

ENVIRONMENTAL CRISIS AND PUBLIC ADMINISTRATION IN DEVELOPING COUNTRIES: THE CASE OF NICARAGUA

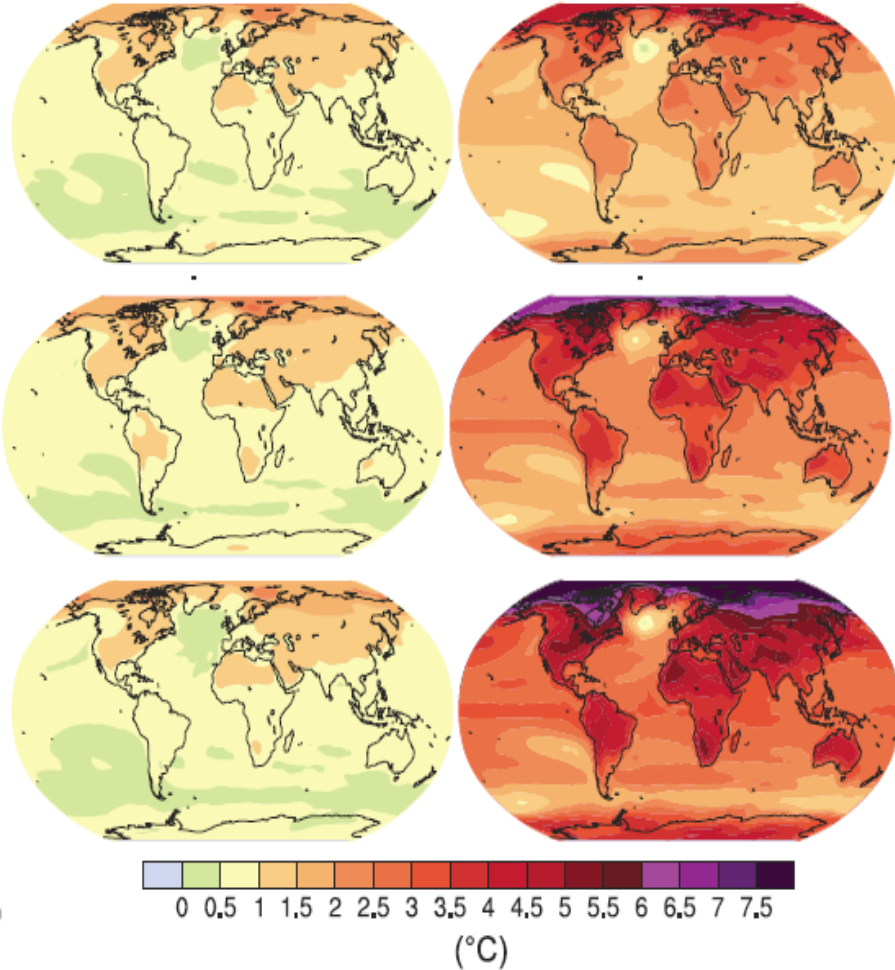
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2020 - 2029

2090 - 2099



GLOBAL ENVIRONMENTAL CRISIS

- Denial of celerity, severity and consequences of multiple, interrelated environmental crisis
- Accelerated Impact of negative synergies :
 - Melting of the Siberian permafrost, releasing methane gas that has 21 times the effect of CO2
 - Deforestation liberates CO2 emissions, accelerating loss of habitat and desertification
- Multiple environmental crises:
 - Deforestation, soil degradation, freshwater scarcity and desertification;
 - Climate change and global warming with volatile temperatures, greater frequency and intensity of extreme weather events, acceleration of the El Niño / La Niña cycle, drought or floods;
 - Contamination of water, air, soil, food, other species and humans;

Negative impacts on human security and almost all species

- **Dead rivers, lakes and areas of seas ;**
- **Loss of habitat, food chains, fauna, flora and biodiversity are already a major extinction events.**

INTERNATIONAL RESPONSE

- International situation
 - Growing awareness among generations of the destruction
 - Apparent contradiction between denial and awareness, due to chronic, collective disability to reach effective international agreements
 - Gridlock for some decades in international negotiations (Sea, space, trade, climate change, etc.)
 - Insufficient and declining financing (United Nations, development, humanitarian assistance and lack of financing for climate change adaptation)
- Green Fund and Transition Committee (From Cancun, Mexico to Durban, South Africa)
 - Created in Cancun but with no defined structures, mechanisms, or sources of finance
 - Funding pledges from developed countries:
 - U.S. \$ 30 billion for the period 2009-2011, at U.S. \$ 10 billion per year.
 - U.S. \$ 100 billion annum goal (not commitment) for the beginning of 2020

THE TROPICS, CLIMATE CHANGE VICTIMS

- The current discussion: only recognizing to small insular countries
- However, Central America and the Caribbean, Sub-Saharan Africa and South Asia already suffer the consequences of climate change, but are not recognized as victims
- Denial and deferral of the costs of mitigation and adaptation to climate change and how to finance them
- Countries in the tropics: Immediate damage and long-term structural consequences
 - Damage will increase significantly year after year
 - The loss of temperature and precipitation parameters necessary for staple crops threatens food security
- What is needed:
 - Changes in regions and seasons of staple crops planting
 - For example, in some coffee-producing countries will be required a higher altitude for the production of quality coffee

PUBLIC ADMINISTRATION FACING UP ENVIRONMENTAL CRISIS

- Countries affected by climate change face daunting problems with little or no international support
 - Threatens development efforts, job and livelihood creation and poverty reduction, and that the decline of poor countries becomes a reality due to the accumulation of impacts of disasters
- Linear disaster planning and management :
 - Stand alone events on an emergency basis
 - The specialized agencies (local officials and military) operate immediately and made priori and post facto evacuations, search , rescue and relief
 - Other agencies are involved in rehabilitation and above all the reconstruction. These stages are more or less linear
- Iterative and not linear planning and managing of human security:
 - Multiple annual disasters, multiple years for recovery
 - Planning and preparation geometrically more complex when geological and nuclear risk exist in addition to environmental ones

PUBLIC ADMINISTRATION IN TIMES OF ENVIRONMENTAL CRISIS

- International support
 - It is ad hoc, unpredictable, short-term and always insufficient
 - There is no agreed , systematic and coordinated international mechanisms
- In structural adaptation poor countries are alone
 - Without financial support to address agricultural losses and ensuring food insecurity of environmental refugees
- Priorities: Human security policies, food and water security
- Challenges:
 - Rapid and profound restructuring of public administration, policy, planning and financing
- Planning for Development: No development without taking into account the risks, costs accrued and structural adaptations
- Organization and social mobilization are required to handle permanent disasters
- Major, multiple year recovery and accumulative disasters become all consuming
 - Japanese tragedy

THE CASE OF NICARAGUA

- The increase in national annual average temperature in Nicaragua over the past 50 years has been 0.06 degrees Celsius per year, which represents a total increase of 3 degrees Celsius over the past half century.
- However, there is great regional variation, even within Nicaragua:
 - Northern mountainous: 4.05 degrees of increase in 54 years, there is a dry area at risk of desertification
 - 2 degrees or more above that, would have serious impacts

THE ROTATION OF “EL NIÑO” AND “LA NIÑA”

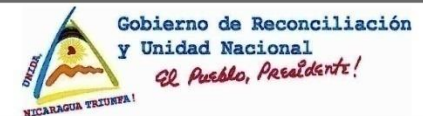
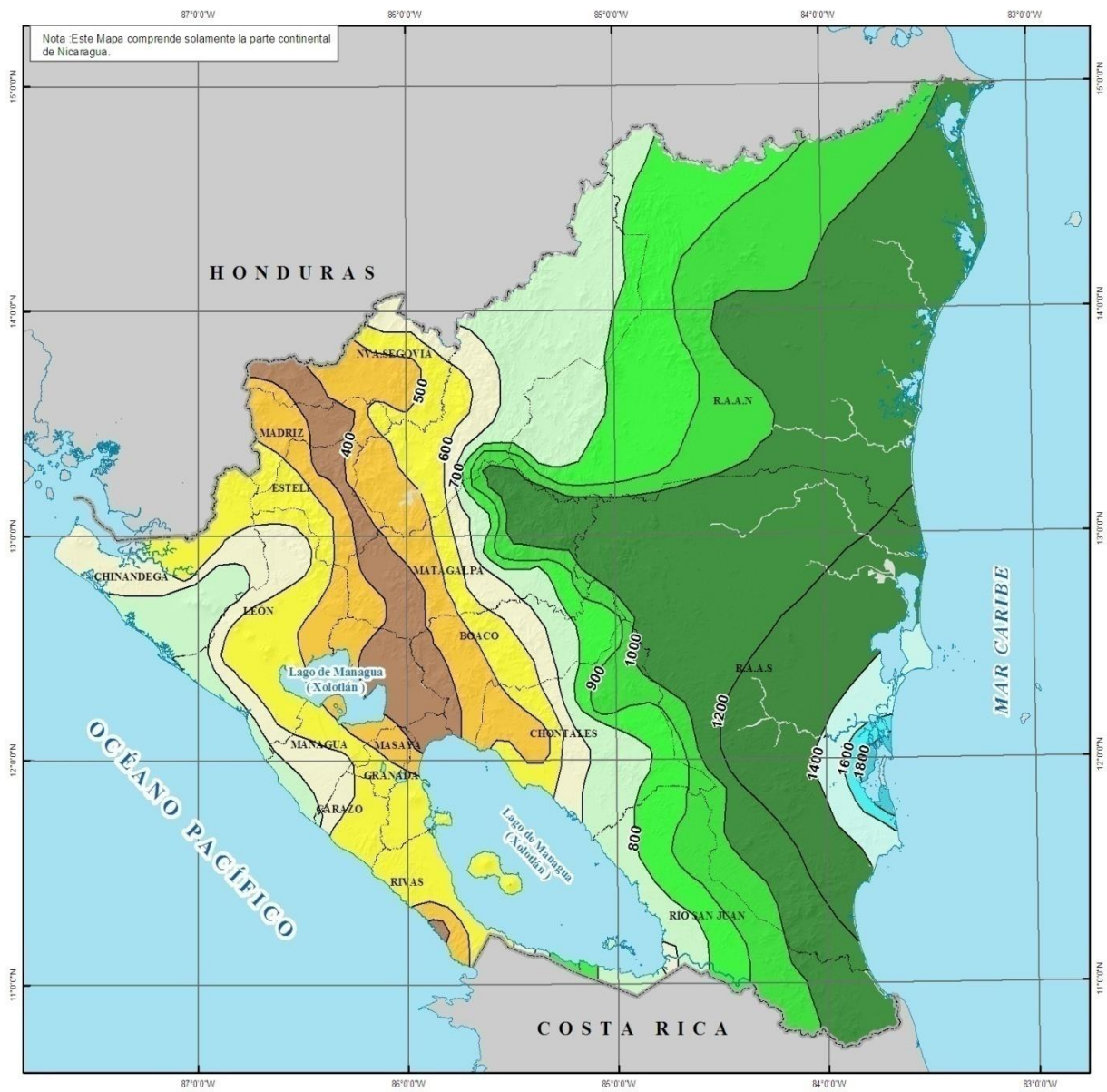
- The alternation has historically occurred between 3 and 7 years with an average of 4 years.
- Historically, a tropical storm or hurricane occurred once a decade.
- Since 2005:
 - 2005: Damages and losses due to excessive humidity season (Storm Stan in October).
 - 2006: El Niño. Losses from draught.
 - 2007: Transition to El Niño. Draught in the first cropping season, lack of rain in June and July
 - 2007: La Niña in the second cropping season. Excess humidity losses.
 - 2008: La Niña events, heavy rains and flooding.
 - 2009: El Niño. Damages and losses from drought in second cropping season.
 - 2010: La Niña. Losses from excessive rains.

AGRICULTURAL LOSSES

2005-2010

- 386.400 hectares of basic grains
 - Represents 9% of the planted area
 - Average annual loss: US\$206.3 million
 - 3.52% of GDP

EL NIÑO (MAY-JULY)



Escenarios de Precipitación Promedio para Eventos EL NIÑO (Período Mayo-Junio-Julio 1971 - 1998)

Legenda

Precipitación (mm)

300-400	1000-1200
400-500	1200-1400
500-600	1400-1600
600-700	1600-1800
700-800	1800-2000
800-900	
900-1000	

Simbología General

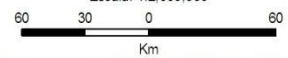
- Límite Internacional
- - - Límite Departamental
- ☪ Cuerpos de Agua

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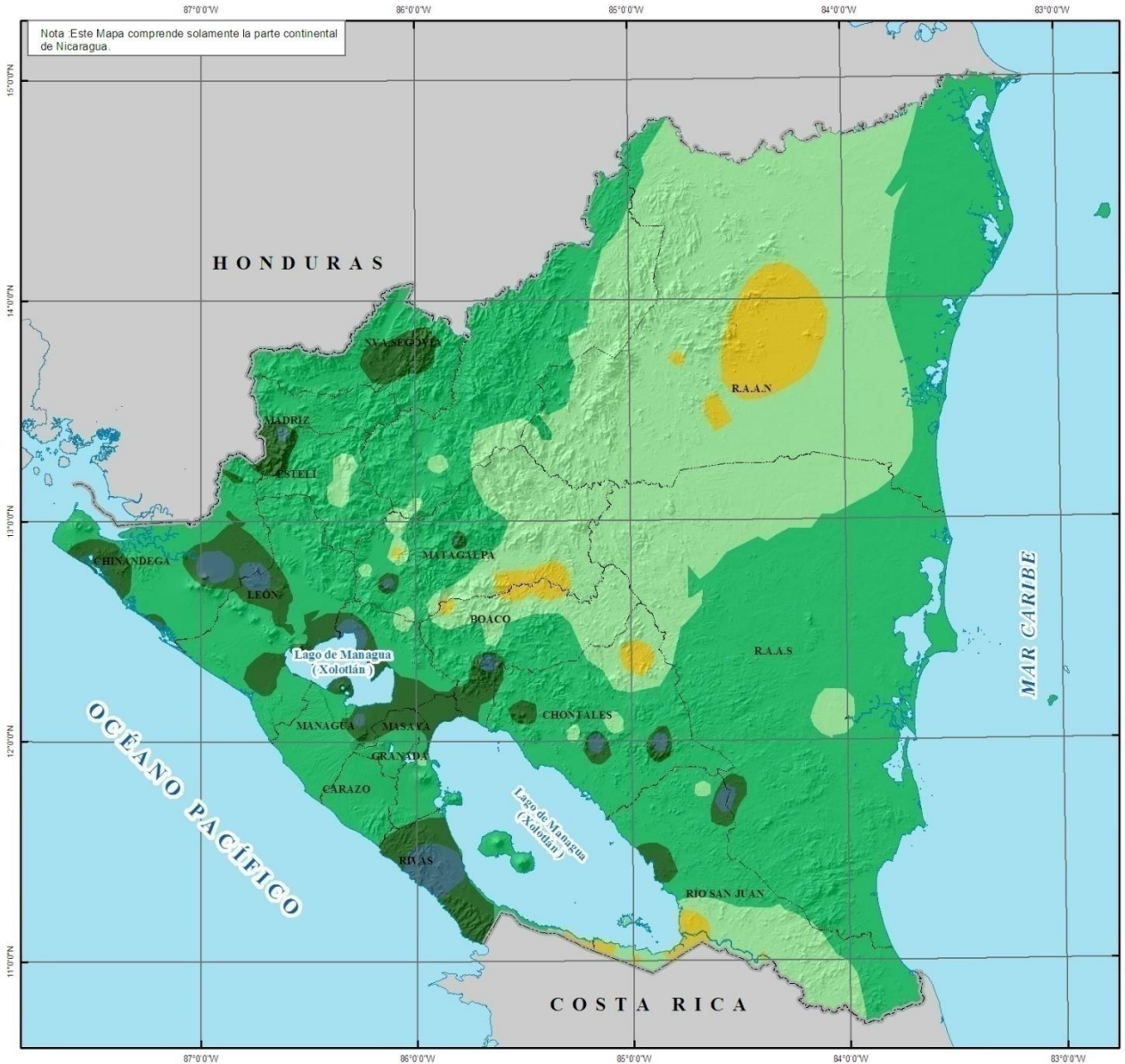
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Escala: 1:2,000,000



Proyección Transversal de Mercator (UTM) Zona 16 WGS 1984
Elipsoide WGS 1984

LA NIÑA (MAY-OCTOBER)



Gobierno de Reconciliación
y Unidad Nacional
El Pueblo, Presidente!
NICARAGUA TRIUNFA!

Rango de Deciles de Precipitación de Mayo-
Octubre de mayor frecuencia durante Los
Años Niña
(Período 1971 - 1998)

Legenda

Rango de Decil Mayo-Octubre

- Seco
- Ligeramente Seco
- Normal
- Ligeramente Humedo
- Moderadamente Humedo

Simbología General

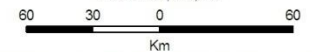
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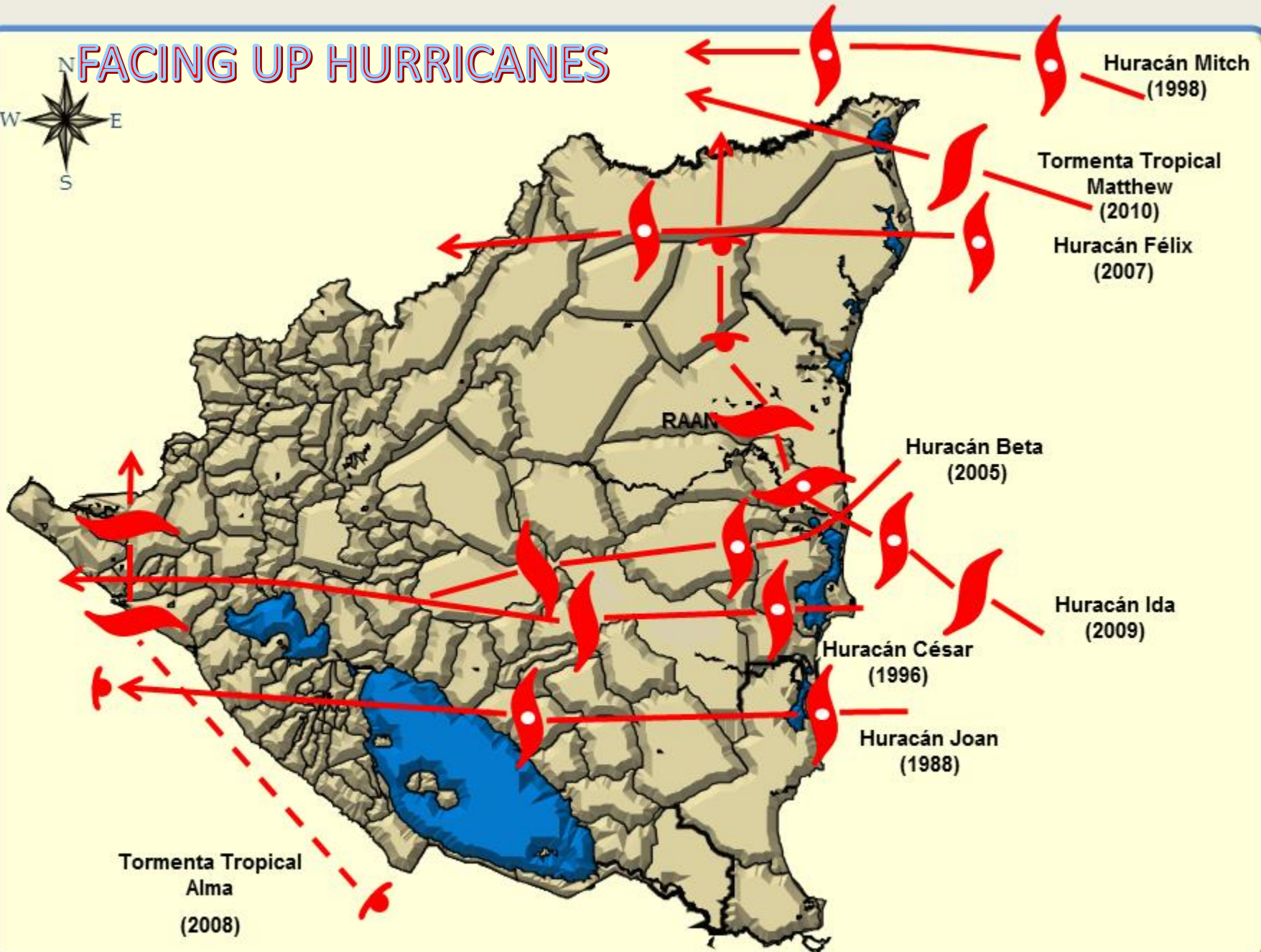
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FACING UP HURRICANES



NICARAGUA FACING THE ENVIRONMENTAL CRISIS: CHALLENGES AND RESPONSES

- Managing the cumulative impacts of successive disasters:
 - Continued assistance to victims of Hurricane Felix (2007) and Hurricane Ida (2009), to victims of the 2009 draught in the "dry zone" and the 2010 flood victims.
 - The yearly nature of these events makes it inevitable that more victims, damages, and losses will continue to accumulate.
- President Daniel Ortega Saavedra
 - Leading the rapid response actions to successive disasters
 - Taking key decisions on food security: production, imports and exports of foodstuffs and commercialization with subsidies for the poor

NICARAGUA FACING THE ENVIRONMENTAL CRISIS: CHALLENGES AND RESPONSES

- **Yet in spite of climate change**

- Helping to reduce poverty and extreme poverty between 2005 and 2009
 - General poverty: declined from 48.3% to 42.5%
 - Extreme poverty: declined from 17.2% to 9.7% according to FIDEG
 - FAO and the World Food Program have declared Nicaragua the only Spanish speaking country in Latin America and the Caribbean that will achieve all of the MDGs by 2015
- Productive and redistributive policies improved equality: The country's Gini index for consumption was reduced from 0.41 to 0.36 in that period.
- Environmental refugees are being relocated in new housing projects

BREAKTHROUGH CEPA PAPER ON POST-CONFLICT AND POST DISASTER PUBLIC ADMINISTRATION

Reasons for poor international results:

DONOR DRIVEN

PARADOX OF INTERNATIONAL STATE-BUILDING

Colonialism, structural adjustment, humanitarian interventions

POLITICAL AND INSTITUTIONAL GOVERNANCE DIMENSION

Cultural, value and institution based

PREVAILING, HEGEMONIC ECONOMIC AND SOCIAL MODEL

Social protection

Economic and social transformations

Redistributive social policies

Micro, small, and medium-sized production

LESSONS FROM NICARAGUA

- 1) Adaptation of the nation, including public policy, planning, finance and administration, to the new realities of climate change.
- 2) National leadership: President Daniel Ortega Saavedra
- 3) National policies, not donor driven
- 4) National institutions, does not except international impositions
- 5) National budget, solidarity based South-South financial support
 - ALBA and PETROOCARIBE based
- 6) Organized and mobilized population
 - 1.2 million volunteers country of 5.8 million people, mainly women and young people