UNITED NATIONS UNIVERSITY

Coltlax

The Conflict of Río Bravo between the United States of America and Mexico: A Case for Hydro-Diplomacy

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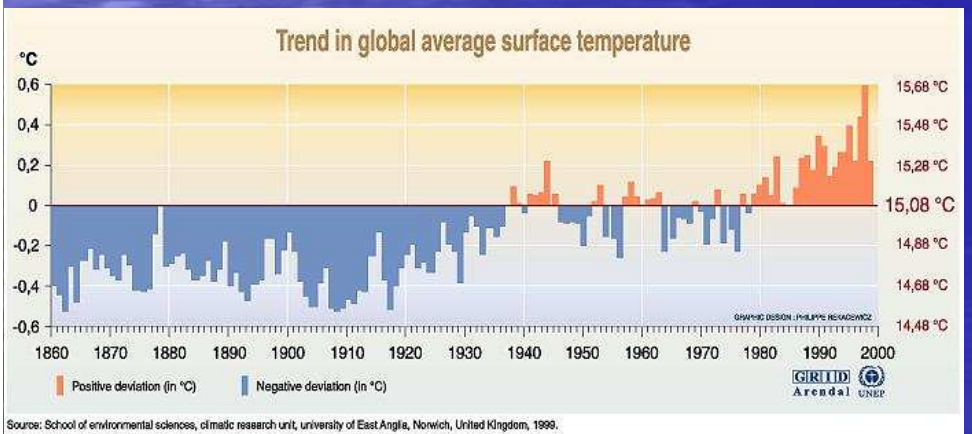
1. Global Climate Change: Temperature Increases & Sea Level Rise

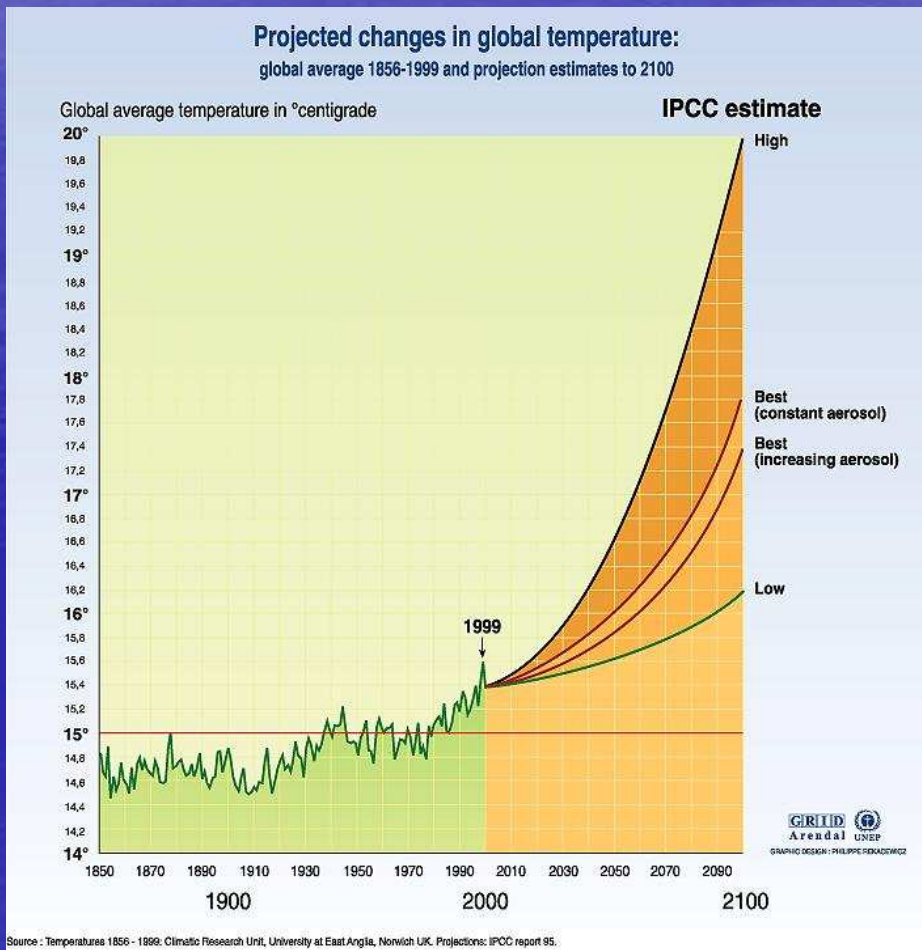
2 Climate Change Impacts: Temperature & Sea level Rise

- Global average temperature rise in 20th century: + 0.6°C
- Proj. temperature rise: 1990-2100: +1.4 – 5. 8°C

Sources: IPCC 1990, 1995, 2001



Source: School of environmental sciences, climatic research unit, university of East Anglia, Norwich, United Kingdom, 1999.



Source : Temperatures 1856 - 1999: Climatic Research Unit, University at East Anglia, Norwich UK. Projections: IPCC report 95.

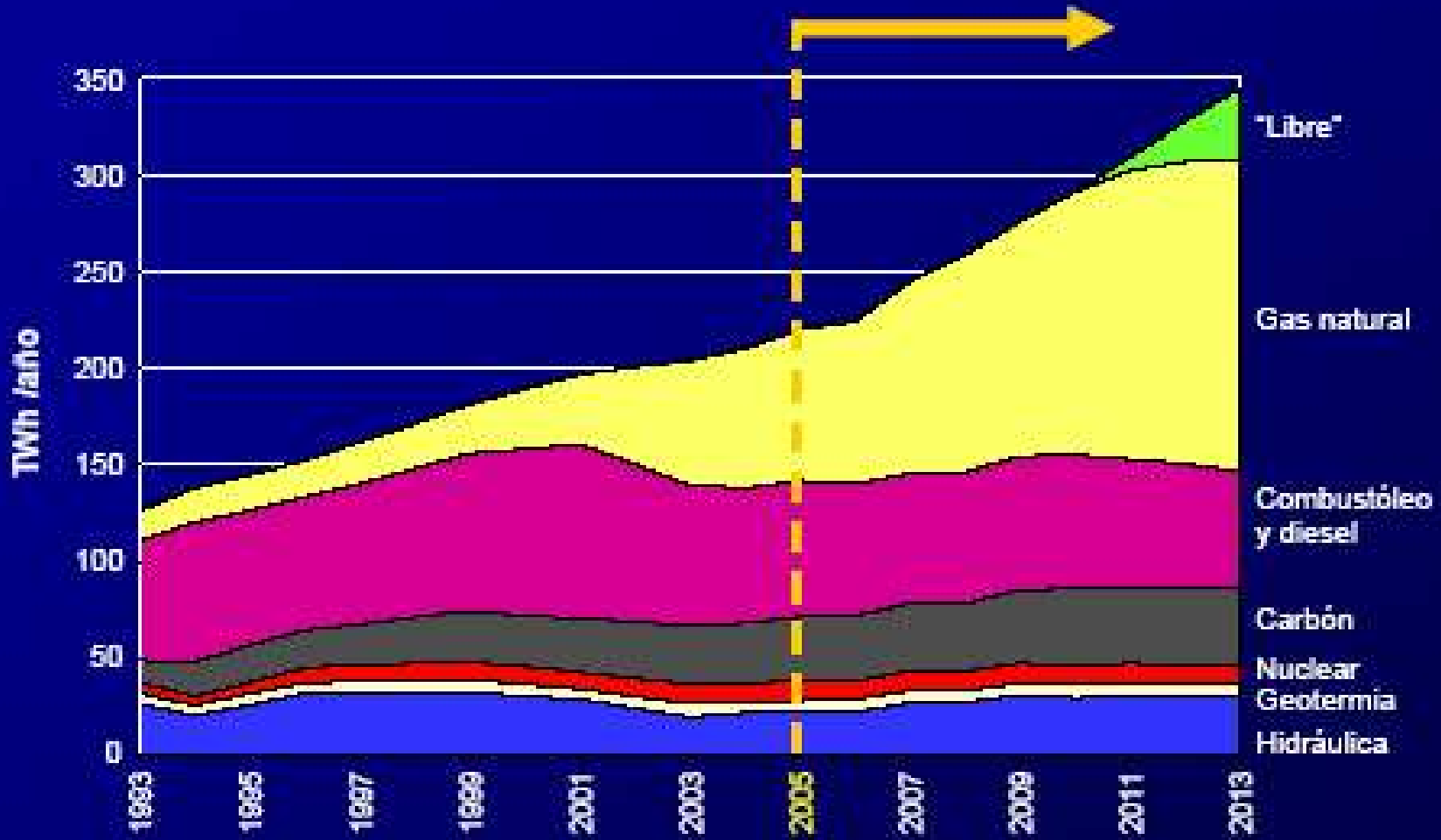
2. Climate Change as a New Security Challenge, Social and Physical Vulnerability:

Water Wars: Climate change may spark conflicts

- Britain's Defence Secretary, John Reid, pointed to violent collision between a rising world population & shrinking world water resource: global warming. Climate change may spark conflict between nations and British armed forces must be ready to tackle violence.
- „We see uncertainty growing ... about the geopolitical and human consequences of climate change. "Impacts such as flooding, melting permafrost & desertification could lead to loss of agricultural land, poisoning of water supplies & destruction of economic infrastructure.
- "More than 300 million people in Africa currently lack access to safe water; climate change will worsen this dire situation".

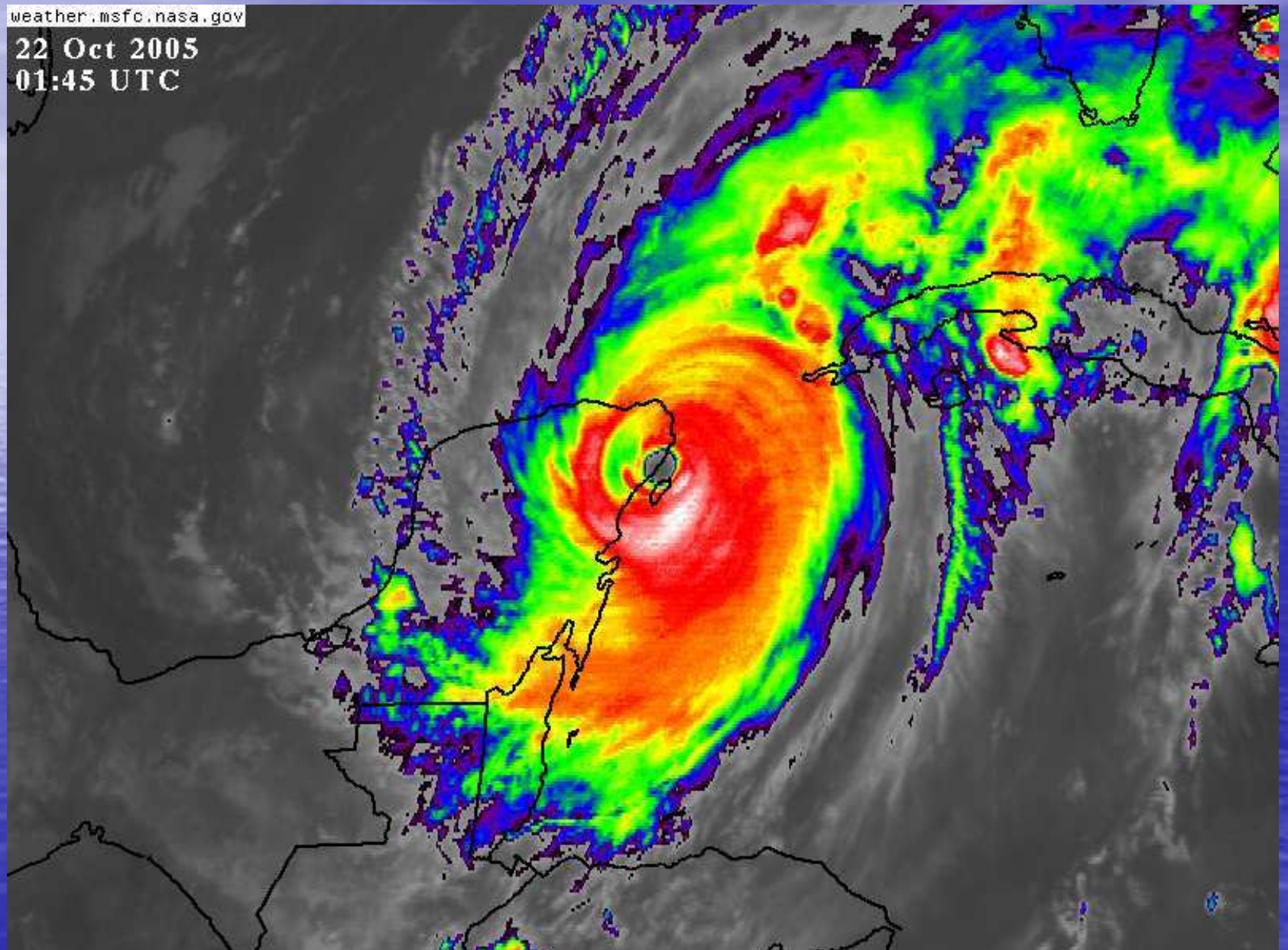
3. Repercussions for Mexico: Use of Energy

- Power sector: A growing dependence on natural gas...

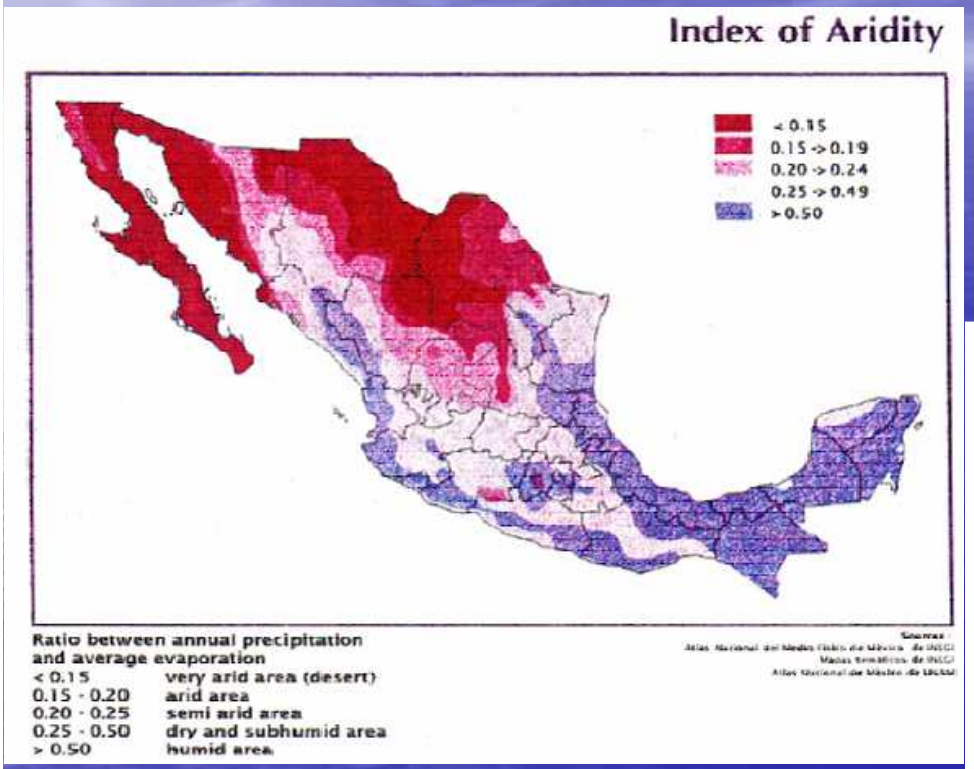


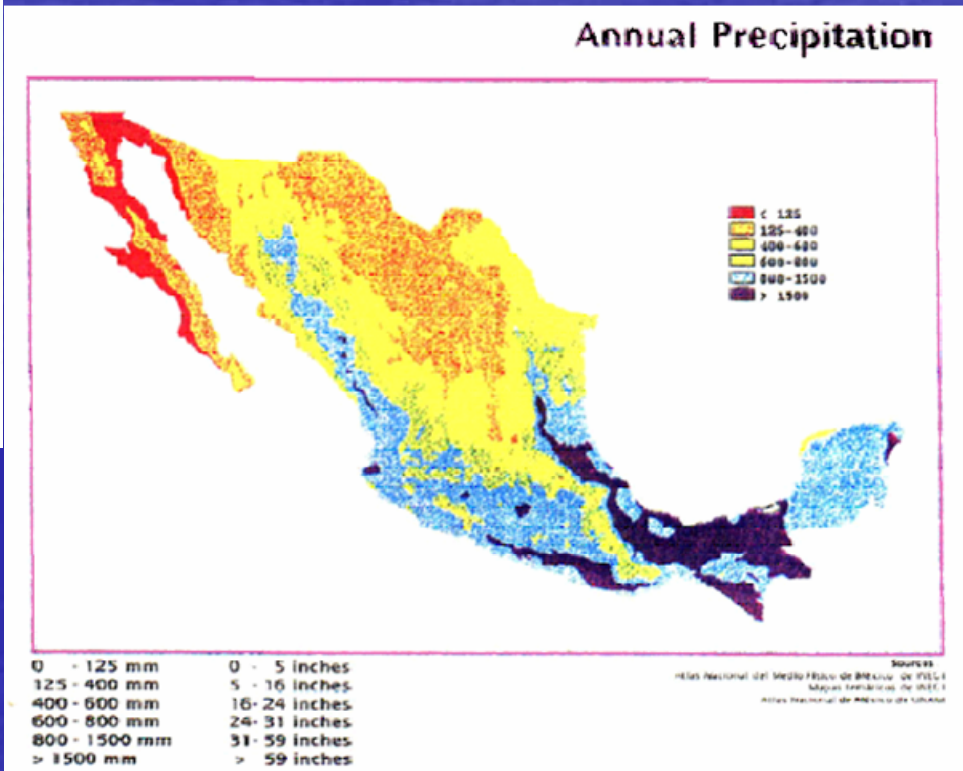
Elaborado a partir de la Prospectiva del Sector Eléctrico 2004-2013

3.1. Hurrican Wilma

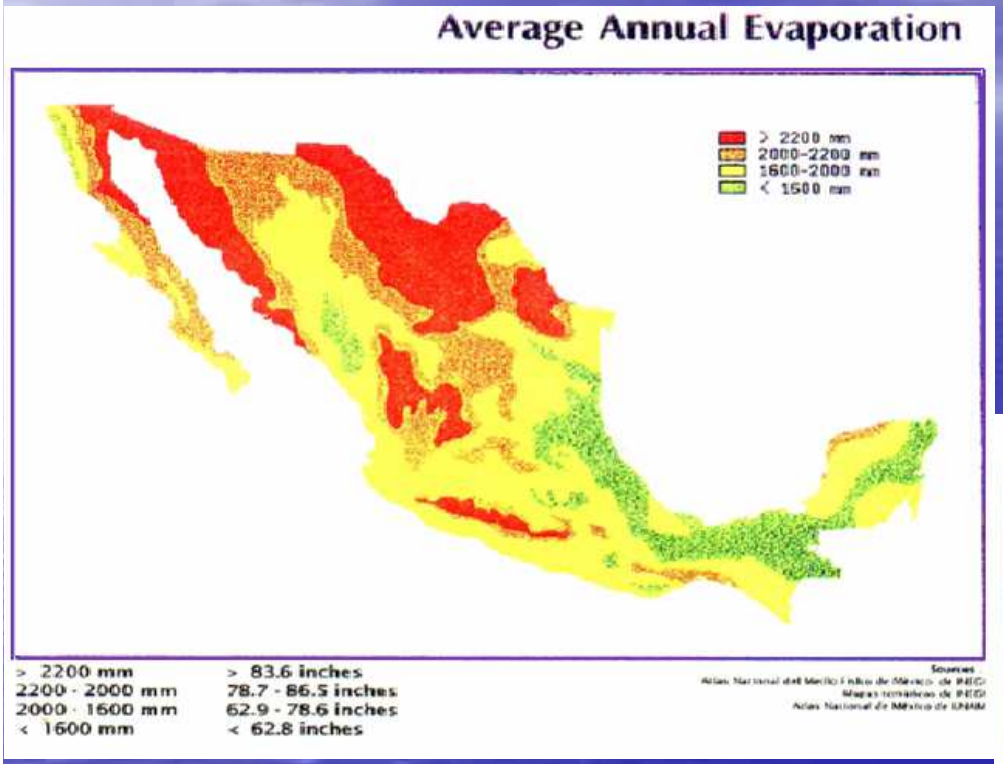


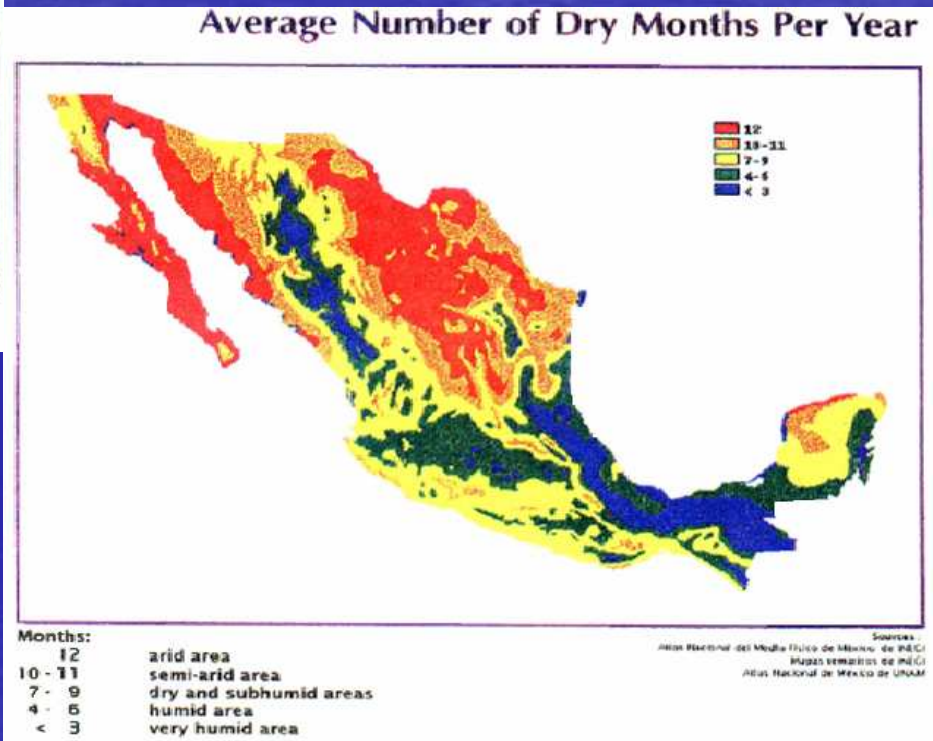
3.2. Desertification, Migration and Conflict – Case of Mexico: Annual Aridity & Precipitation



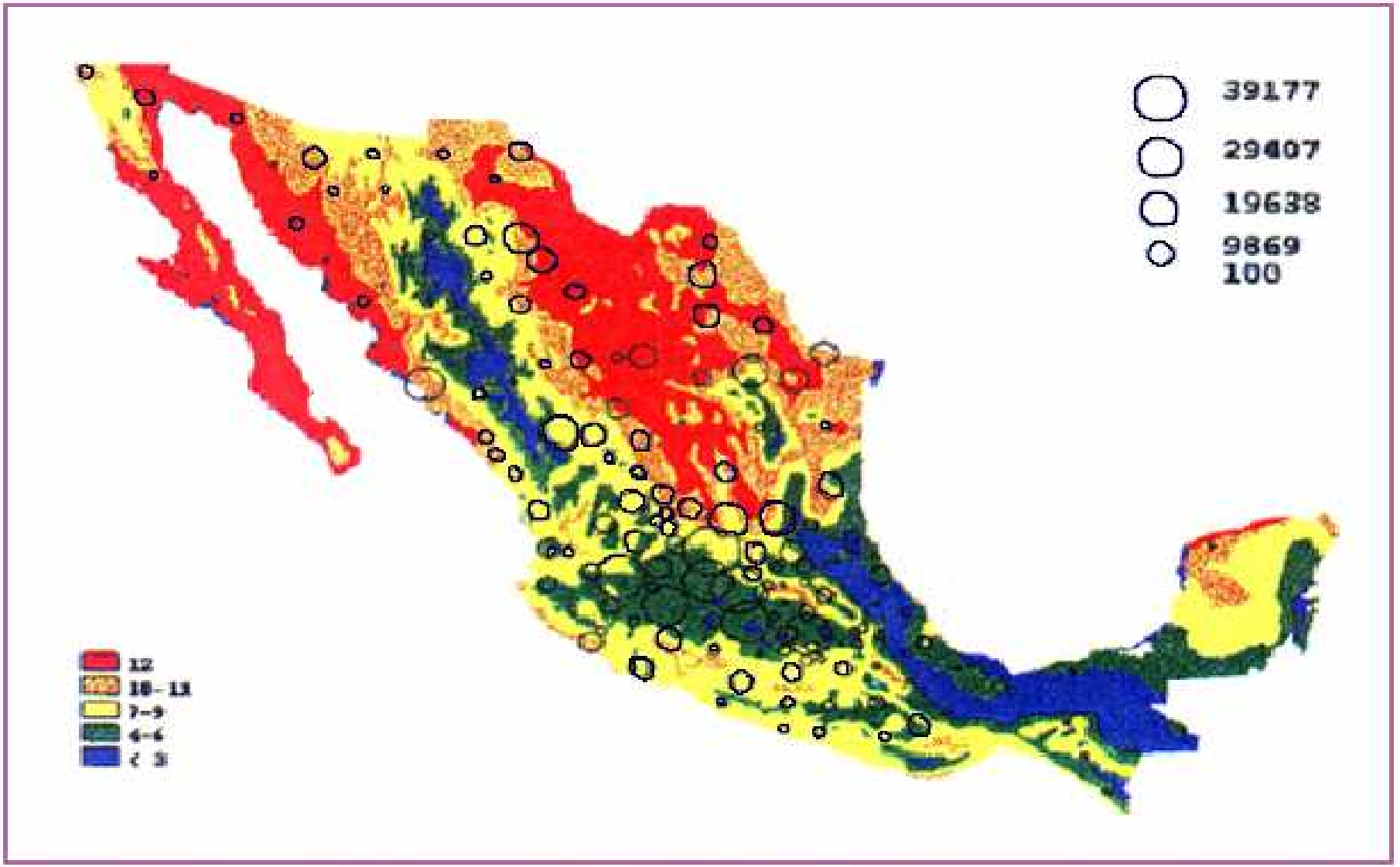


3.3. Dryness and Desertification in Mexico:
Annual Evaporation & Dry months per year





3.4. Number of Dry Months and Migration



Number of dry months and flow (estimation for 1993) of Mexican migrants living and working in the US, surveyed on the border on their return to Mexico (spatial distribution according to their region of birth in Mexico, rural and urban localities).

3.5. Social Vulnerability: Internal Inequity in Mexico

Concept	% of Population	% of GDP	% of Financial Savings
Very Rich	0.23	40.3	78.0
Poor	52.7	18.4	10.0

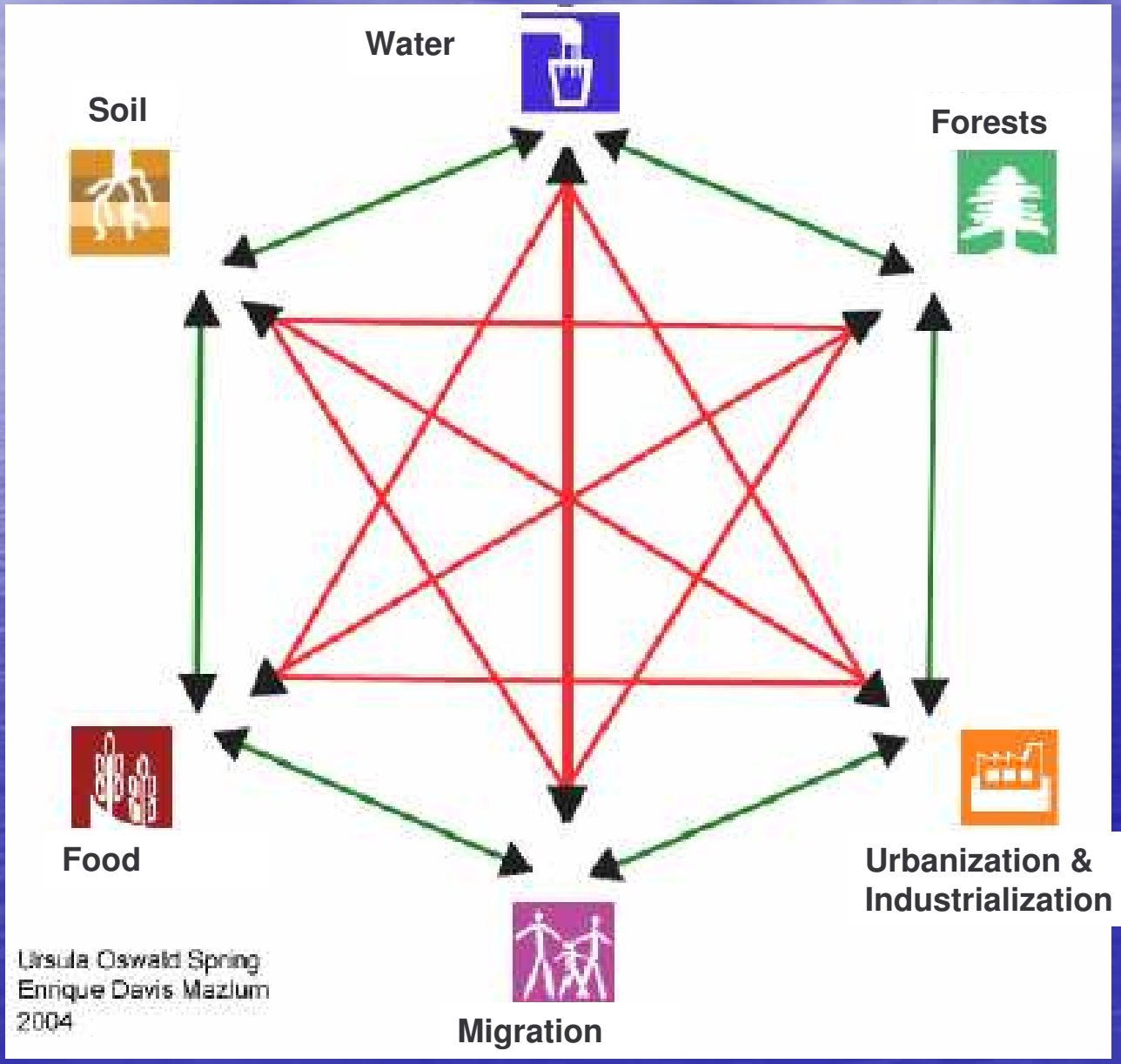
Source: INEGI, 2004 y Bank of Mexico, 2004

4. Border Region of Río Bravo

4.1. Localization of Río Bravo or Río Grande

- Source in the State of Colorado
- Length 1,900 miles
- Fifth largest river in USA
- Used by the US States of Colorado, New Mexico and Texas
- The Colorado River Storage Project Act (1956) authorized Clen Canyon dam and Central Arizona Project (1986)
- Used by 5 states and 11 municipalities in Mexico
- Used for domestic, industrial and agricultural purposes in Mexico
- Irrigates the Desert of Chihuahua, one of the most biodiverse deserts in the world

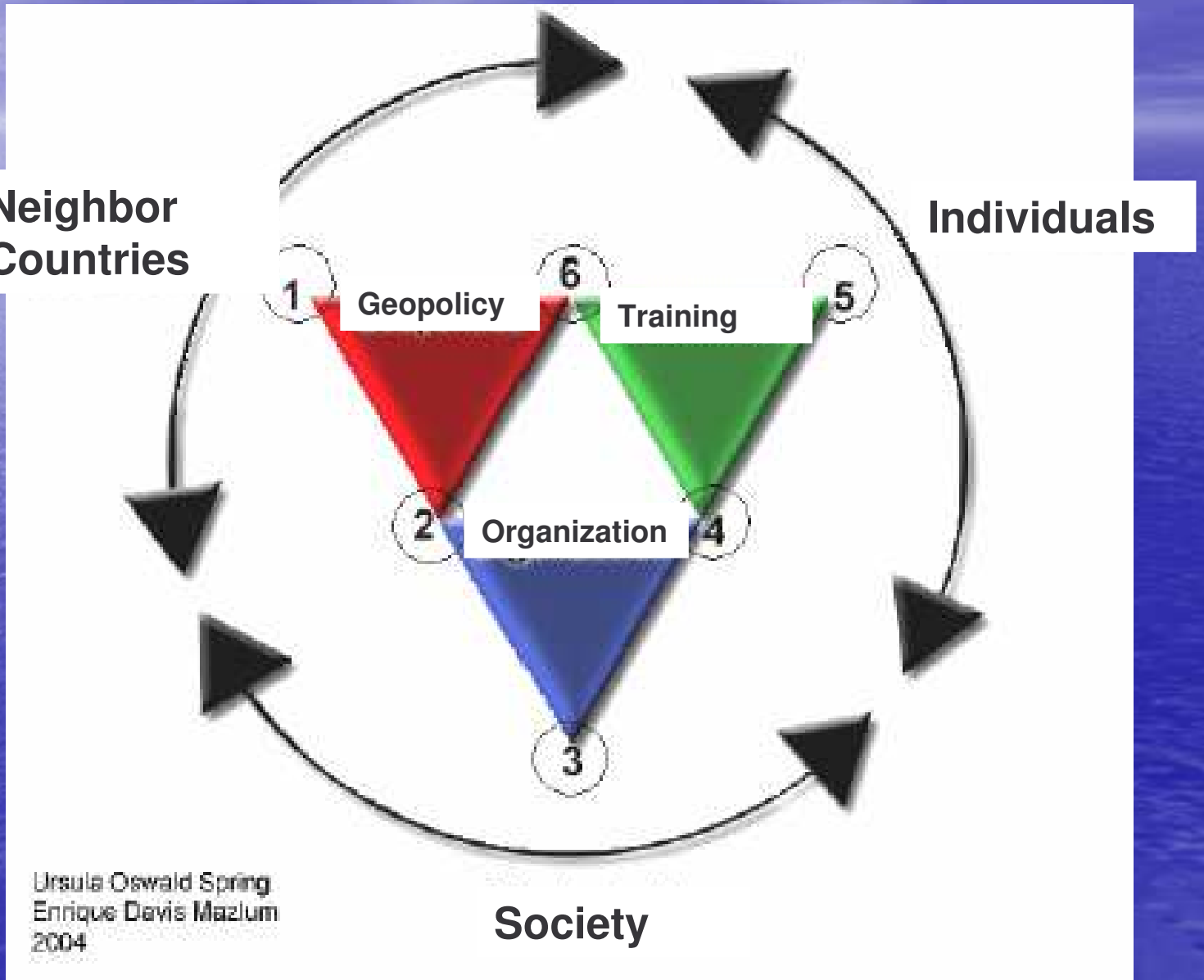
5. Growing Conflicts between Neighbors



5.1. Socio-Physical Vulnerability in Río Bravo

- International Treaty signed in 1944
- Increase of population to 10 million by migration
- Less precipitation and higher dryness
- Intensification of productive processes:
  - Growth of maquila and other industries
  - Higher demand of agricultural water
- Overexploitation of river for irrigation
- Dry-out of the river and affluents during dry season
- Depleting of aquifers
- High pollution by agrochemical, domestic and industrial waste and waste water without treatment
- Modification of ecosystems
- Destruction of biodiversity in very fragile environment

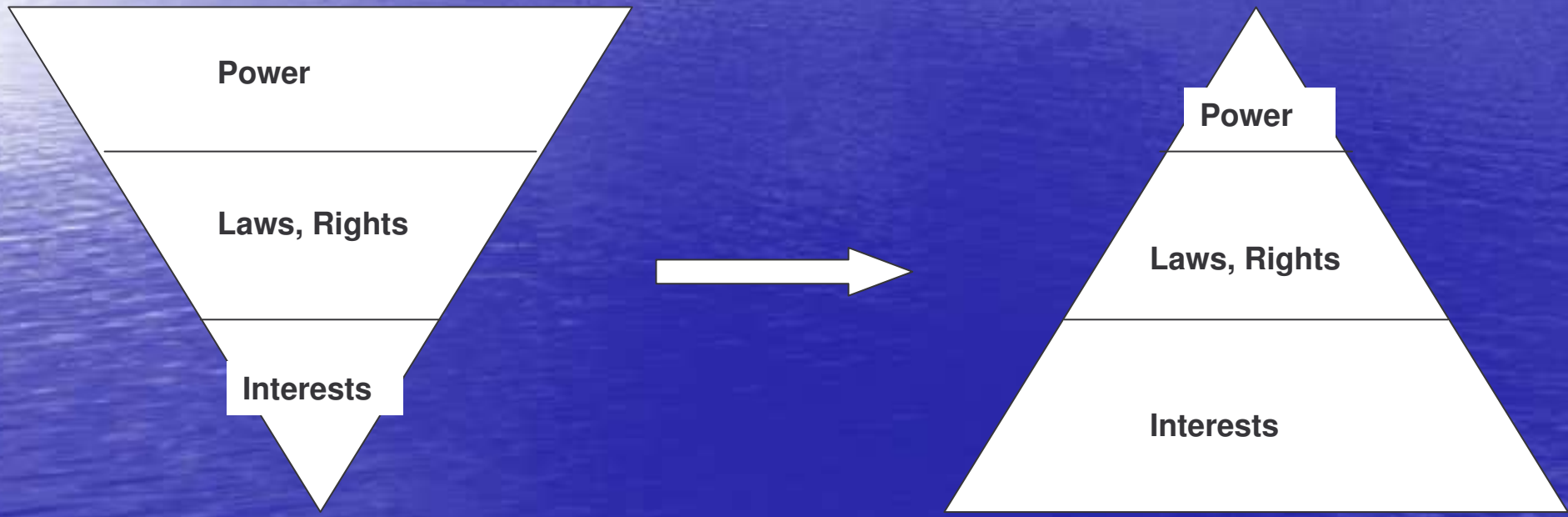
6. Hydro-Diplomacy



6.1. From an False System of Conflict Resolution to an Effective One

What is false?

What should we do?



Source: Ury, Brett, Goldberg, 1993

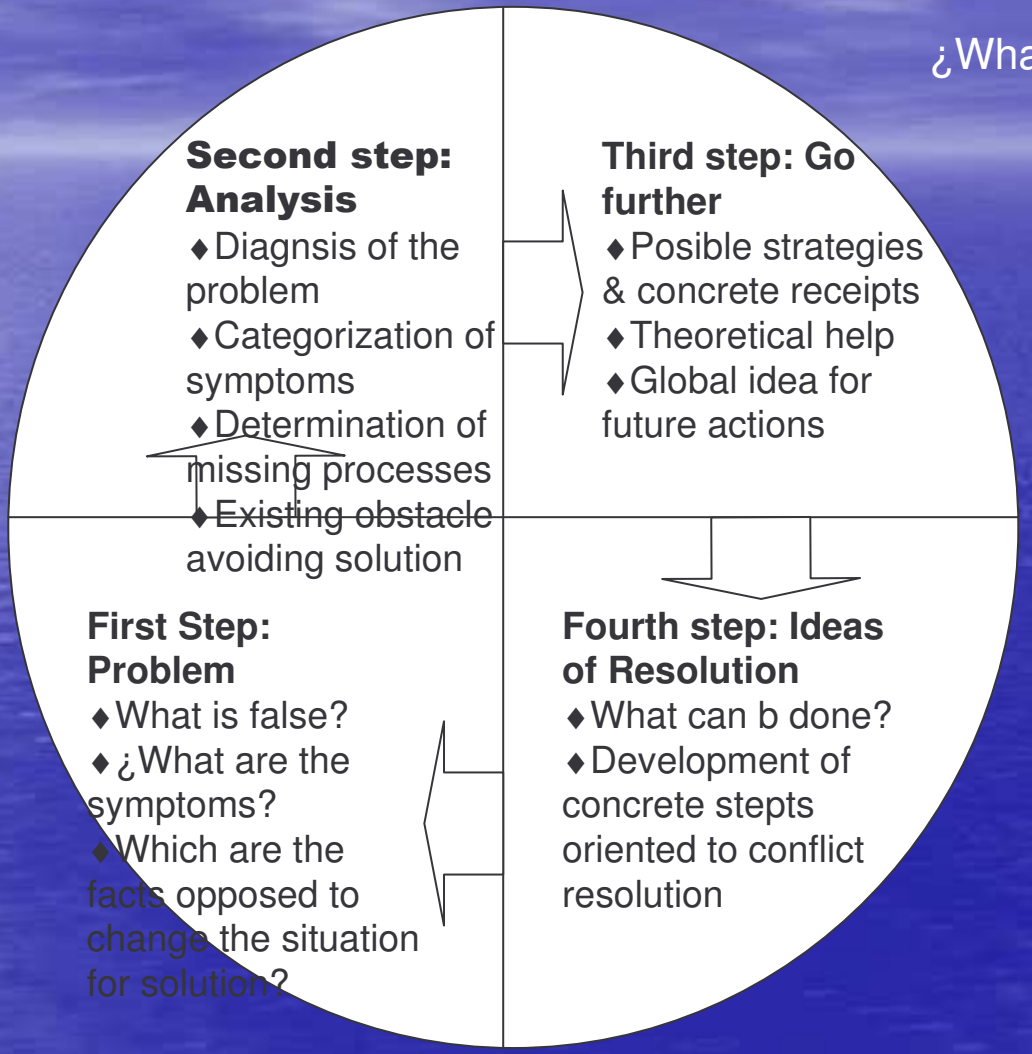
6.2. Circular Diagramme of Mediation

¿What is false?

¿What should we do?

in theory

in reality



Fuente: Roger Fisher, William Ury, Bruce Patton, 1991: 104

7. Human, Gender and Environmental Security (HUGE)

Level of expansion	Determination Which security?	Mode of expansion Reference object Security of whom?	Value at risk Security of what?	Source(s) of threat Security from whom or what?
Without expansion	National security (political, military dimension)	The State	Sovereignty, territorial integrity	Other States, terrorism, sub-state actors, guerrilla
Increased	Societal security	Nations, social groups	National Unity, national identity	(States), Nations, Migrants, Alien cultures
Radical	**Human security**	**Individuals (Humankind)**	**Survival, quality of life, cultural integrity**	**The State, globalization, nature, GEC, poverty, fundamentalism**
Ultra-radical	**Environmental Security**	**Ecosystem, urban and agricultural system**	**Sustainability**	**Nature Humankind**
Trans-radical	**Gender security**	**Gender relations, indigenous, minorities**	**Equity, identity, social relations**	**Patriarchy, totalitarian institutions (élites, governments, religions, culture), intolerance**

Source: Bjørn Møller, 2003:279 and Úrsula Oswald, 2001, 2004

7.1. Ethics of Sustainable Peace-Building Security with Cooperation and Solidarity

GS –Gender Security

ES – Environmental Security

HS –Human Security

Multiculturalism
Dissipative System
Technological Diversity
Pleasure, Happiness
Creative Efforts
Agathos & Kalos
Local Self-Sufficency

Civilizational Process
Globalization/Solidarity
Nets and Relations
Ethics to Care
Multiplicity /Plurality
Transversal Polícy
Plural Decision-making

Bottom-up Political Participation
Bio-Socio Cultural Collaboration
Care for Vulnerable
Permanent Evaluation & Adaption
Regional Peace Building
Global Well-being
Healthy and Beautiful Environment

Thank you for your attention

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