THE PO VALLEY COMPARE ITSELF WITH BIG INTERNACIONAL BASINS

CULTIVATING GOOD WATER

2009
Connection

Global X Local

Situation
**GLOBAL WARMING - THE PLANET IS SICK**

- Destruction of Ozone Layer/ Increasing of the global temperature
- Exhaustion of the potable water reservoirs
- Increasing of the hydric, atmospheric and soil pollution
- Enlargement of solid waste – garbage
- Deforestation
- Erosion / Desertification / Exhaustion and degradation of cultivable soil
- Extinction of species from flora and fauna
- Dominating production and consuming patterns causes environmental devastation, reduction of natural features and massive extinction of species
- The injustice, a poverty, the nescience and the violent conflicts raise and cause huge suffering

| 550 million firearms in the world (1 weapon for 12 people) |
| 370 richest people in the world receives more than 2,6 billion people each year |
| 500 multinationals control 25% of the world economic activities and 80% of technologic innovations |
GLOBAL PROBLEMS

- Erosion
- Deforestation
- Water eutrophication
- Macrophyts
- Pesticides used

LOCAL PROBLEMS

- Erosion
- Lack of infrastructure
- Sewage and garbage
- Golden mussel
- Macrophyts
World Bank Report / 99 - Twenty Century saw wars caused by ideological differences, religious or control of oil reserves and the twenty-first century could be dominated by conflicts caused by the scarcity of WATER.

TODAY: 250 million people in 26 countries face chronic lack of water resources.

PREDICTION: In 30 years, the number will jump to 3 billion in 52 countries.
are due to the 'extra' increase of the following gases:

- **Carbon Dioxide (CO₂) – 49%**
  - 70 millions of tons of CO₂ are emitted to the atmosphere every 24 hours
  - Fossil fuel burning, vegetation changes (deforestation), biomass burning

- **Methane (CH₄) – 18%**
  - Bovine, pig and birds catering – earth of rubbish
  - Oil production

- **CFC’s (clorofluorcarbon) – 14%**
  - Pressurized container, refrigerators and air conditioning
  - Electronic equipaments
  - Aluminium and foundry products

- **Nitrous Oxid (N₂O) – 6%**
  - Fertilizers industries
  - Oil combustion

- **Other gases – 13%**
“In order to survive to the present fast changes, we must be prepared to analyse the standards of our own based organizations”

Alvin Toffler – ‘A Empresa Flexível’

“Companies are responsible by environment and must coordinate all its business in relation to environment responsibility and in order to protect Earth”

Ken O’Donnell – ‘A Alma noNegócio’
NEW BUSINESS MISSION

BEFORE

To make good use of the water resources of the Parana River in hydraulic terms, owned jointly by both countries from and including Salto Grande de Sete Quedas, or Salto de Guaíra, to the mouth of the Iguassu River

PRESENT

To generate high-quality electricity with social and environmental responsibility, driving sustainable, economic and technological development, as well as tourism, in Brazil and in Paraguay

Situational Strategic Planning
September 5, 2003

FOCUS: Social and environmental responsibility, the new ethic of business behavior
LA PLATA RIVER BASIN

3.200.000 km²
ONE OF THE BIGGEST RIVER BASIN IN THE PLANET
IGUASSU FALLS  NATIONAL PARK OF IGUASSU

MONDAY – PARAGUAY FALLS

ITAIPU BINACIONAL

Energy with Socioenvironmental Responsibility
Nowadays

✓ SYSTEMIC VISION OF ENVIRONMENTAL MANAGEMENT WITH FOCUS ON SUSTAINABILITY
Cultivating GOOD WATER

20 programs | 63 initiatives | 2,146 partners

Implemented on the Paraná River Watershed 3:
- covering 8000 km²
- 23 cities included
- 1 million people
- 73 micro watersheds served

www.itaipu.gov.br
Principles

Ethics of Care – we care for what we love
The Earth Charter - Principles
1- Respect and care for the community
2- Ecologic integrity
3- Social and economic justice
4- Democracy and peace

The millennium goals

Treaty on Environmental Education for Sustainable Societies and Global Responsibility

- Eco Rio 92
- Agenda 21
- Global Pact
- Brazilian Public Policies
- National Conference on Environment
- Hydro Resources National Plan

Water for all
Water for life
BASIN MANAGEMENT

PREVIOUS CONCEPT: BORDERS ALONG THE CITIES
CURRENT CONCEPT: BORDERS ALONG THE BASINS

Paraná 3 Basin

1 Million inhabitants
29 Municipalities

Selected Micro Basins

70

Recovered Micro Basins

150
CULTIVATING GOOD WATER OBJECTIVES

✓ Recovery of every single Paraná 3 Micro Basin
✓ Common management with local community
✓ Local action and global connection
✓ Support to vulnerable groups and promotion of social justice
✓ Construction of Culture for Peace and Water Culture
✓ Implementation of Ethics of Care
✓ Construccion of Sustainability
✓ Search for a new way of Being, Feeling, Living, Producing and Consuming
✓ Construction of Solidarity between peoples and from people to the nature
IMPLEMENTATION PROGRAM STEPS

Selection of the micro basin
Community awareness
Management committee composition
Future workshops

Partnership settlement
Water pacts
Signature of the agreement
Follow up and validation
WORKSHOPS FOR THE FUTURE

The Wailing Wall

The Tree of Hope

A Path Ahead

175 workshops
MYSTIC OF WATER
MYSTIC OF AIR
THE EARTH CHARTER IN THE WATER PACTS
MYSTIC OF EARTH
MYSTIC OF FIRE
MYSTIC OF PEACE
Terracing

No Tillage

Soil Conservation

51,444,22 ha

599,80 km of fences and Boofer zones

Green Fertilization

517 Water Community Supply Centers

4.156,905 Trees planted in the protected belts

146 Manure distributors

1.972,01 km Upgrading Roads

3.053 Farmers and technicians capacitated

599,80 km of fences and Boofer zones

BASIN MANAGEMENT COLLECTIVE ACTIONS

Spring waters restoration

Fertilizers correct destination

Land drainage

Trees planted in the protected belts

Manure distributors

Fertilizers correct destination

Upgrading Roads

Farmers and technicians capacitated

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Spring waters restoration
7,433 Environment Control Plans

BASIN MANAGEMENT - INDIVIDUAL ACTIONS

ENVIRONMENTAL LIABILITY CORRECTION

RIPARIAN FOREST

Dairy

HOUSE

BARE SOIL

PIG FARM

PASTURES

WASTE

Universities + Co-ordination

Incubators + International hydro-Information Centre

80%

20%
Rural Sustainable Development

187
Organic producers in the beginning of the programme

967
Organic producers with technical support

Medicinal Plants [141 species]
✓ 118 Medicine gardens established
✓ 870 School cookers capacitated
✓ 129,000 seedlings donated

Fish Production
✓ 730 Fish cage established
✓ 3 Aquicultural Parks
✓ Structure of Fishing Points
Avá Guarani Community
✓ 1,020 People
✓ 200 t of organic manioc / year
✓ Pray’s house, residences

Solidary Collecting
✓ 1,667 Capacitating collectors
✓ Capacitation
✓ Chariots, uniform kits, equipments

Young Gardener
✓ 260 Graduation
✓ 20 Gardeners in course
✓ Gardener’s kits being delivered
BIOINDICATORS

Environment Laboratory

WATER

Monitoring Sample Points
Soil & Water

PARTICIPATIVE
MONITORING

State Health Fundations

WATER QUALITY MONITORING

Formation of local population in water quality monitoring for the identification of aquatic organism
COLABORATIVE MONITORING PROGRAM

Objective:
Capacitating of local population on water quality monitored by identification of aquatic organism
Presentation of “A Matita” theater

105 Networks on corporative environment and education in Brazil and in Paraguay

3,069/year Visits to the Ecomuseum and to the Biological Protected Area

135,000 Students receiving the brochure

ENVIRONMENT EDUCATION

10,400 Protagonists on Environmental Education in the Paraná 3 Basin

800 class hours

255 Environment Educators / 34 Involved municipalities

TREATY ON ENVIRONMENTAL EDUCATION FOR SUSTAINABLE SOCIETIES
PARTICIPATIVE RESEARCH ACTION
People who learn participating (PAP)

PAP 1 (MMA e MEC)
Idealizers of National Politics of Environment Education

PAP 2
Universities

PAP 3 - 300 people from different segments

Anchor Institutions
Itaipu

PAP 3 - 300 people from different segments
Anchor Institutions
Ibama/PNI

PAP 4
Group of youngers

PAP 4
Pastorals

PAP 4
Students

PAP 4
Women’s groups

PAP 4
Fishermen

PAP 4
Collectors

PAP 3
NGOs

PAP 3
Journalists

PAP 3
Association

PAP 2
Technicians

PAP 2
Teachers

PAP 2
Town hall

PAP 2
Universities

PAP 3
Housewives

PAP 3
Students

PAP 3
Technicians

PAP 3
Health agents

PAP 4
Pastorals

PAP 4
Students

PAP 4
Women’s groups

PAP 4
Fishermen

PAP 4
Collectors

2.907 PEOPLE IN COURSE
65 WORKSHOPS ON CULTURE OF WATER

The Earth Charter

2006

2008
WATER CULTURE

✓ Is the relation all societies have with water
✓ Is what we do with water, for water and in water
✓ Is the way conflicts are solved
✓ Is originated from the water use
✓ Are the dreams and poems concerning water
ALL PEOPLES HAVE A WATER CULTURE

- Changes must be cultural in order to become permanent.
- Water management and water technology come after water culture.
- This is why water is a social and cultural good, as well as a right of everybody, including the ecosystems.
- Also, water is the ethics principles and is registered in the myths and legends of our peoples and religions.
FOR THE FIRST NATION
CITIZENS

- Water is sacred
- Water is a living being
- Water gives life
- Water is a social being
- Water is a spiritual being
- Water is the principle for everything
- Water is part of the ethic values
- Water is the basis of the cultures
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WORKSHOP OF EARTH CHARTER

✓ 65 workshops
BIODIVERSITY: OUR INHERITANCE

732,863,16 t Sequestration of Carbon per year

Area: 60,500 ha
Average wideness: 210 m
Length: 2,900 km

43 millions of planted trees

Total of protected areas + protection belt: 100,531 ha
Three-Nation Biodiversity Corridor
Biodiversity Corridor

Itaipu’s forest protection belt

Iguassu National Park

CORRIDOR IN SANTA MARIA

NATIONAL PATRIMONY PRIVATE RESERV - Sta. María Farm (240 ha)
Itaipu Renewable Energies Platform

- Solar Energy
- Biofuel
- Eolic Energy
- Electric chariot
- Sanitary Embankment Energy
- Electric vehicle
- Hydroelectric
- Iguaçu Star Milk Farm – Céu Azul
- Columbari Farm
- Wastewaters & Biomass Treatment Station - “Shalon Columbari Farm – Céu Azul”
AGROENERGY CONDOMINIUM
FOR FAMILY AGRICULTURE

- Animals dejecta
- Bio-digestor
- Gas pipeline
- Bio gas electric power plant
- Bio fertilizer
- MDL (Clean Development Mechanism)
INTERNATIONAL CENTER OF HIDROINFORMATIC (CIH)

COOPERATION
UNESCO / PHI - Programa Hidrológico Internacional
UNESCO / PHI – Oficina Regional América Latina y Caribe - LAC
Gobierno del Brasil - COBRAPHI – Comisión Brasileña del PHI
Gobierno del Paraguay - CONAPY - Comisión Nacional del PHI del Paraguay
ITAIPU BINACIONAL PY / BR
CULTIVATING GOOD WATER

2006-2009 BASE ACTIONS FOR SUSTAINABILITY

INTERNAL ENVIRONMENT

BEING / FEELING
- Awareness
- Training
- Concepts
- Values
- Ethics of Care
- “Logos X Patos “
- Sustainable Society

EXTERNAL ENVIRONMENT

LIVING
- Basin / Microbasin
- Environmental liabilities
- Water Sources/Rivers
- River Bank
- Soil Conservation
- Life Community
- Sustainable Society

CONSUMING
- Food / Organic
- Flowing out - Solidary
- Collect
- Health/Medicine Plants
- Water / Energy
- Being X Having Culture
- Sustainable Society

PRODUCING
- Agroecology
- Organic Agriculture
- No tillage
- Diversification
- Aquiculture
- Associations
- Technologies
- Sustainable Societies

CONSUMING

CGW
- Programs
- Actions
- Committees
- Partners

GOVERNMENT / COMMUNITY / ENVIRONMENT
“THAT OUR TIME BE REMINDED BY THE AROUSING OF A NEW REVERENCE TOWARD LIFE, WITH A STRONG COMMITMENT TO REACH SUSTAINABILITY, BY A FAST FIGHT FOR JUSTICE AND FOR PEACE AND BY A HAPPY CELEBRATION OF LIFE.”

The Earth Charter
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