Resilience for life,
Physical and fiscal-financial Resilience

A Global Challenge

Gerson Martínez
Minister of Public Works from El Salvador

The perspective from El Salvador

LATIN AMERICA AND THE CARIBBEAN:

635 millions

8.6% of the Global population

Source: United Nations 2015

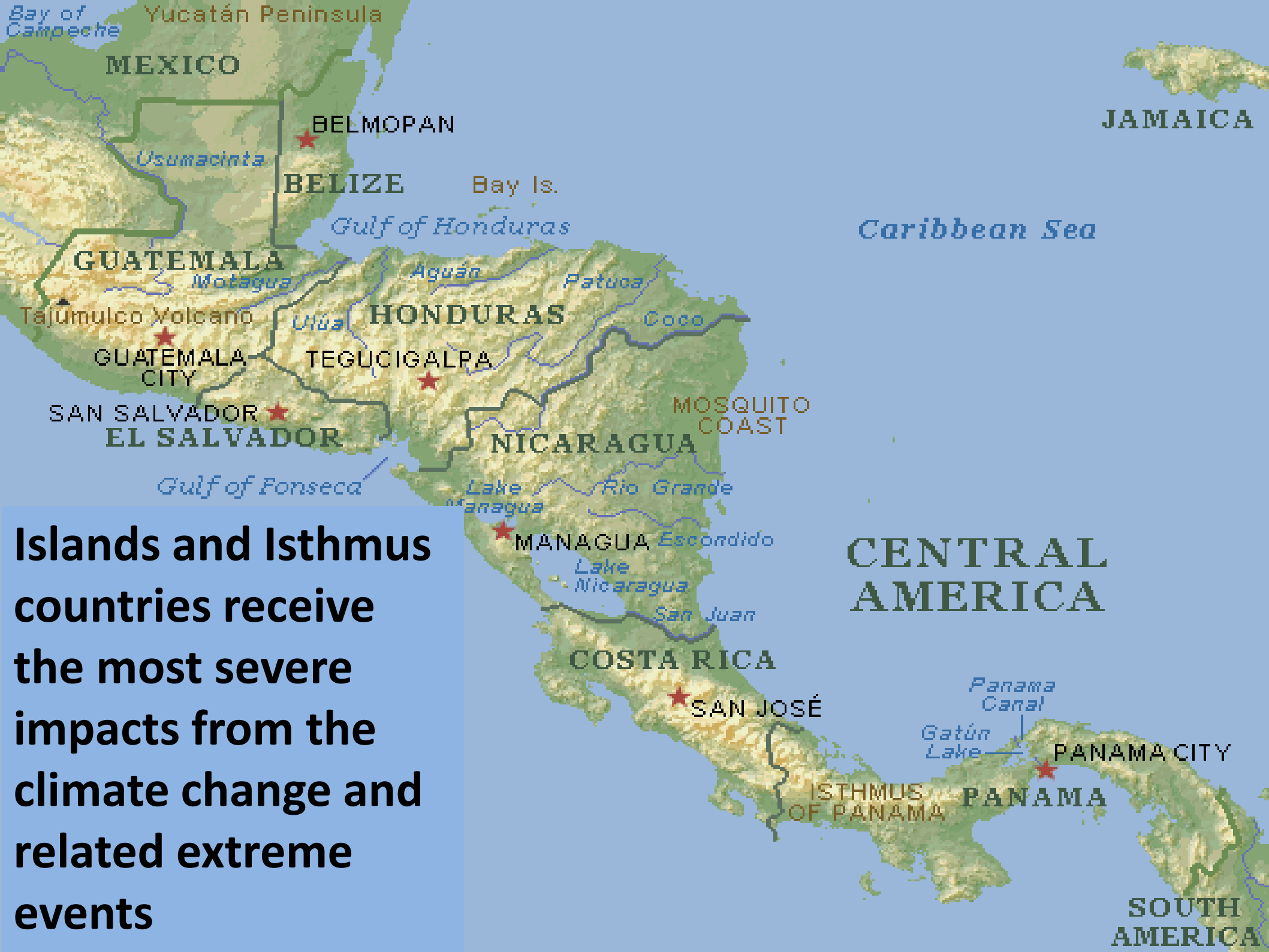
Medium income but great heterogeneity and inequiality

Latin America and the Caribbean is the world region where most people live in urban area

DEVOTION TO UNPLANNED URBANISM

"The resurrection" from Malthus – Planet Calcification

Latin America and Caribbean is the world developing region most urbanized (ECLAC)



Islands and Isthmus countries receive the most severe impacts from the climate change and related extreme events

UNDAC Report 2010:

El Salvador was considered the most vulnerable country in the world

Multi-risk Atlas

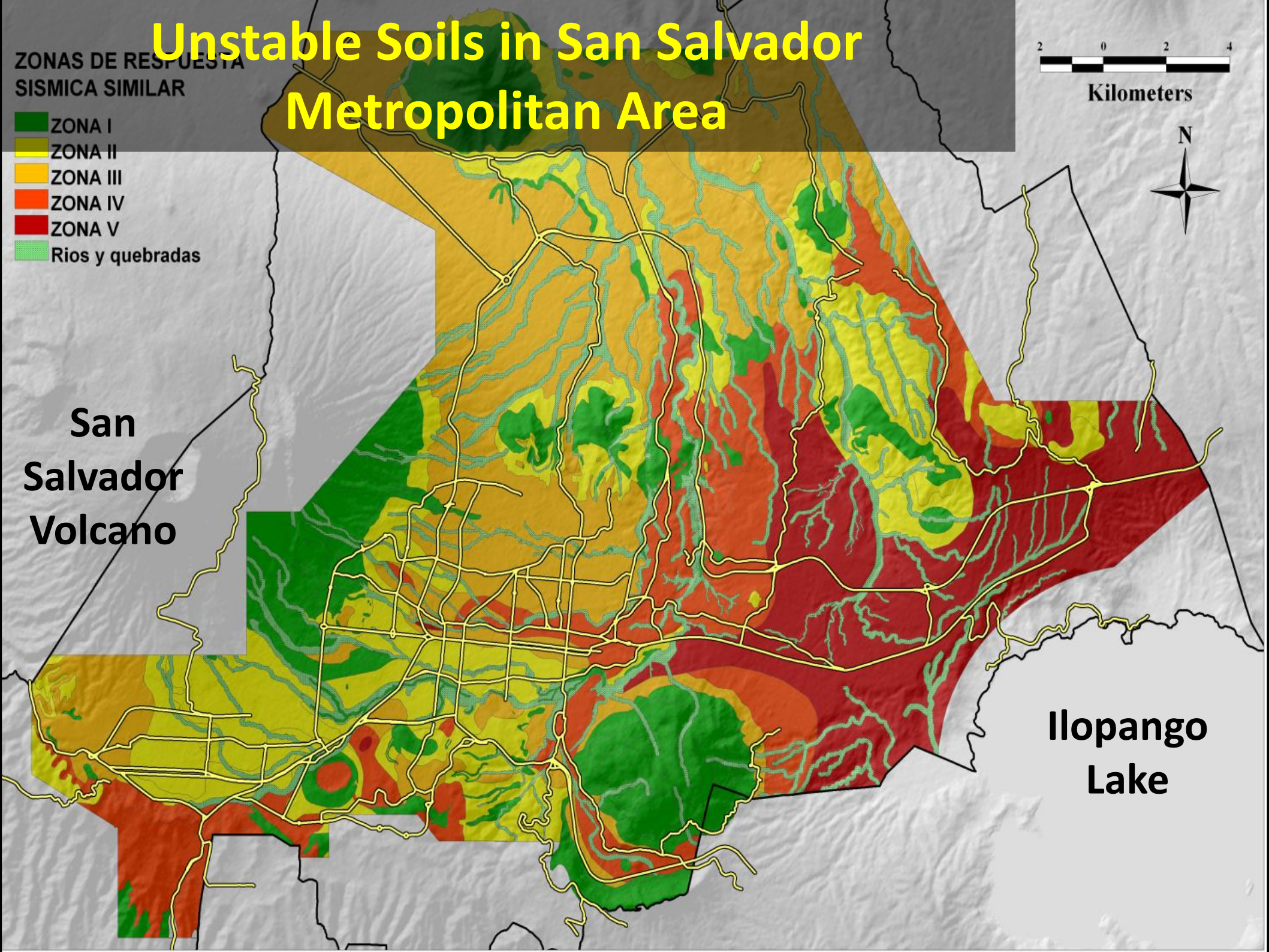
Extreme Drought

Landslide induced by earthquakes

Volcanic Eruptions

Floods by extreme rainfalls

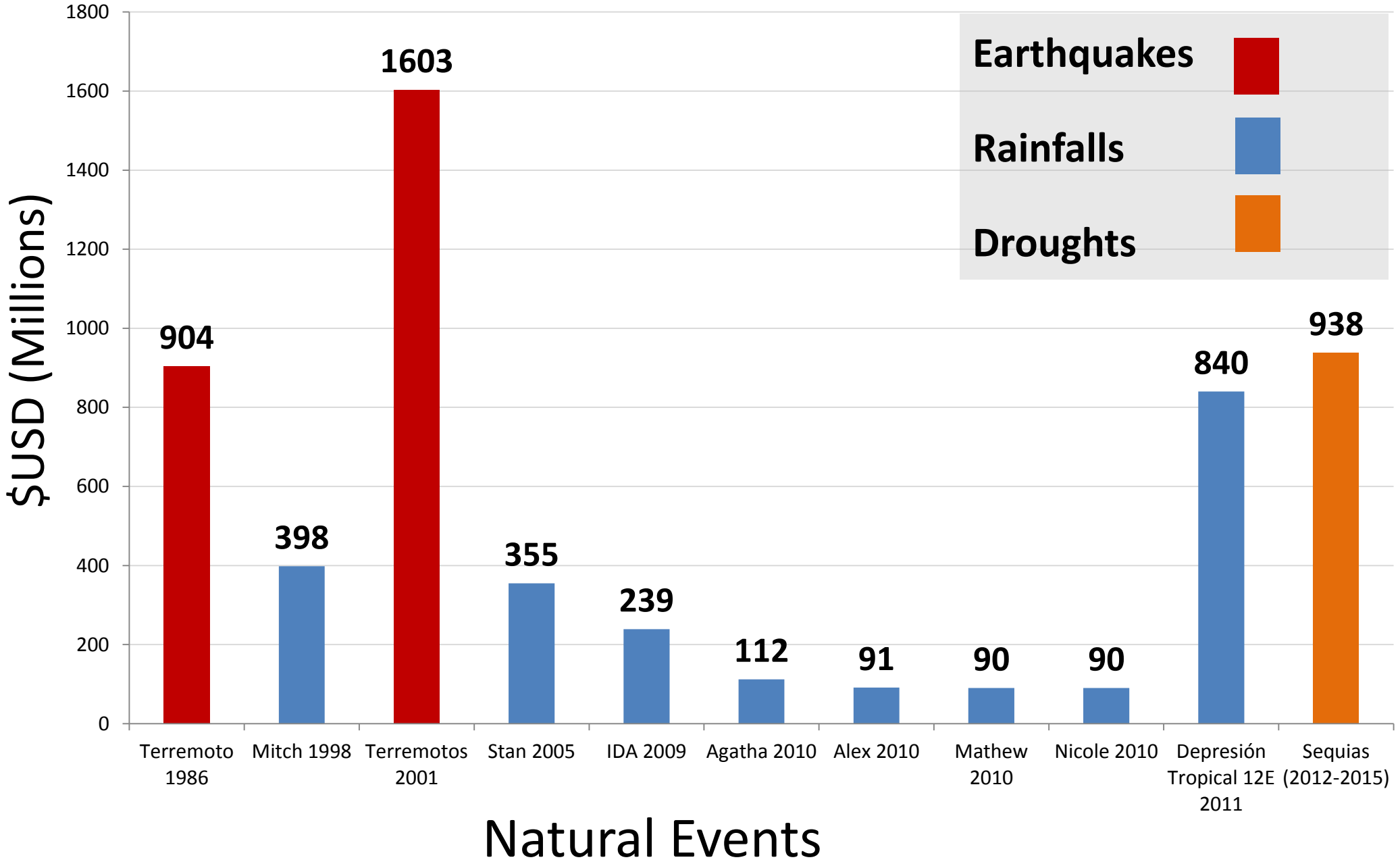
Unstable Soils in San Salvador Metropolitan Area



El Salvador:

Impacts of extreme events

Economic Impact from natural events during the last 30 years




More than 150 afected bridges due extreme rainfalls from 2009 to 2017 in a surface of 20,742 km²

Economic losses in transportation sector due extreme events from 2009 to 2011

STORM	YEAR	TOTAL ECONOMIC LOSS (MILLIONS)	TRANSPORTATION SECTOR	
			ECONOMIC LOSS (MILLIONS)	PERCENTAGE AS PROPORTION OF TOTAL LOSSES
Ida	2009	USD $315	USD $118	37.5%
Agatha, Alex, Matthew and Nicole	2010	USD $159.8	USD $53	33.2%
12-E	2011	USD $840.4	USD $226.4	27.0%
CUMULATIVE TOTAL		**USD $1315.2**	**USD $397.4**	**30.20%**

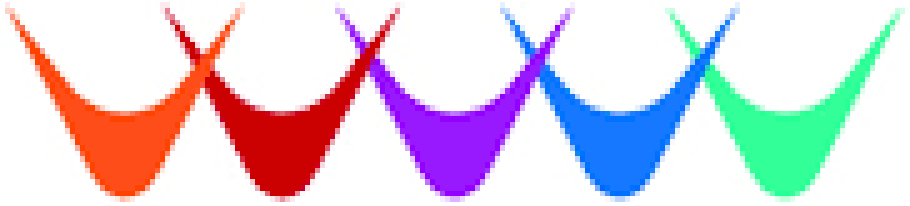
6% GDP

Source: MOP - El Salvador and ECLAC

Creation of Strategy for Climate and Geological Risks Management towards a Culture of foresight and prevention

The Human being, center of the strategy

EL SALVADOR,
PART OF A GLOBAL STRATEGY



Sendai Framework for Disaster Risk Reduction

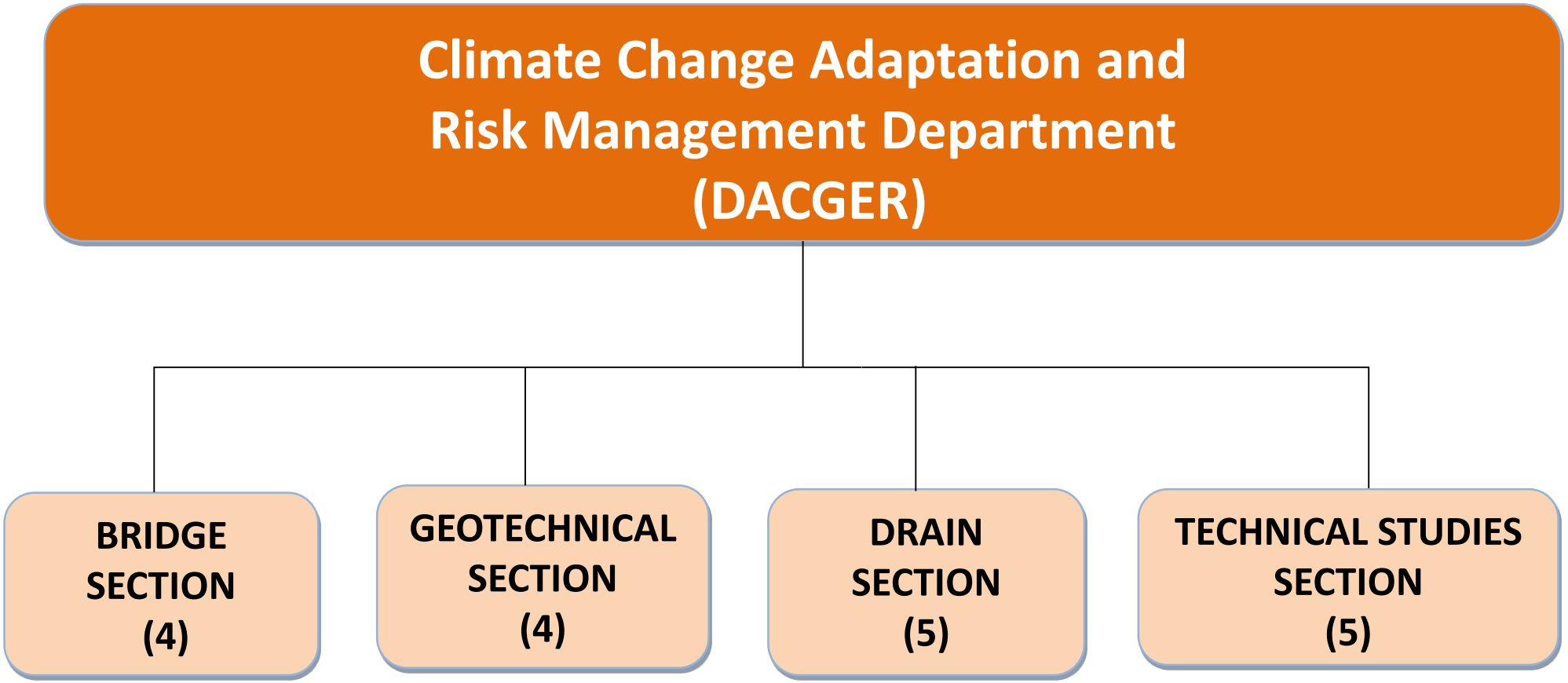
United Nations Framework Convention on Climate Change

Creation of the first Climate Change Adaptation and Risk Management Department in Latin America and Caribbean

As strategic organization inside a Ministry of Public Works, Transportation, Housing and Urban Development

December 13th, 2010

DACGER



25 PEOPLE (19 TECHNICIANS SPECIALIST + 6 ADMINISTRATIVE AND FIELD SUPPORT)

Intensive program of protection works

780 vulnerable areas eliminated of 978 inspected

Cost-Effectiveness Analysis

Social, Environmental and Economic Impacts

Stabilization works in an active landslide

Stabilization works in erosive soils and rainwater conduction

Stabilization works in erosive soils and rainwater conduction

Stabilization works in erosive soils and rainwater conduction

Regional Impact

Mesoamerica

POLÍTICA MARCO REGIONAL DE MOVILIDAD Y LOGÍSTICA DE CENTROAMÉRICA

COMITRAN
CONSEJO SECTORIAL DE MINISTROS DE TRANSPORTE DE CENTROAMÉRICA

COMIECO

COSEFIN

POLÍTICA MARCO REGIONAL DE MOVILIDAD Y LOGÍSTICA DE CENTROAMÉRICA

CONSEJO DE MINISTROS DE TRANSPORTE DE CENTROAMÉRICA, COMITRAN
CONSEJO DE MINISTROS DE INTEGRACIÓN ECONÓMICA CENTROAMERICANA, COMIECO
CONSEJO DE MINISTROS DE HACIENDA O FINANZAS DE CENTROAMÉRICA, COSEFIN

Elaborada por la
Comisión Técnica Regional de Movilidad y Logística del COMITRAN, bajo la Coordinación del Ministerio de Obras Públicas, Transporte, Vivienda y Desarrollo Urbano de El Salvador
y
La Secretaría de Integración Económica Centroamericana (SIECA)

SIECA

Con el apoyo de:

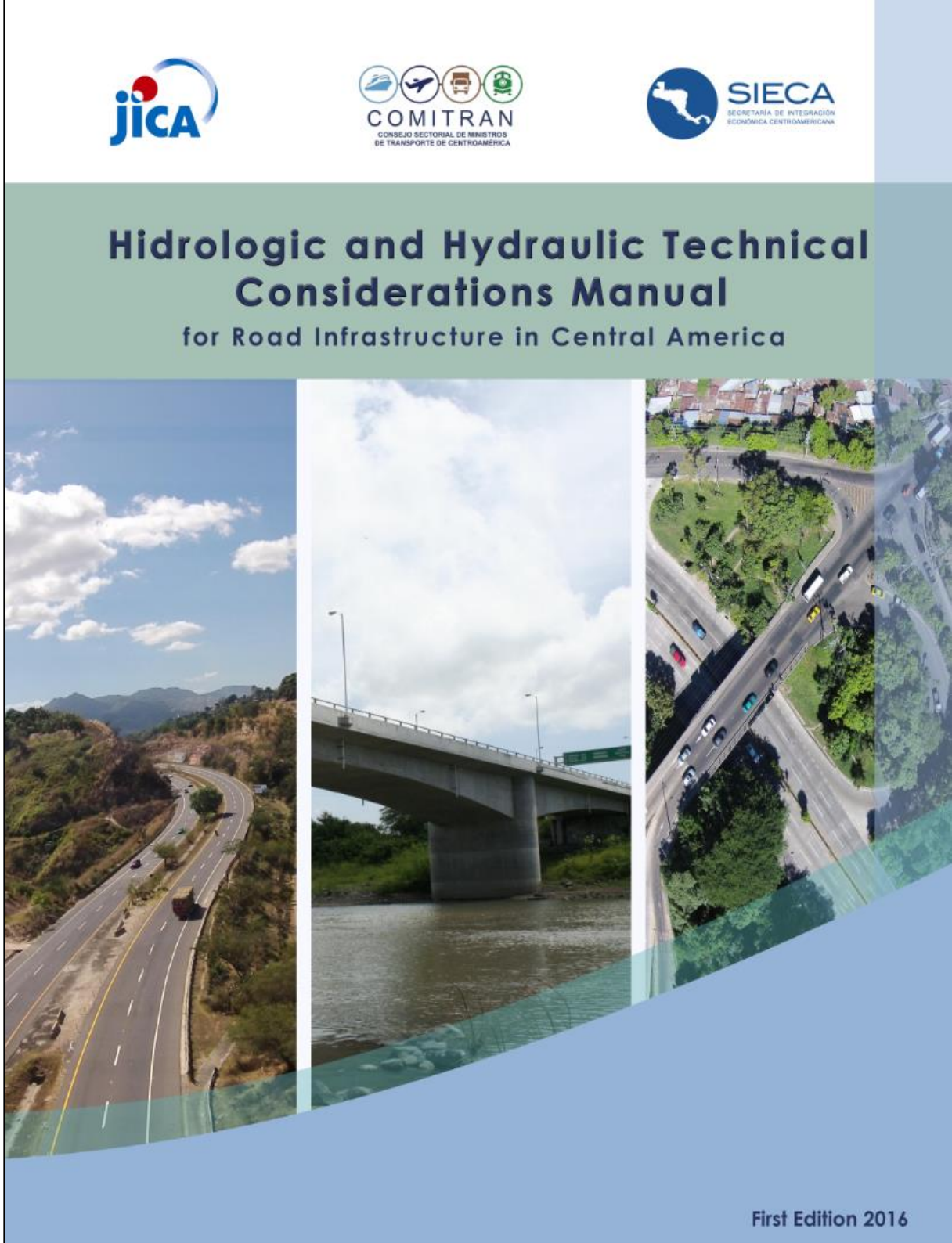
BID
CEPAL
JICA
AMEXCID

Junio 2017

Regional Impact

- Establishment of a **regional technical group** in climate and geological risk management
- **Agreements** in technical criteria at Central American region
- **Key Partners** :

IDB, JICA, UNDP, KFW



MASTER PLAN TOWARDS SUSTAINABLE MANAGEMENT OF RAIN WATER

Volcanic Hazard Management

Drone technology to identify debris flow paths

Volcanic Hazard Management

Building dikes for debris flow control

Volcanic Hazard Management

Building dikes for debris flow control

Volcanic Hazard Management

Building dikes for debris flow control

SPACE RECOVERY:

PUBLIC SPACE FOR WELL LIVING

Infraestructure in order to space recovery

BEFORE

AFTER

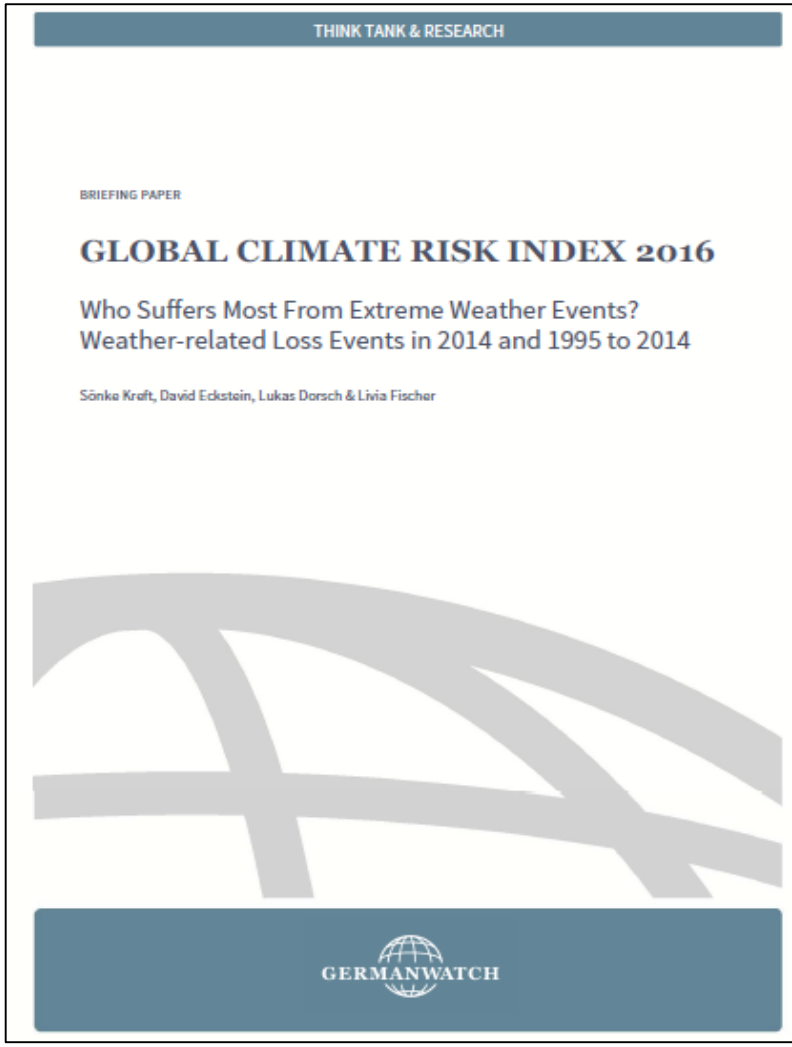
MOVING TO GREEN CITIES: THE GOAL

CLEAN TRANSPORTATION ALTERNATIVE

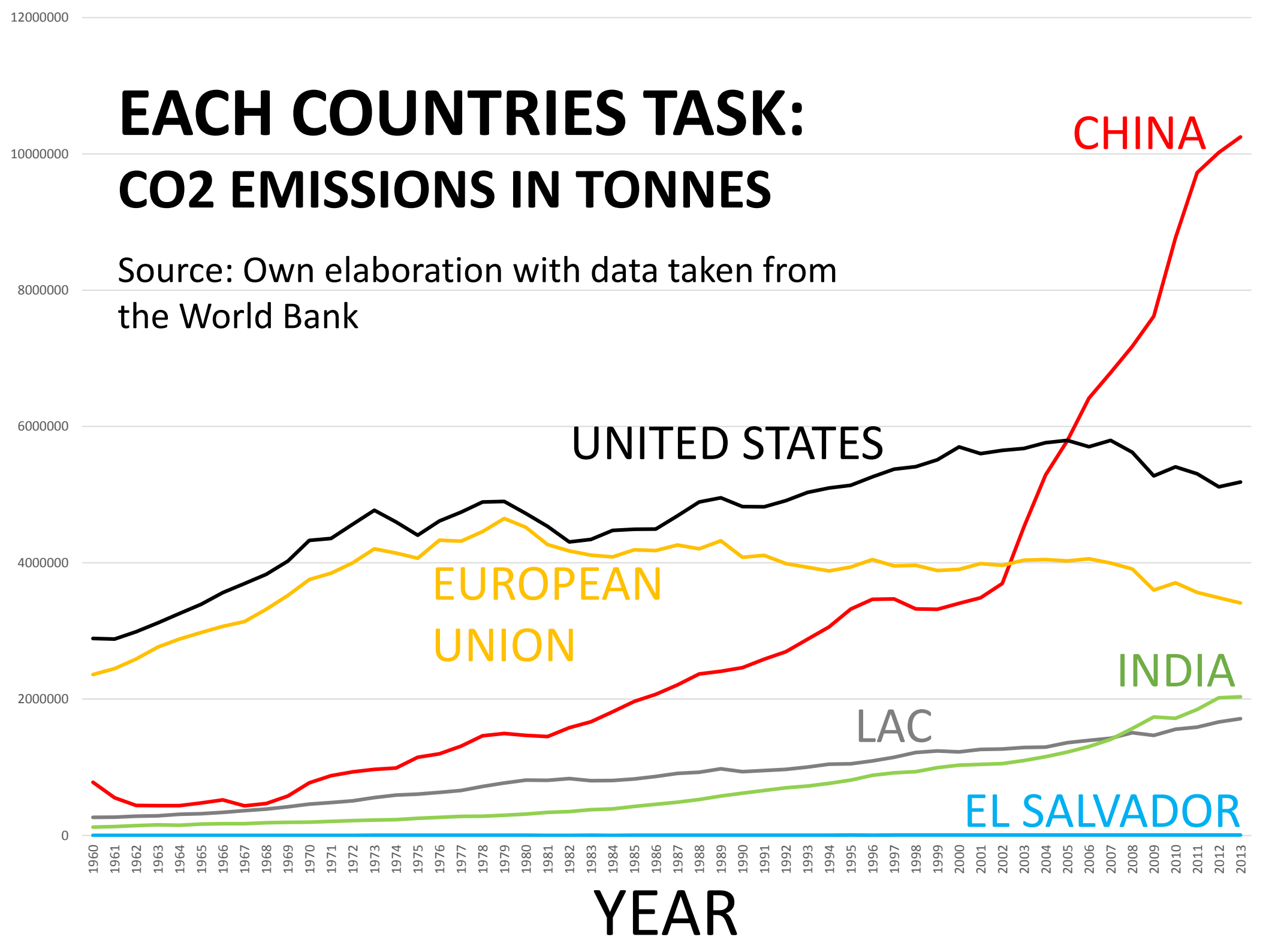
BIKE-ROUTE MONSEÑOR ROMERO, SAN SALVADOR

SIGNIFICANT PROGRESS

World Risk Report 2016:
Position 11

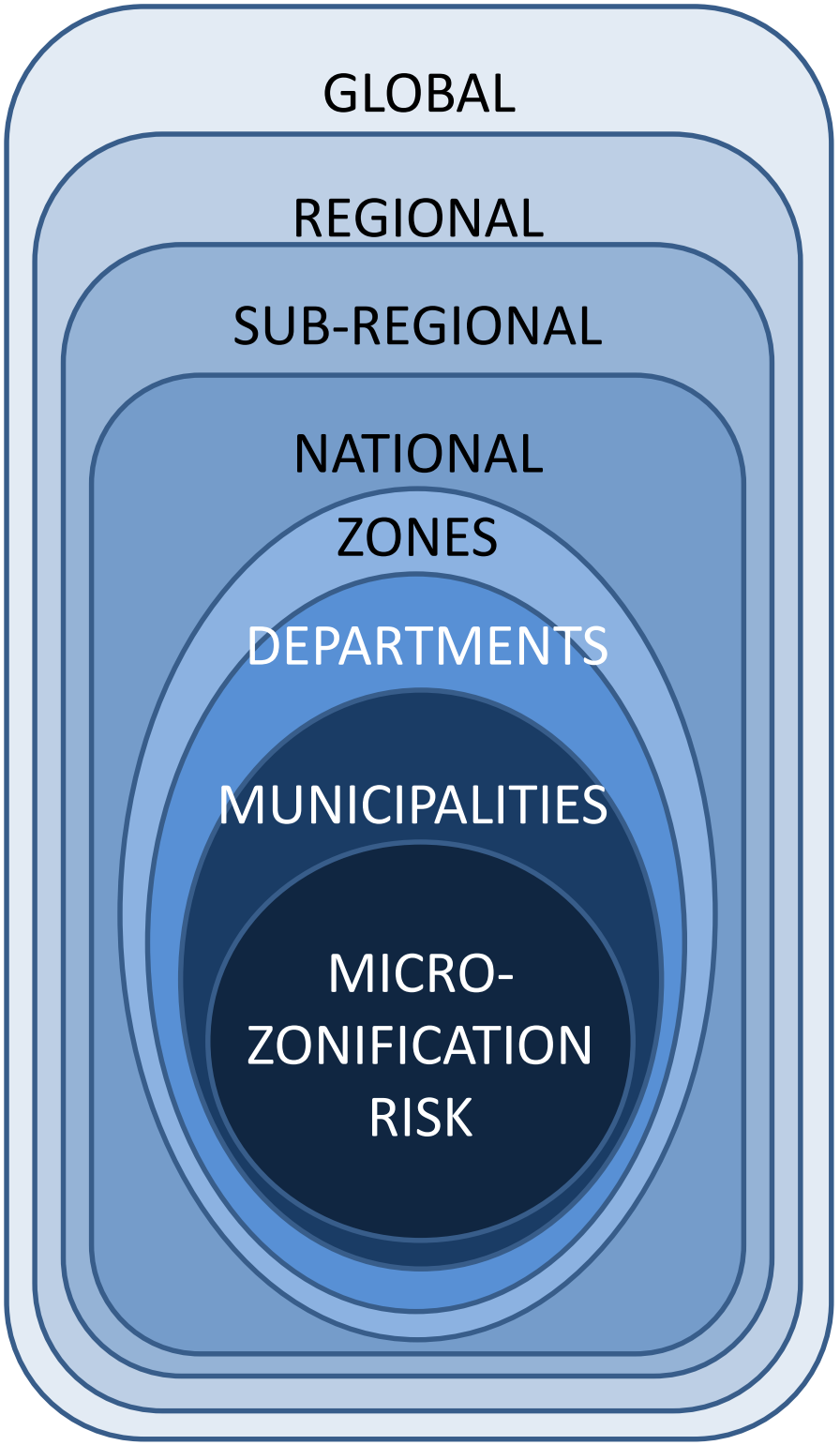


GERMANWATCH Report:
Position 14 (1995-2014)


EACH COUNTRIES TASK:
CO2 EMISSIONS IN TONNES
Source: Own elaboration with data taken from the World Bank
CHINA
UNITED STATES
EUROPEAN UNION
INDIA
LAC
EL SALVADOR
12000000
10000000
8000000
6000000
4000000
2000000
0
1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
YEAR

Multiscale Strategic Management

- Accessible global adaptation funds
- Loans and refundable funds at low interest rates
- Regional and sub-regional funds
- Loans, non-refundable and refundable funds should incorporate environmental and climate change indicators



Lessons and Conclusions

1. Human Being should be the focus in any disaster risk reduction and climate change adaptation strategy

2. Each country, region, continent and the world working jointly on a global multiscale strategy for disaster risk reduction and climate change adaptation.

3. Move from reactive and predatory culture to Preventive and Environmental Sustainability Culture

4. Vulnerable Groups: children, elderly people, disabilities persons, personas con discapacidad y native groups: Essential Focus of the Strategy

5. Common but differentiated responsibilities (Greenhouse Gas Emissions Action)

6. Corruption and technical standards infringement are underlying risk factors which must be eradicated from construction industry

7. Build Back Better – New bases Rebuilding

8. Moving from risk information to culture prevention and risk knowledge

Agreement for Resilience

A global challenge

Gerson Martinez

Ministry of Publics Works from El Salvador