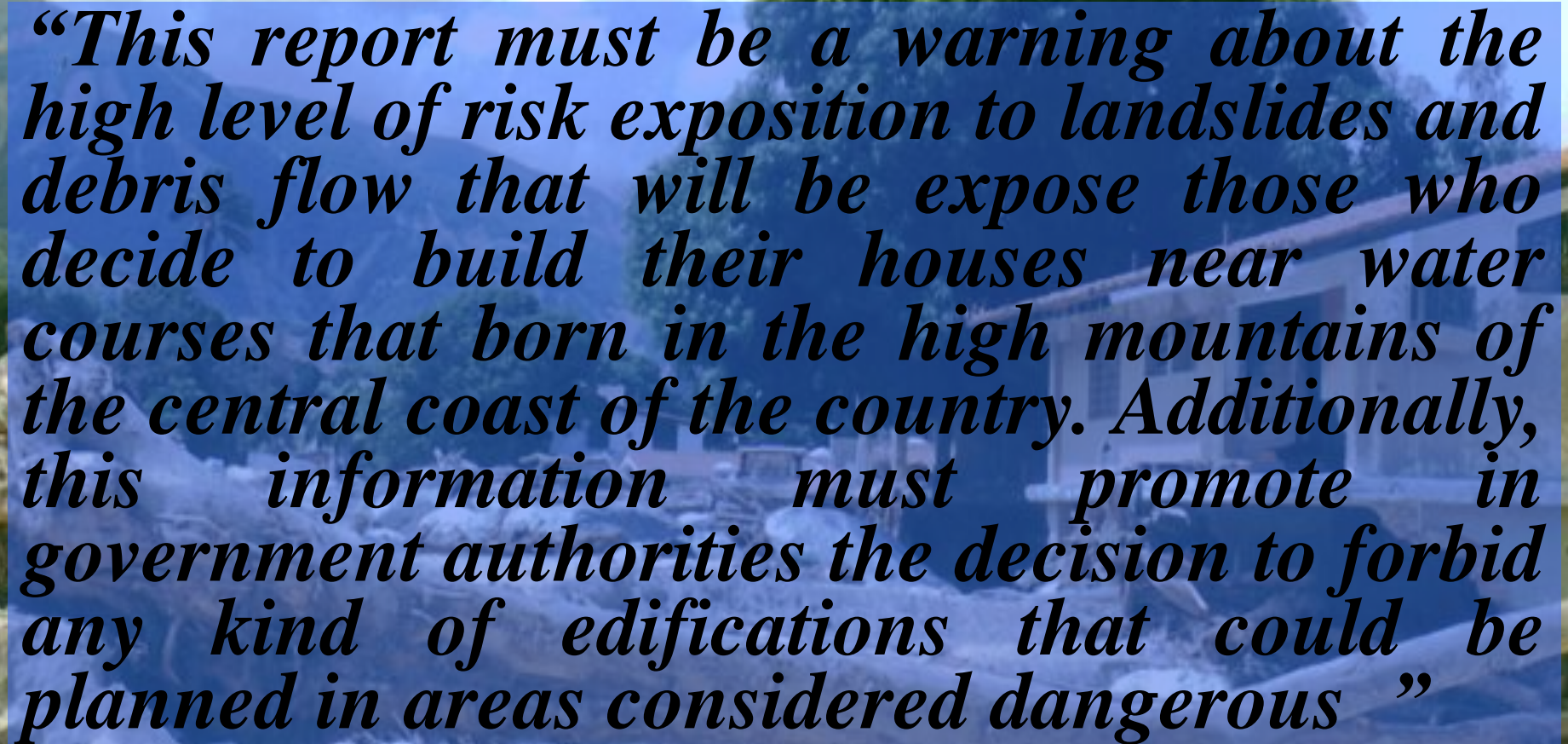


# HISTORICAL CLIMATIC DISASTERS IN THE STATE OF VARGAS - VENEZUELA

Basin	Area	Date	Basin	Area	Date
Qda. Osorio	La Guaira	1740	R. Mamo	Mamo	1944
Qda. Osorio	La Guaira	1780	Qda. Osorio	La Guaira	1948
Qda. Osorio	La Guaira	1789	Pta. Mulatos	La Guaira	1948
Qda. Osorio	La Guaira	1797	El Cojo	Macuto	1948
	Anare-Caruao	1912	Qda. Piedra Azul	Maiquetía	1948
	Hda. Pto. Cruz	1914	Qda. Osorio	La Guaira	
Qda. Osorio	La Guaira	1938	R. Los Caracas	Los Caracas	1951
Qda. Piedra Azul	Maiquetia	1938	R. Los Caracas	Los Caracas	1954
Qda. Osorio	La Guaira	1944	Qda. Osorio	La Guaira	1972
R. Chichiriviche	Hda. Chichiriviche	1944			

Fuente:

Funvisis-El Nacional -Comisión OCHA/PNUD/CAF- DESINVENTAR



*“This report must be a warning about the high level of risk exposition to landslides and debris flow that will be expose those who decide to build their houses near water courses that born in the high mountains of the central coast of the country. Additionally, this information must promote in government authorities the decision to forbid any kind of edifications that could be planned in areas considered dangerous ”*

*Dr. Eduardo Rohl  
National Science Academy  
1950*

# *¿Climate change or unsustainable development urban model?*







***RISK REDUCTION***  
*Risk conditions*

- ***Hazards***
- ***Vulnerabilities***

- 1. Disasters are NOT naturals.***
- 2. Disasters are just the “natural” consequence of non-managed risks.***
- 3. It is necessary to promote a more integral approach to this problem considering disaster risk reduction as an inner condition of sustainable development management***



***RISK***



***DISASTER***



# ***COMPLEXITY OF APPLIED RESEARCH ON DISASTER RISK MANAGEMENT***

*¿Where are the causes of permanent construction of potential disaster risk scenarios?*

***Land use***

***Buildings and urbanisms***

***Polític***

***Education***

***Culture***

***Idiosincrac***

***Development model***

***Institutional capacity***



## ***ABOUT THE DESIGNING PROCESS***

*The Agenda of priority research projects promoted to improve national institutional and social capacities on disaster risk reduction was the result of an 8 months process of negotiation between multiple academic, scientific and institutional actors.*

*Some activities developed as part of this process included:*

- 52 workshops and meetings.*
- Conversations with more than 150 experts.*
- Contacts with 90 institutions and organizations.*

## ***THEMATIC LINES INCLUDED***

- |          |   |           |  |
|----------|---|-----------|--|
| <b>1</b> | <b><i>EDUCATION AND CAPACITATION</i></b>                                      | <b>7</b>  | <b><i>MEDICAL AND PSICOLOGICAL DRR ASPECTS</i></b>                 |
| <b>2</b> | <b><i>IDENTIFICATION AND CHARACTERIZATION OF HAZARDS.</i></b>                 | <b>8</b>  | <b><i>APPLIED COMPUTATIONAL SCIENCES &amp; TELEMATIC</i></b>       |
| <b>3</b> | <b><i>TECHNOLOGY FOR BUILDINGS AND URBAN VULNERABILITY ASSESMENT</i></b>      | <b>9</b>  | <b><i>LEGAL AND ORGANIZATIONAL ASPECTS</i></b>                     |
| <b>4</b> | <b><i>RISK AND PUBLIC MANAGEMENT</i></b>                                      | <b>10</b> | <b><i>SOCIAL AND CULTURAL ASPECTS</i></b>                          |
| <b>5</b> | <b><i>VULNERABILITY OF PUBLIC SERVICES AND LIFE-LINES</i></b>                 | <b>11</b> | <b><i>NEW TECHNOLOGIES FOR DISASTER REHABILITATION PROCESS</i></b> |
| <b>6</b> | <b><i>APPLIED TECHNOLOGY FOR DISASTER PREPARATION AND RESPONSE SYSTEM</i></b> | <b>12</b> | <b><i>RISK, ECONOMY AND PRODUCTIVE STRUCTURES</i></b>              |

## **RESEARCH AGENDA**

### **Gestión de Riesgos y Reducción de Desastres**

#### **Líneas Prioritarias**

### **Convocatorias 2001**

**Educación y Capacitación para el Riesgo.**

**Zonificación de Amenazas y Riesgos a escala Nacional, Regional y local con énfasis en las Amenazas Sísmicas, Hidrometeorológicas y Geomorfológicas.**

**Diseño, Evaluación y Reforzamiento de edificaciones, urbanismos y otras obras civiles de interés público frente a las amenazas naturales.**

**Riesgos y Gestión Pública.**

**Riesgos, Líneas Vitales y otras Obras de Infraestructura.**

**Tecnología e Informática Aplicada.**

**Fortalecimiento de Instituciones de Respuesta.**

**Atención Médica y Psicológica.**

**Aspectos Legales y Organizacionales.**

**Aspectos Sociales y Culturales del Riesgo.**

**Herramientas para la Respuesta y la Rehabilitación.**

**Riesgos, Economía y Aparato Productivo.**

**Responsable:** Alejandro Liñayo

**Teléfono:** 238.3532

**Correo-e:** [alinayo@mct.gov.ve](mailto:alinayo@mct.gov.ve) / [alejo01@funmrd.gov.ve](mailto:alejo01@funmrd.gov.ve)



**Ciencia y Tecnología para la Gente**



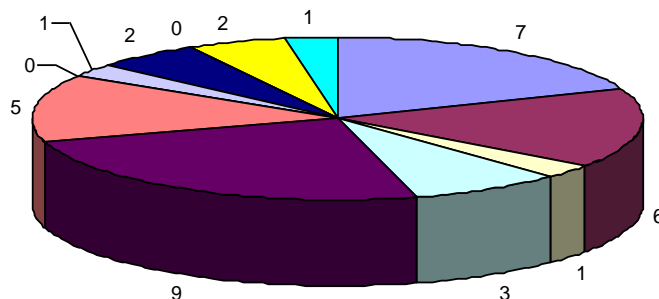
# ***RESULTS OF THE EXPERIENCE***

***Duration of the program: 2000-2007***

***Received solicitudes: 240***

***Approved projects : 55***

***Estimated investment: 4,5 millions \$***

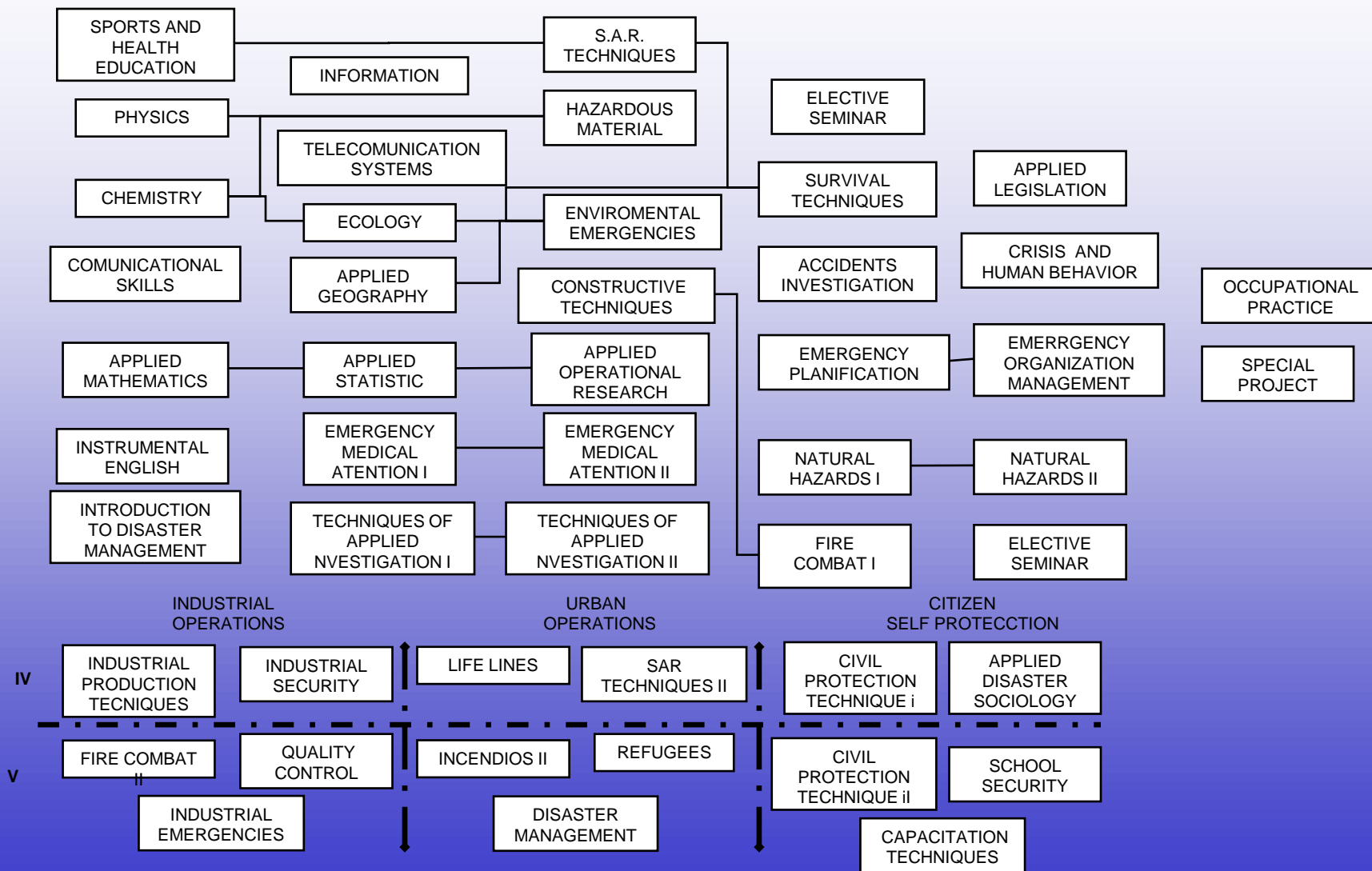


EDUCACIÓN	RIESGO Y GESTION PUBLICA	ASPECTOS SOC. RIESGO	TECNOLÓGIA.INFORMATICA
INVENTARIO Y CARACT.AMEN	REFORZAEDIF Y URBANISMO	RIESGO Y LINEAS VITALES	FORT.INSTITUCIONES DE RES.
TECNOLOGÍA.RESP. Y REHABI.	ASPECTOS LEGALES Y ORGA.	ATENCION MEDICA Y PSICOLO.	RIESGO Y ECONOMIA

## *Research Agenda on Disaster Risk Reduction*

### ***ACTION LINE 1: EDUCATION AND CAPACITATION ASPECTS:***

- **Methodologies for the sustainable incorporation of disaster risk management in the basic education official program.**
- **Curricular strategies for the incorporation of DRR in university degrees (strategic programs).**
- **Curricular strategies and technology to promote the academic professionalization of the national system for disaster response management.**
- **Methodologies for measuring the impact of education/ training programs on DRR**
- **Technologies to promote distance education on local risk management**





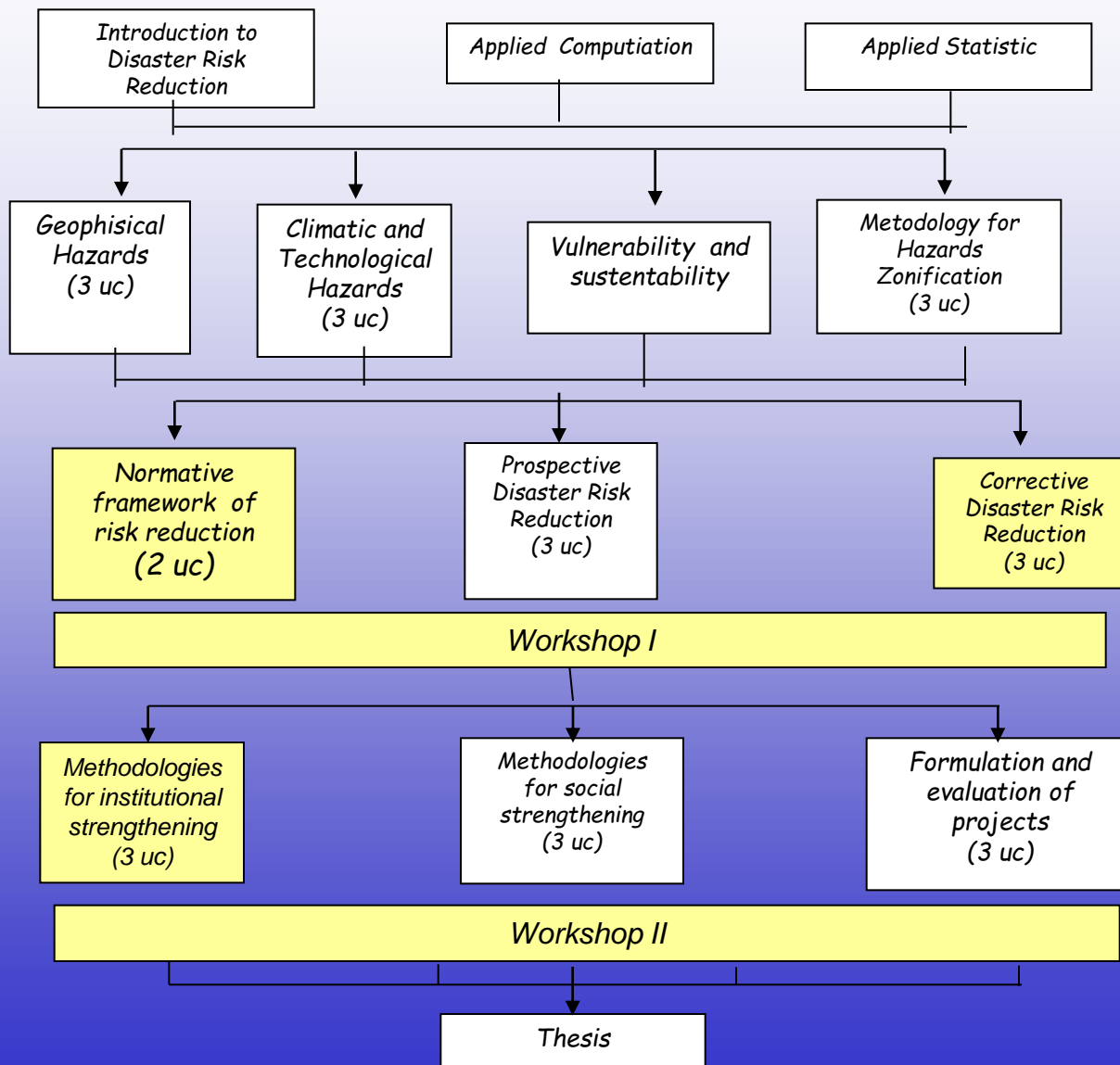
## MASTER IN SOCIO-NATURAL AND TECHNOLOGICAL RISK REDUCTION

### INTRODUCTION

### 1<sup>er</sup> PERIOD

### 2<sup>do</sup> PERIOD

### 3<sup>er</sup> PERIOD





*“It is prioritary to promote the incorporation of disaster risk reduction as an indispensable and complementary dimention of any profetional profile, in order to asure in our college graduates the capacity to identify their specifics responsibilities in the construction of disaster risk scenarios.” (ISDR-ONU, 2008)*



## Phd. Program Political Sciences

DOCTORAL RESEARCH LINE IN  
DISASTER RISK REDUCTION AND  
GOVERNANCE

*Understanding the conditions  
that promote social construction  
of disaster risk scenarios in Latin  
America, and main aspects that  
condicionate their institutional  
and social management.*



[doctogrdg@cigir.org](mailto:doctogrdg@cigir.org)  
[doctogrdg@gmail.com](mailto:doctogrdg@gmail.com)



## **METHODOLOGY FOR PRORITARY PROGRAMS IDENTIFICATION:**

- 1. TOTAL NUMBER OF UNIVERSITY PROGRAMS 574**
- 2. TOTAL NUMBER OF TECHNICAL CAREERS 363**
- 3. FILTERS APPLIED TO SIMILAR PROGRAMS 141**
- 4. DEFINITION OF PRIORITY PARAMETERS:**
  - a.- INDEX OF SOCIAL INTEREST**
  - b.- INDEX OF COVERAGE.**
  - c.- INDEX OF DRR IMPACT.**
- 5. PARAMETERS NORMALIZATION AND PONDERATION**
- 6. PRIORITY LIST OF PROGRAMS TO BE REINFORCED**
- 7. TOP TEN SELECTION AND PILOTS EFFORTS**

# PRIORITY PROGRAMS

## **INGENIEERING & TECHNOLOGY:**



## **MILITARS SCIENCES AND ARTS:**

***Militar Sciences and Arts***





# ***UNITED NATION SASAKAWA AWARD FOR DISASTER REDUCTION***



*“In awarding the Certificate to FUNDAPRIS, the UN Sasakawa Award Jury cited the dedication of " a group of university professors who placed their knowledge and skills at the service of less fortunate people. Their actions will serve as a model to other social actors, both in terms of their achievements, but also in the exemplary manner they worked with national government authorities“.*

***Bonn - Germany  
2003***