

Project: Support for implementing The Regional Water Center for Arid and Semi-Arid Zones in Latin America and the Caribbean – Cazalac

Budget code: 513RLA2040

Country/region: Latin America and the Caribbean

Total Project budget (including programme support costs) US\$: 400,000 (Total project budget US\$ 1.048.900,00)

Funding sources, including possible Government counterpart contributions:
UNESCO Flanders Trust Fund, Government of Chile.

Implementation period: 2003 - 2005

Sector/Division: Division of Water Sciences, Montevideo

Project officer: María Concepción Donoso

January, 2006

EXECUTIVE SUMMARY

The establishment of CAZALAC was based on the request of the Government of Chile to the UNESCO International Hydrological Programme Intergovernmental Council. This request was supported by numerous IHP National Committees from the Member States of the region and worldwide. As a result of this action, an Agreement was signed between UNESCO and the Government of Chile. This agreement provided the basis for the formulation of a research and training workplan aimed to strengthen the institutional capacities for the sustainable management of water resources in the arid and semi-arid zones of Latin America and the Caribbean (LAC).

During the period 2002-2005, CAZALAC has carried out eleven training courses and workshops; three major research projects namely on the vulnerability of soils to erosion in arid zones, the mapping of Arid Zones (with the support of 27 countries of the region), and a study related to the efficient use of water resources in different economic sectors. Also, cooperation agreements have been signed with numerous organizations from the region and worldwide.

In 2005, the General Conference of UNESCO approved the incorporation of CAZALAC to the group of centers category II. On February 2, 2006, the Agreement for the establishment of CAZALAC as a Center under the Auspices of UNESCO, was signed by the Director General and the Ambassador of Chile.

The actions developed are important steps toward achieving the Center main objectives, oriented to improve natural ecosystems and life quality of local communities of the arid zones of the region. It is therefore recommended the continuation of the technical and financial support to CAZALAC. The Center demonstrated to have reached a state of maturity and recognition in the region with good research and capacity-building capabilities.

1. BACKGROUND

The Water Center for Arid and Semi-Arid Zones of Latin America and the Caribbean, CAZALAC, was created by initiative of the Chilean government with the support of the Member States of Latin America and the Caribbean, LAC, through the national committees of UNESCO's International Hydrologic Program (IHP). The Water Center was conceived as an organization dedicated to coordinate/articulate scientific and technological actions aimed at achieving a sustainable water management in arid, semi-arid and sub-humid zones in Latin America and The Caribbean.

Activities began in the city of La Serena in the second half of 2002 with the support of UNESCO and the Governments of Chile and Flanders (Belgium), through an Agreement that was ratified by Supreme Decree N° 202 issued by the State Department of the Government of Chile.

CAZALAC's action area covers arid, semi-arid and sub-humid zones throughout the LAC countries. In areas under these climate conditions, the majority of the population is economically destitute and very few natural resources are available. An improved water management is visualized in these territories as a relevant contribution to several development alternatives.

On June 17, 2003 the Department of Justice of Chile approved CAZALAC's by-laws and granted the organization the legal status that has enabled it to act as an independent juridical institution.

As a result of the collaborative efforts between the Government of Chile and UNESCO in the 33rd General Assembly of the UNESCO held in October 2005, it was approved to grant CAZALAC the status of UNESCO II Category Center

The Chilean Government – among other responsibilities – committed itself to permanently finance the basic operating expenses and the cost of Chilean staff. This commitment has been definitively materialized, since CAZALAC has been included as a special item in the Public Works Department budget as of 2006. In addition, the agreement with UNESCO also stipulates that the Chilean Government will finance the construction of a building, which will materialize in 2006. As is recorded in the Minutes of the last meeting held by the CAZALAC Board of Directors on November 16, 2005, the Regional Government of Coquimbo, Chile, is responsible for the construction of the Center Headquarters on the premises of the University of La Serena.

Project Objective

To support establishing a Water Center for Arid Zones in Latin America and The Caribbean, which will systematically address the serious problems caused by extreme water shortage and impairment in arid and semi-arid environments and will develop favorable conditions for regional cooperation and exchanging experiences regarding these issues.

2. FINANCIAL STATEMENTS

Funding for the operation and activities of the CAZALAC have been provided primarily by the Government of Chile and the UNESCO-Flandes Funds in Trust. Financial contributions have also been made by UNCCD, GWA, and ICTP. Furthermore, in-kind support has been given by numerous institutions and organizations for an estimated amount of approximately a quarter of a million US dollars. Annex 1 presents a detailed description of the financial contributions to CAZALAC.

Source	Amounts in Thousands US\$				
1. Direct contributions	Year 2002	Year 2003	Year 2004	Year 2005	Total 2002-2005
Government of Chile	53.7	58.4	11.5	232.2	355.8
UNESCO-Flanders Fund	53.7	182.5	145.1	374.5	755.8
Total Direct Contributions	53.7	182.5	155.1	431.8	826.9
2. Total in-kind contributions	20.0	30.0	99.0	73.0	222.0
Total CAZALAZ Funding	73.7	212.5	254.1	504.8	1,048.9

3. RESULTS AND MAIN ACTIVITIES (2003 – 2005 PERIOD)

3.1. Research

- **Map of Arid Zones Project**

The central objective of this initiative is to prepare a map of the water regimes prevailing in Latin America and The Caribbean and to identify arid, semi-arid and sub-humid zones, based on updated and standardized criteria. Twentyseven countries of LAC are participating.

Main output:

- Planning workshop. Objectives, roles and procedures were identified.
- Work structure was determined and technical coordinating teams were formed.
- Four training workshops were developed to form a group of specialists trained on project procedures
- A methodological guidelines and software to process data and produce indicators was issued
- Systematized, processed and validated climatic data, in digital format
- A digitalized version of the LAC regional maps
- A digital version of indicators by country and for the entire region
- Publication of document in hard print and electronic format, CD (In process)
- Map to be presented at the World Water Forum (March, 2006).

- **Methodologies to be applied to determine Water Use Efficiency. Case study in the Region of Coquimbo.**

This study is being developed from January 2005 to April 2006 and is focused on the three main basins of the IV Region of Coquimbo, Chile (Elqui, Limarí and Choapa). Its main objective is to investigate and learn on the effective use of water resources, current utilization techniques and use efficiency, and – based on this research results – to create specific proposals aimed at achieving an improved water use and formulating recommendations to guide users towards making informed decisions when the use of water resources in the IV Region is involved. The following specific objectives have been established for the study: (1) Evaluate the water use efficiency at a local level. (2) Evaluate water use efficiency in basins at a global level. (3) Prepare a diagnosis on the current status, through interviews with relevant actors. (4) Prepare specific proposals to improve water use based on the configuration of a hydrologic simulation model that will allow simulating several situations and scenarios at the level of the main water basins in the region. (5) Formulate recommendations or guidelines to guide users towards making duly informed decisions on matters involving water resources.

- **Surveys on erosion vulnerability of soils in arid zones.**

Research projects aimed at determining soil development in arid and semi-arid zones when extreme precipitation events occur.

- **Assessment of soil erosion risks in representative lands of the Mediterranean arid zone of the Coquimbo Region in Chile.**

The project is currently in the stage of developing a map of the surveyed zone and compiling data to apply erosion models and simulate different scenarios. The main activities developed are:

- A rain simulator was built.
- The study area was identified

- Data were compiled
- A pre-grade project was developed

3.2. Education and training

The following capacity building activities have been carried out in the period 2002-2005 following the directives, recommendations and agreements reached at the annual CAZALAC Steering Committee meetings.

- **International Workshop “Strategies to develop research on water resources in LAC’s Arid Zones”**, which set the Center’s program guidelines and roles. La Serena, Chile, January 2003.
- **VII Latin American School of Soil Physics, topic: Soil Hydrology**. La Serena, Chile, November 2003.
- **Workshop on Group Underground Water Management and Indigenous Communities**. DGA-CONADI-CAZALAC. Arica, Chile, December 2003.
- **Course on Applied Hydrogeology**. This course was organized by CAZALAC, with the collaboration of the University of Bochum (Germany), University of La Serena (Chile) and the General Water Directorate (Chile). La Serena, Chile, September-October 2004.
- **Course on Groundwater Deposit Pollution**. Organized by CAZALAC, Universidad del Centro, Prov. Buenos Aires, and Univ. de La Serena. The main teachers came from the University of Ben Gurion, Israel. La Serena, Chile, on 23-26 November, and in Rio Cuarto, Argentina, from 30 November to 03 December 2004.
- **VIII Latin American School of Soil Physics**. This course was developed in collaboration with the Association of Post-Graduates in Agricultural Sciences of Mexico. Jiutepec, Mexico, November 2005.
- **International Workshop on Wetlands and Endorheic Water Basins**. One day was used to discuss strategies to manage endorheic water basins in the Puna sector of Argentina, Bolivia, Peru and Chile. This activity was organized by the University of Chile with the collaboration of CAZALAC, among other institutions. Santiago, Chile, 24-28 October, 2005.
- **I Post-Grade Course on Mining and Environment**. The course addressed issues related to water management in the mining industry and the influence of existing ores as natural pollutants and recommendable steps to be applied, regarding early alert and remedy actions. Organized by University of La Serena, Chile, and University of Castilla de La Mancha, Spain. La Serena, Chile, 4-25 November 2004.
- **South Cone Workshop on Restoration of the Forest Hydrological Landscape**. The main topic of the course was basin management in arid zones. The initiative was supported by the IHP National Committee of Argentina. Cordoba, Argentina, November 2005.

In addition to courses and workshops, CAZALAC carried out other forms of capacity building, namely:

- **Study-work opportunities for Professionals and PhD studies**
Engineer Koen Verbist – a Belgian doctorate student from the University of Gent – has

been part of CAZALAC's work team since April 2005. This was made possible with the support of the International Cooperation Agency of Chile (AGCI), in coordination with the University of La Serena and the Government of Flanders. His main activities – to be developed in a three years period - have been focused on soil erosion vulnerability in arid zones, the arid zone mapping project and preparing new project proposals to seek extrabudgetary financing.

- **Student internships**

Students from the University of Gent, University of La Serena and University of Talca have assisted in field data compiling and operating the rain simulator, with the purpose of developing their pre-grade projects on soil erosion vulnerability in arid zones of Region IV, Chile (in 2004 and 2005).

- **Scholarships**

An Engineer from CAZALAC participated in the Scientific and Technological Information Management training program - STIMULATE4, imparted by the Vrije Universiteit Brussel (October-December 2004)

3.3. Publications and Dissemination

- **“Systematization of a rain simulator construction and calibration experiences”** technical note published in 2005.
- **Technical Document on Hydrology: Parameter Assessment and Hydrological Processes in Soil.** Compendium of scientific papers presented in the VII Latin American School of Soil Physics, Topic: Soil Hydrology. La Serena, Chile on November 2-14, 2003. Published by UNESCO-Paris 2005.
- **“Guía metodológica para la elaboración del mapa de zonas áridas, semi-áridas y sub-húmedas secas de América Latina y el Caribe”** (methodological guideline to compile and process meteorological data). Document in Spanish (in press).
- **Methodological guidelines for the preparation of the map of arid, semi-arid and sub-humid dry zones of Latin America and the Caribbean.** English version available on-line and CD.
- **Map of arid and semi-arid zones of Latin America and the Caribbean** (poster).
- **Map of arid and semi-arid zones of Latin America and the Caribbean** (technical brochure).
- **CAZALAC** (informative brochure).
- **Electronic Newsletter** published every two months (1700 subscribers).
- Web site (www.cazalac.org).
- **IHP's Virtual Library** in the UNESCO-Montevideo Regional Office (July-November, 2004), contribution of support and materials.

3.4. Agreements and Collaboration

- **UFZ, Germany.** General scientific & technical cooperation agreement.
- **University of Leipzig, Germany.** General scientific & technical cooperation agreement

- **University of Bochum, Germany.** General scientific & technical cooperation agreement
- **University of Ben-Gurion and the Institute for Water Sciences and Technologies (IWST), of Israel** General scientific & technical cooperation agreement
- **Universidad Nacional Experimental “Francisco de Miranda”, Venezuela.** General scientific & technical cooperation agreement
- **Universidad Nacional del Centro de la Provincia de Buenos Aires, Argentina.** General scientific & technical cooperation agreement
- **CAZALAC – Post-Graduate Association, Mexico.** Agreement to develop research and training on rain water collection and management.
- **Gender Water Alliance (GWA),** collaboration for the development of pilot projects on water and sanitation.
- **University of Gent, Flanders, Belgium,** collaboration in multiple scientific activities

In addition, the Center forms part of the “institutional group” of programs and organizations linked to the International Hydrological Program of UNESCO, and within this framework, it has been invited to form part of:

- Global Information Network on Water Resources in Arid Zones (G WADI)
- Water Education Program. IHE Institute (Delft, Holland)

Furthermore, representatives of CAZALAC have participated in 12 meetings, seminars, workshops and events related to the issue of sustainable water management in arid environments, in Chile and abroad.

3.5. Other Activities

- **Regional Program of Integral Water Management in the Arid and Semi-Arid Zones of LAC.** This program will be implemented within the scope of the UNCCD. Activities will jointly be carried out by CAZALAC and the UNCCD Convention.
- **Project on water resources, mining and local communities.** “Develop and propose a water management model in areas where interaction with salt deposits takes place (a non-metallic mining resource), with social empowerment in closed basins of the Altiplano plateau”. An important part of the local communities of the II Region of Chile (Atacama Desert) still live in rural areas, where they keep traditions linked to natural resources, including water resources as the main centers of development. These communities mostly inhabit territories showing vulnerable and highly interesting ecosystems that strongly depend on water resources. Therefore, to attain sustainable water management these indigenous populations are visualized as part of the key actors.
Main activities carried out with local communities.
 - Determination of the area status and site selection. Atacama Salt Deposit
 - Three training workshops on surface and groundwater management.
 - Interaction of several competitive economic activities and sustainability concepts.
 - Training on flow and well measurement. Water quality.
 - Delivery of measurement equipment.

- Monitoring plan.

- **Project on water systems restoration in rural communities.** Mainly aimed at restoring drinking water systems destroyed by hurricane Stan. This initiative is implemented in rural locations of the municipality of San Antonio, department of San Marcos, located in the western part of Guatemala near the border with Mexico. The project also includes the participative development of an integral water management model with a scope on gender.

4. FINDINGS AND LESSONS LEARNED

The various projects carried out by CAZALAC have contributed to the overall wealth of good practices in water management developed in the LAC region through lessons learned resulting mainly from the Center's research activities.

The Annual CAZALAC Evaluation Meetings have been useful to update and re-direct the main points of the work plan and the activities, taking into account the new requirements and the information presented during the process. Also, these have allowed to keep all the counterparts fully informed.

IHP National Committees and Focal Points of Member States involved in CAZALAC activities have collaborated positively in the Center projects.

5. CONCLUSIONS AND RECOMMENDATIONS

During the period 2002-2005, CAZALAC has evolved to a Center of regional scope and recognition. The results and products of its activities have contributed to the advancement of knowledge in the field of water resources under the scope of the Center. In particular, the map of arid, semi-arid and sub-humid dry zones of LAC is expected to be an important tool for both scientists and decision-makers.

Furthermore, the Center has developed a solid portfolio of capacity building activities, which was enhanced through the offer of work-study opportunities, internships and scholarships. At the end of this first three years of existence of the Center, CAZALAC also supported the participation of over 450 students and professionals to different courses and workshops. It is important to notice that in these venues, CAZALAC has engaged the support of a number of highly recognized academic and research institutions such as the University of Bochum, the University of Gent, and the University of Ben-Gurion, among others.

But the presence of the Center has transcended in the regional arena beyond the area of academia and research, for CAZALAC has become a major player within the network of institutions related to water and environmental management. It is not a coincidence that CAZALAC was chosen by UNCCD to develop the base document for the establishment of a regional program of integral water management in Arid and Semi-Arid zones in LAC.

Over the years, CAZALAC has developed important working relations with a good number of IHP National Committees of Member States in LAC. In this context, the Center has

contributed to strengthening the relationship within the IHP network. CAZALAC has also collaborated with IHP LAC programmes and working groups regional coordinators through the implementation of joint activities. For example, CAZALAC and FRIEND-Cuba worked together in the process of putting together the map of arid zones of Cuba, which is linked to the FRIEND initiative on climatic extremes early warning system.

In summary, CAZALAC has achieved the objective of addressing the problems linked to extreme water shortage and impairment in arid and semi-arid environments and has developed favorable conditions for regional cooperation and exchange of experiences regarding these topics.

It is therefore recommended the continuation of the technical and financial support to CAZALAC. The Center demonstrated to have reached a state of maturity and recognition in the region with good research and capacity-building capabilities. In addition, the Center is presently contributing to the overall agenda of the water science sector (IHP) of UNESCO in Latin America and the Caribbean.

ANNEX 1

Financial statement

Source	Amounts in Thousands US\$				
1. Direct contributions	Year 2002	Year 2003	Year 2004	Year 2005	Total 2002-2005
Contribution by Government of Chile					
DGA	53.7	58.4	-	-	112.1
ULS	-	-	2.8	2.8	5.6
CONAF	-	-	8.7	29.4	38.1
GORE- Coquimbo (FNDR)	-	-	-	200.0	200.0
Total Government of Chile	53.7	58.4	11.5	232.2	355.8
Contribution by UNESCO-Flanders Trust-Fund					
	-	112.8	121.5	129.4	363.6
Direct contribution to CAZALAC UNESCO - 10% Support					
		11.3	12.1	12.9	36.4
Total UNESCO-Flanders Fund	53.7	182.5	145.1	374.5	755.8
Other contributions					
UNESCO (LAC Regional Office)	-	-	-	20.0	20.0
ICTP	-	3.8	-	-	3.8
UNCCD	-	-	10.0	-	10.0
GWA				37.3	37.3
Total Direct Contributions	53.7	182.5	155.1	431.8	826.9
Source	Contributions Valued in Thousands of US\$				
2. In-kind contributions	Year 2002	Year 2003	Year 2004	Year 2005	Total 2002-2005
Government of Chile	10.0	15.0	20.0	20.0	65.0
UNESCO	5.0	5.0	8.0	8.0	26.0
Flanders	5.0	5.0	10.0	20.0	40.0
Government of Israel	-	1.0	5.0	-	6.0
University of Bochum	-	-	12.0	-	12.0
UNCCD	-	-	30.0	-	30.0
Map Project (LAC countries)	-	-	10.0	15.0	25.0
U. of Waterloo (Canada)	-	1.0	-	-	1.0
U. de Duke (USA)	-	1.0	-	-	1.0
Int. Contribution - Shops (Universities, Centers and International Organizations)					
	-	-	4.0	10.0	14.0
ICTP (Trieste, Italy)	-	2.0	-	-	2.0
Total in-kind contributions	20.0	30.0	99.0	73.0	222.0
Total CAZALAZ Funding					
	Valued in Thousands of US\$				
	Year 2002	Year 2003	Year 2004	Year 2005	Total 2002-2005
	73.7	212.5	254.1	504.8	1,048.9

ANNEX 2

List of national and international staff, experts and interns

National/Chile

Directorate:

- Guido Soto, Executive Director, CAZALAC
- Manuel Soto B., Technical Adviser, CAZALAC

Experts/Consultants:

- Maria Angélica Alegría
- Luis Rojas
- Adrián Lillo
- Damaris Orfanophoulus
- Fernando Santibáñez
- Bruno Cánepa
- Sergio Chavez
- Edmundo Gonzalez

International Experts/Consultants

- Koen Verbist (Flandes, Belgium)
- Deyanira Lobo (Venezuela)
- Zelmira May (Uruguay)
- Israel Velasco (México)
- Oscar Lucke (Ecuador)
- Cristina Moyano (Argentina)
- Marcelo Gaviño (Argentina)

Interns

- Marjolein De Weird, Ghent University, Belgium
- Arne Baert, Ghent University, Belgium
- Gerardo Robles, Civil Engineering Student, University of La Serena, Chile
- Felipe Nuñez, Civil Engineering Student, University of La Serena, Chile
- Elizabeth Lagos Farias, Forestry Engineering Student, University of Talca, Chile
- Claudio Kvolek, Ingeniero Agrónomo, Universidad de Buenos Aires, Argentina
- Katrijn Alaerts, Ghent University, Belgium
- Bram Vandekerckhove, Ghent University, Belgium

ANNEX 3

List of major equipment provided under the project

- Rain simulating equipment (designed and built by CAZALAC)
- Tank haulage car for rain simulator transportation
- Workstation GIS 3.0 HT
- Portable Mitsubishi XL-4U Projector
- Photographic SONY DSC-P92 Camera
- Cartographic GPS eTrex VISTA C
- Notebook SONY VAIO VGN-T330FP
- Notebook SONY Vaio FR 862
- Digital Samsung SCD – 352 Video Camera

ANNEX 4

Technical reports prepared during the project

- Final Report Document, Workshop: “Strategies to Develop Research on Water Resources in Arid and Semi-Arid Zones in Latin America and the Caribbean” January 15,16 & 17, 2003, La Serena – Chile (Including the participants’ technical presentations)
- Final Report of the First Project Assessment Meeting: Creation and Start-Up of the Water Center for Arid and Semi-Arid Zones in Latin America and the Caribbean – CAZALAC. La Serena, Chile, January 22 – 23, 2004.
- Summary and Conclusion Report of the First Workshop on the project to prepare a map of arid, semi-arid and sub-humid zones in Latin America and the Caribbean. Santiago, Chile, May 3-6, 2004.
- Report on the International Course – Applied Hydrogeology in Arid Zones, La Serena, September 27 to October 8, 2004 (University of La Serena, Chile, University of Bochum, Germany, CAZALAC)
- Report of International Course on Underground Water Pollution. November 23 – 26, 2004 in La Serena, Chile; November 30 – December 3, 2004 in Argentina.
- Final report - Training Workshop on Assessment of the state of water resources and mapping of arid zones in the Caribbean Martinique, 30th September to 2nd October 2004.
- Final report of Andean Countries Sub-regional workshop – Map of Arid, Semi-Arid and Dry Sub-Humid zones in Latin America and the Caribbean – Preparation Project held in Quito, Ecuador on January 20 – 21, 2005.
- Report of the Second Project Assessment and Planning Meeting – Creation of a Water Center for Arid and Semiarid Zones in Latin America and the Caribbean held in La Serena – Chile. Santiago, January 24 and 25, 2005.
- Summary and conclusions of the Middle America Sub-Regional Workshop – Map of Arid, Semi-Arid and Dry Sub-Humid zones in Latin America and the Caribbean – Preparation Project held in Jiutepec, Morelos on April 7-8, 2005.
- Final report of the South Cone Sub-regional workshop - Map of Arid, Semi-Arid and Dry Sub-Humid zones in Latin America and the Caribbean – Preparation Project held in Buenos Aires, Argentina on May 23 and 24, 2005.

ANNEX 5

During the period 2002-2005 the following Evaluation and Coordination Meeting have been carried out:

- Planning and Evaluation Meeting. La Serena, Chile, January 2003.
- Evaluation Meeting 2004. La Serena, Chile, January 2004.
- Evaluation Meeting 2005. La Serena, Chile, January 2005.

The Members of the Evaluation Committee are:

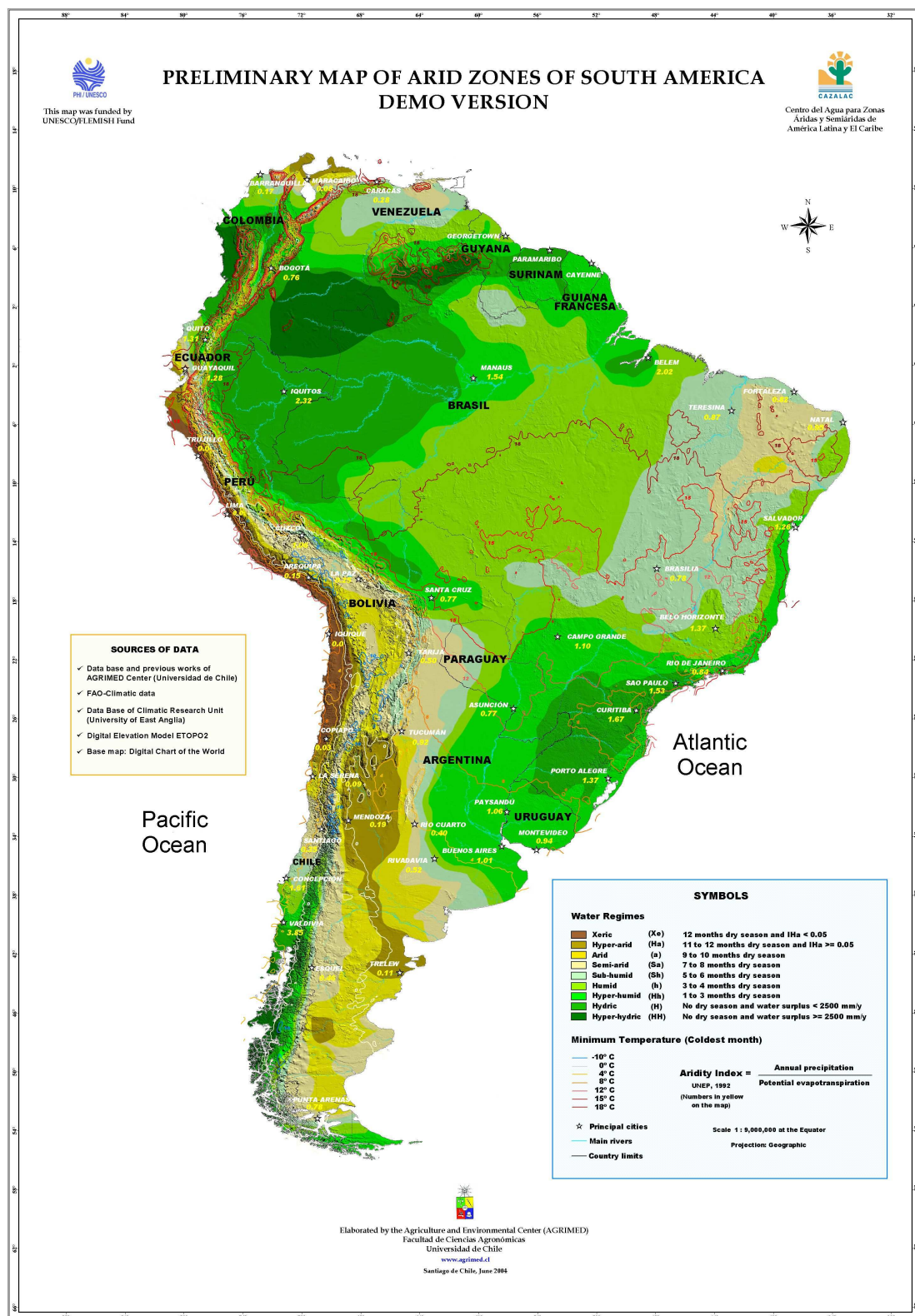
- Rudy Herman
- Donald Gabriels
- Maria C. Donoso
- Deyanira Lobo
- Roberto Pizarro
- Humberto Peña
- Carlos Salazar
- Marcelo Gaviño
- Edmundo González
- Felipe del Río

ANNEX 6

6.1. Participants to capacity building activities

	Chile				LAC				
	Universities / Research Centers	Public Sector	Private Sector	Total	Universities / Research Centers	Public Sector	Private Sector	Total	Aggregate Total
Course on Hydrology and Soil Physics	8	8	2	18	16	5	3	24	42
Underground Water Management Workshops – Aymara Communities	6	18	85	109	-	-	-	-	109
Course on Applied Hydrogeology	11	6	1	18	3	3	-	6	24
Course on Underground Water Deposit Pollution	8	24	12	44	3	-	-	3	47
VIII ELAFIS 2005	-	2	-	2	15	7	5	27	29
I Post-Grade Course on Mining and Environment	15	8	2	25	-	-	1	1	26
Workshop on Sustainable Wetland Management	22	15	7	44	8	6	-	14	58
South Cone- Sector Workshop on Restoration of the Forest Hydrological Landscape	4	2	1	7	32	18	12	62	69
Wetland Management Project, Mining Industry & Social Area (3 Workshops)	-	10	42	52	-	-	-	-	52
Total	74	93	152	319	77	39	21	137	456

6.2. First version of the Map of Arid and Semi-Arid Zones



6.3. Rain simulator





ANNEX 7

List of Acronyms

AGCI	Agencia de Cooperación Internacional de Chile internacional Cooperation Agency of Chile
CAZALAC:	Centro del Agua para Zonas Áridas y Semiáridas de América Latina y el Caribe Water Center for Arid and Semi-Arid Zones in Latin America and the Caribbean
CONADI	Corporación Nacional de Desarrollo Indígena (Chile) National Indigenous Development Corporation (Chile)
CONAF	Corporación Nacional Forestal (Chile) National Forestry Corporation (Chile)
DGA	Dirección General de Aguas (Chile) Water Directorate (Chile)
ELAFIS	Escuela Latinoamericana de Física de Suelos Latin American School of Soil Physics
FNDR	Fondo Nacional de Desarrollo Regional (Chile) National Funds for Regional Development (Chile)
FRIEND	Flor Regimes From Internacional Experimental and Network Data
GORE-Coquimbo	Gobierno Regional de Coquimbo (Chile) Regional Government of Coquimbo Province (Chile)
GWA	Gender Water Alliance
ICTP	International Centre for Theoretical Physics (Trieste, Italy)
IHP	International Hydrologic Program
IWST	Institute for Water Sciences and Technologies (Israel)
LAC	Latin America and the Caribbean
STIMULATE4	International Training Program on Information. Scientific and Technological Information Management in Universities and Libraries (Edition 4)
ULS	Universidad de La Serena (Chile) University of La Serena (Chile)
UFZ	UmweltForschungszentrum

Centre of Environmental Research (Germany)

UNCCD

United Nations Convention to Combat Desertification