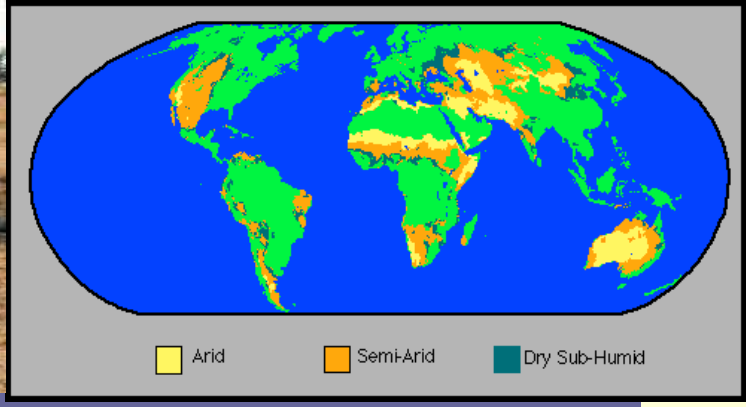

Prof. Dr. Úrsula Oswald Spring,
CRIM-UNAM, Mexico
PD Dr. Hans Günter Brauch, Germany

Third Session of the Committee for the Review of the Implementation of the Convention (CRIC 3)

Bonn, 10 May 2005

UNCCD

UNITED NATIONS
NATIONS UNIES

GLOBAL INTERACTIVE DIALOGUE ON MIGRATIONS AND CONFLICTS

© Úrsula Oswald Spring, UNAM, CRIM, Mexico,
former minister of environment in Morelos
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Contents

1. Basic Focus, Research Questions and Key Concepts

- **What have the social sciences learnt since Almería on the linkages: desertification & conflict?**

  „evidence is emerging for a correlation between poverty, desertification and conflicts of various kinds in arid and semi-arid areas".

- **What do we need to know for the future? What can multidisciplinary research from both the natural and social sciences contribute?**

- **„Survey on dryland ecosystems should investigate correlation between desertification, poverty and migration and become part of an early-warning system for humanitarian crises"**
- **„Research to be translated into policy-oriented training and dissemination"**
- **Scientific tasks remain to be realised!**

1.1. Towards a Fourth Phase of Research on Environmental Security

1. Conceptual Phase: Concept Environmental Security

- Inclusion of environmental factors in US national security agenda
- Ullman (1983), Myers (1989), Mathews (1989)
- Brundtland-Commission (1987), Gorbachev (1987), NATO (1996-)

2. Empirical Phase: Case studies: Scarcity - Conflict

- Toronto: Thomas Homer-Dixon: since 1991: 3 Projects
- Zürich/Bern: G. Bächler, K. Spillmann (3 volumes 1996,1997)

3. Phase: Manifold Research - Little Integration (1995-)

- Resource scarcity or abundance as a cause of conflict
- INE-SEMARNAT (2 volumes 2004)

4. Phase: Human & Environm. Security & Peace (HESP)

- ✓ Our proposal: focus on linkages between global environm. change and extreme & fatal outcomes (hazards, migration, crises and conflicts)
- ✓ Brauch, 2003, *Security & Environment in the Mediterranean,* ch. 2, 51
- ✓ Oswald, 2004: *HUGE, Human, Gender and Environmental Security*

1.2. Empirical Phase: Case Studies: „Desertification and Conflicts?“

- **Toronto: Tad Homer-Dixon: since 1991: 3 Projects**
  Environmental scarcity & conflict: no issue
  - T.F. Homer-Dixon/J. Blitt (Eds.): *Ecoviolence, Links among Environment, Population, and Security*, 1998
  - T.F. Homer-Dixon: *Environment, Scarcity & Violence*, 1999

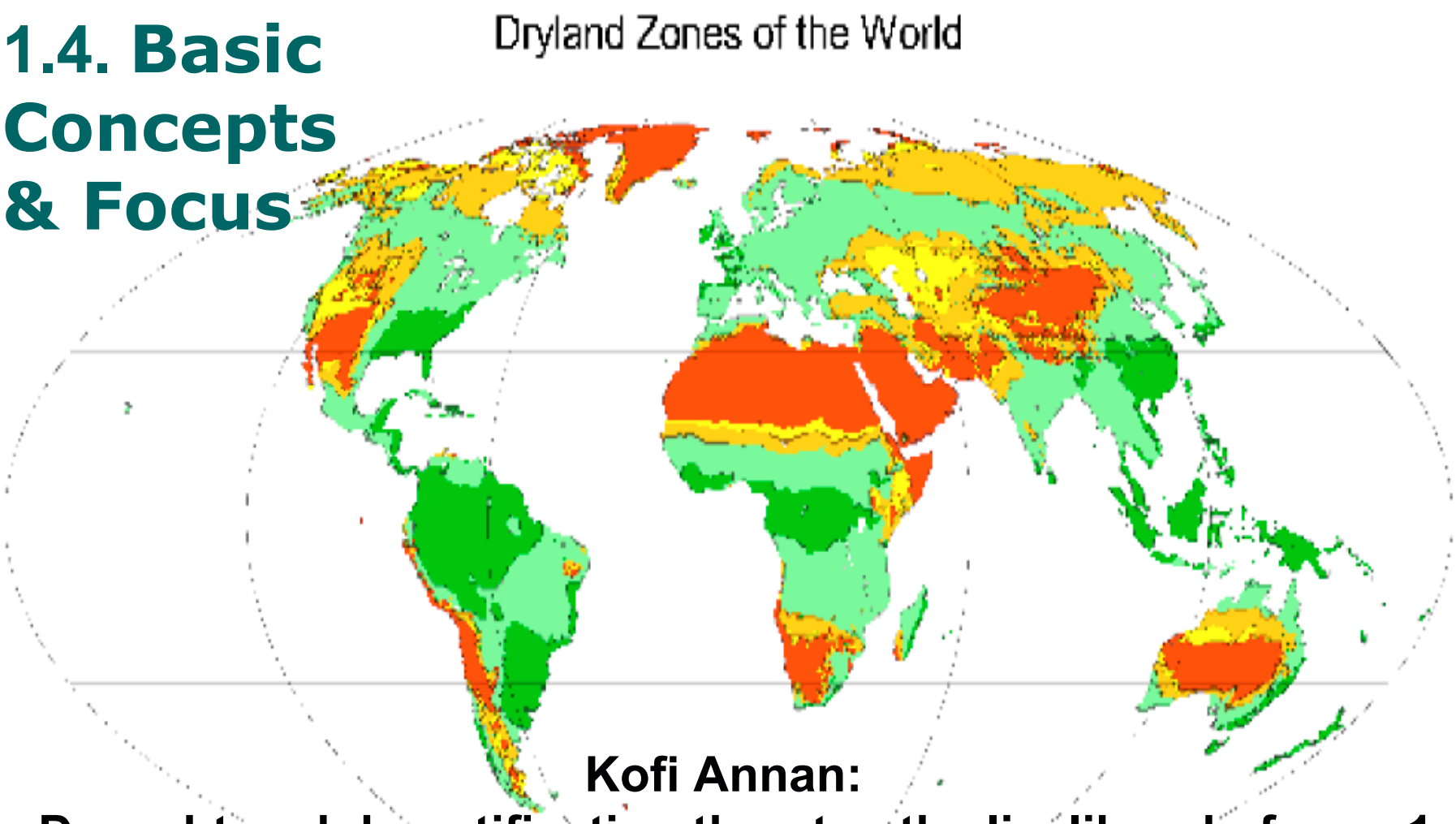
- **Zürich/Bern: G. Bächler, K.Spillmann (3 volumes 1996,1997): Environmental Degradation, Conflict and Conflict Resolution: Case studies**
  - Vol. 2: Case studies on Bangladesh; Sudan & Darfur, Nigeria, Central Asia, Rwanda
  - Vol. 3: China, Thailand, Tuaregs vs. Niger, Algeria, Senegal, Namibia: Urbanisation and internal migration

- **INE-SEMARNAT: *Cambio Climático en México* (2 vol. 2004)**

1.3. Insufficient Systematic Research

- Relationship between environmental degradation & migration is important, complex & still little understood.
- Shortcomings of environmental security research:
  - Narrow disciplinary focus seems to prevail both in the social and in the natural sciences;
  - Understanding the linkages requires a cooperation between soil, water but also social and political sciences (international relations, disaster studies and peace research) that hardly exists;
  - Inter- and multidisciplinary research is not easy at universities where career patterns are within your own discipline
  - Understanding the complex causal relationship between environmental degradation, migration & conflicts remains a task for theory-oriented & empirical research that at some stage may offer lessons for preventive policy action
  - Lacking contributions from peace & conflict studies
  - Few links to Southern and gender security studies

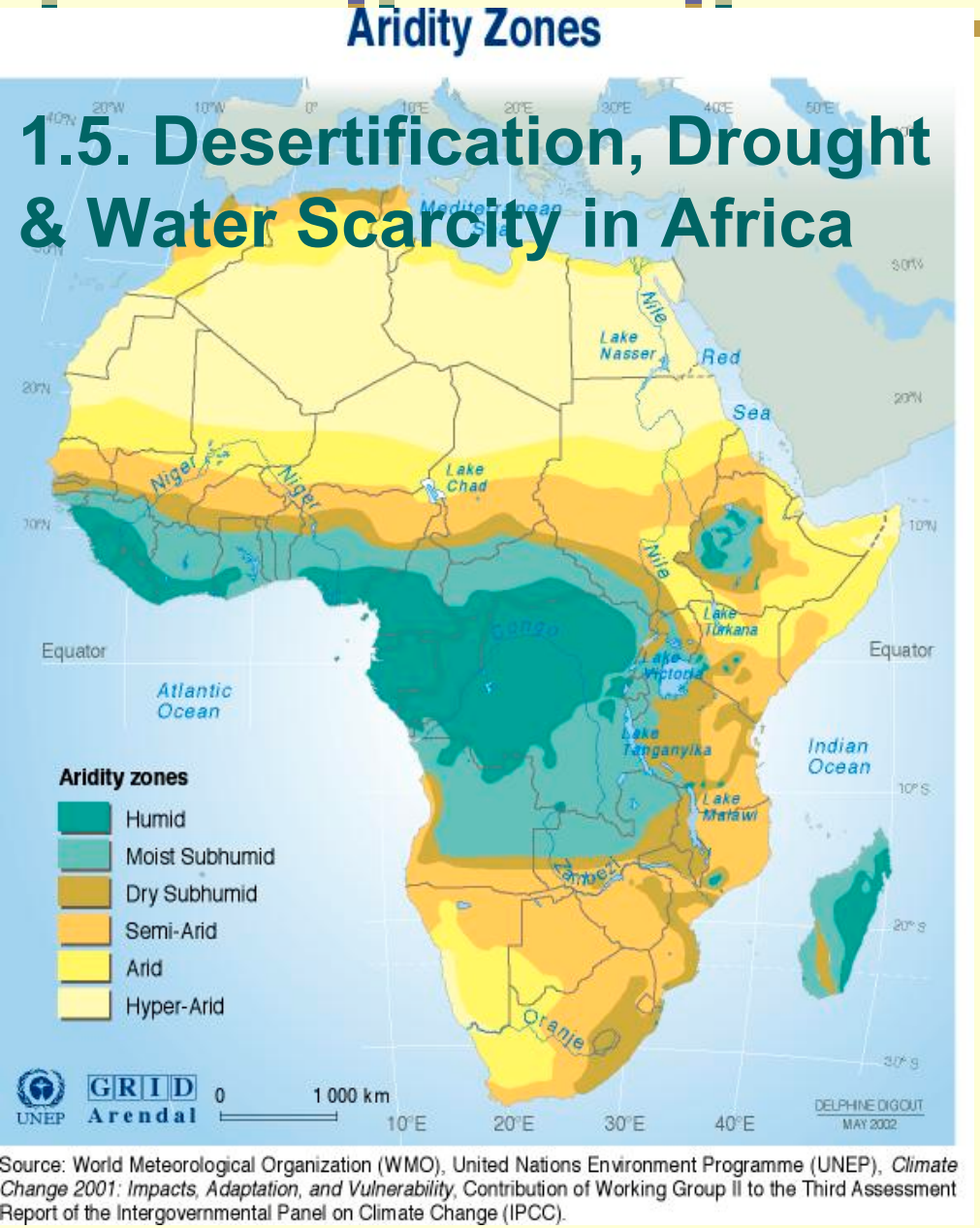
1.4. Basic Concepts & Focus



Kofi Annan:

„Drought and desertification threaten the livelihood of over 1 billion people in more than 110 countries around the world.“

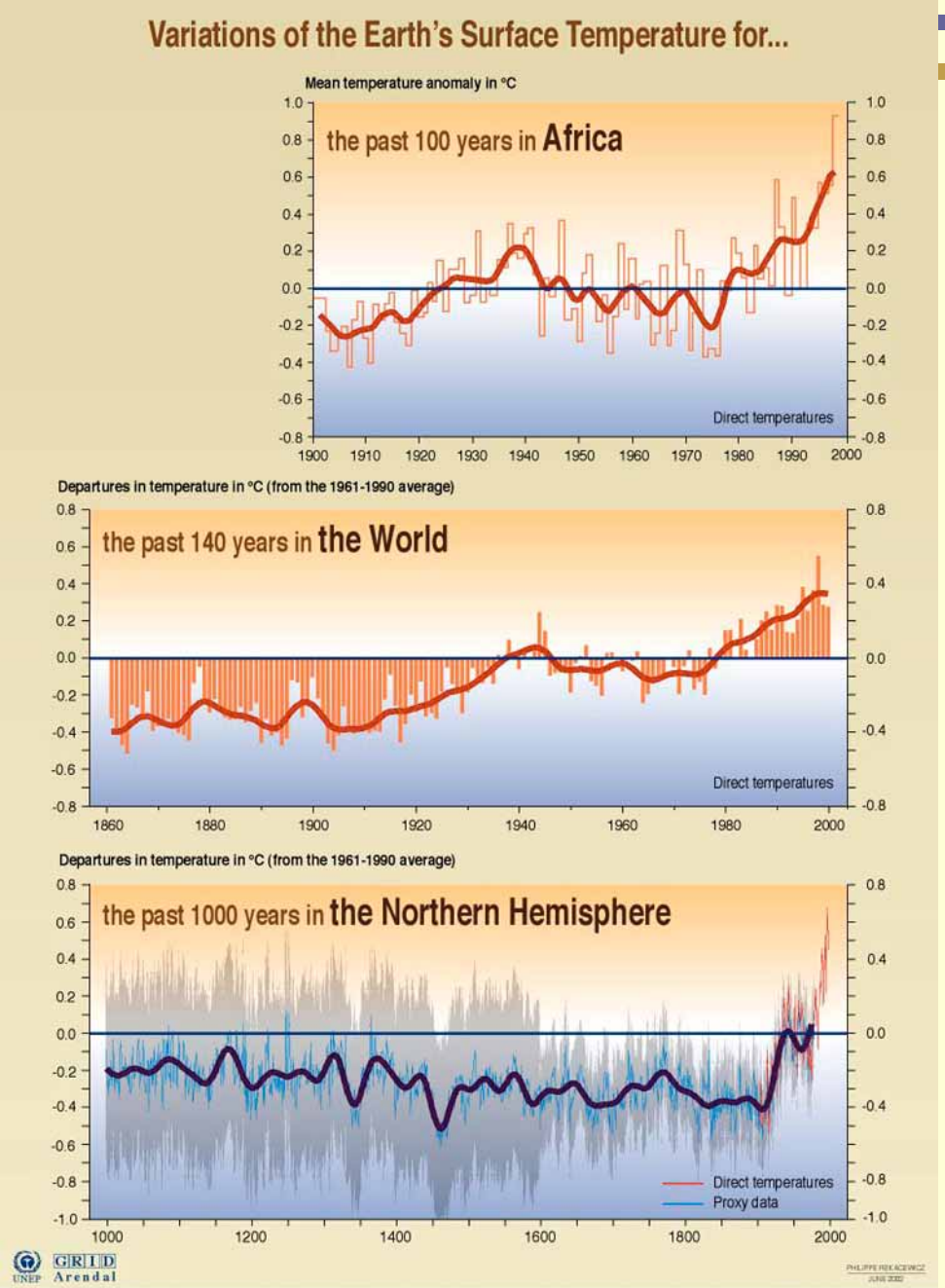
1.5. Desertification, Drought & Water Scarcity in Africa



Source: World Meteorological Organization (WMO), United Nations Environment Programme (UNEP), *Climate Change 2001: Impacts, Adaptation, and Vulnerability*, Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

Desertification Concept

- 1990 UNEP *ad hoc* group for the "Global Evaluation of Desert.": "***Desertification is land degradation in arid, half-arid and dry sub-humid areas resulting from opposite human impact***".
- UNCED in Rio de Janeiro in 1992 adopted this definition: "Desertification is land degradation in arid, half-arid and dry sub-humid areas, resulting from various factors, including climatic variations and human activities."



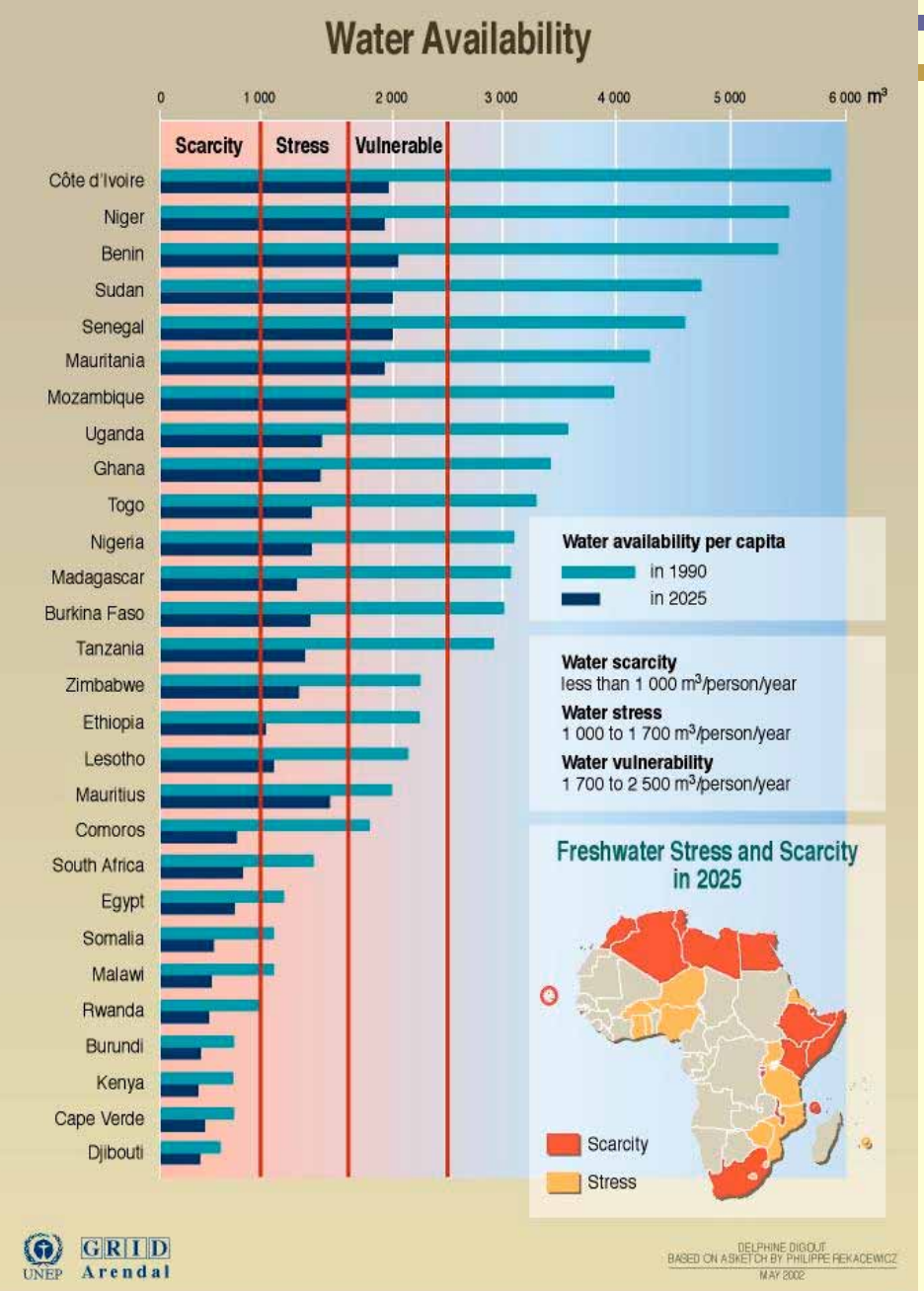
1.6. Temperature Change in the World & in Africa

Interactions: desertification & climate change: IPCC, TAR (2001):

WG II (IPCC 1996): Most deserts are likely to become more extreme.

- **Most desert regions: become hotter & most not become wetter.**
- **Few Opportunities to mitigate greenhouse gas emis. in desert regions**
- **Human-induced desertification may counteract any ameliorating effect of CC on most deserts unless appropriate management actions are taken.**

➢ **Human-induced factors: (population growth, urbanisation & agriculture/food) contribute to processes of soil erosion and desertification.**



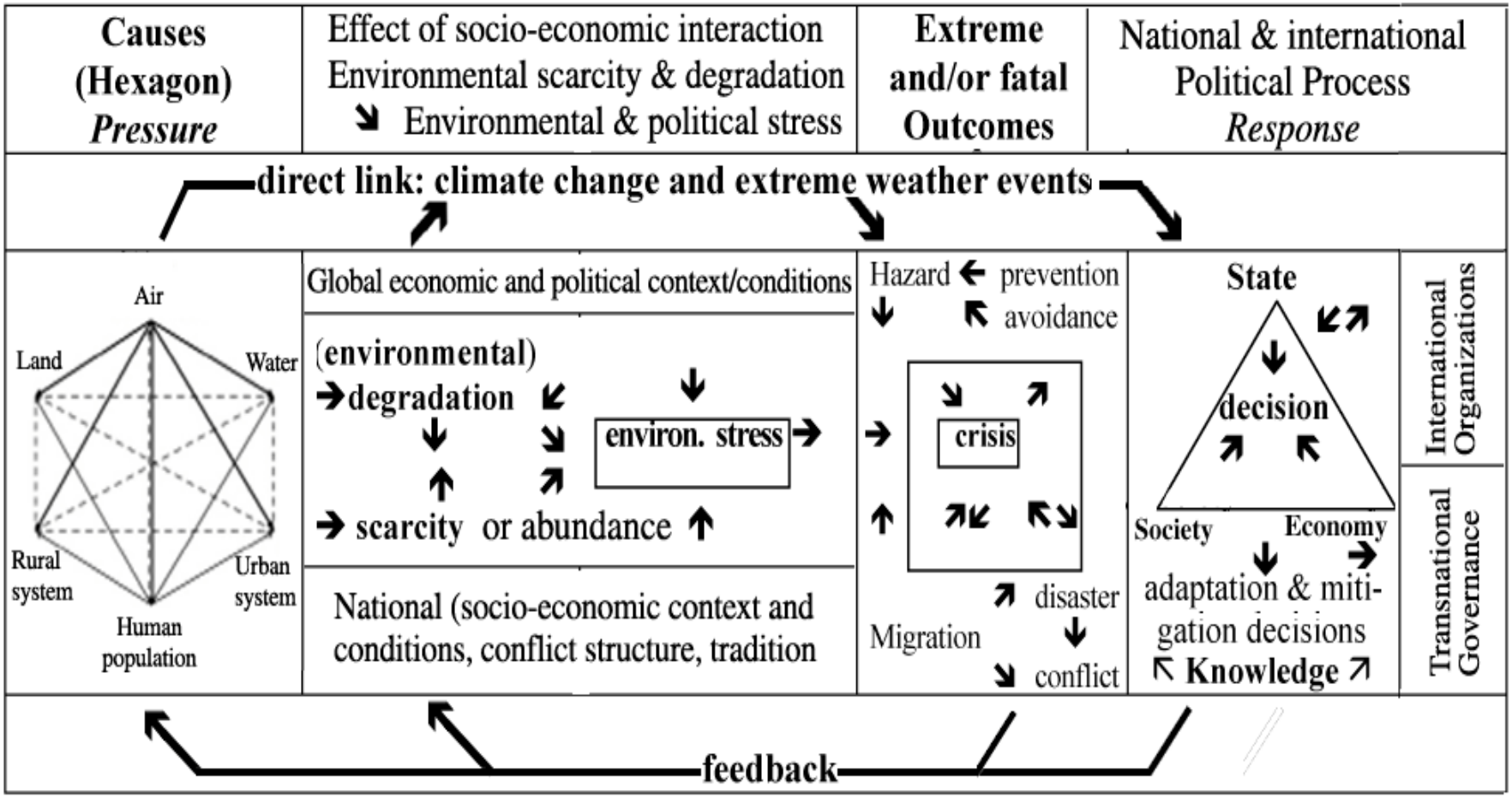
Source: United Nations Economic Commission for Africa (UNECA), Addis Ababa ; Global Environment Outlook 2000 (GEO), UNEP, Earthscan, London, 1999.

1.7. Water Scarcity in Africa

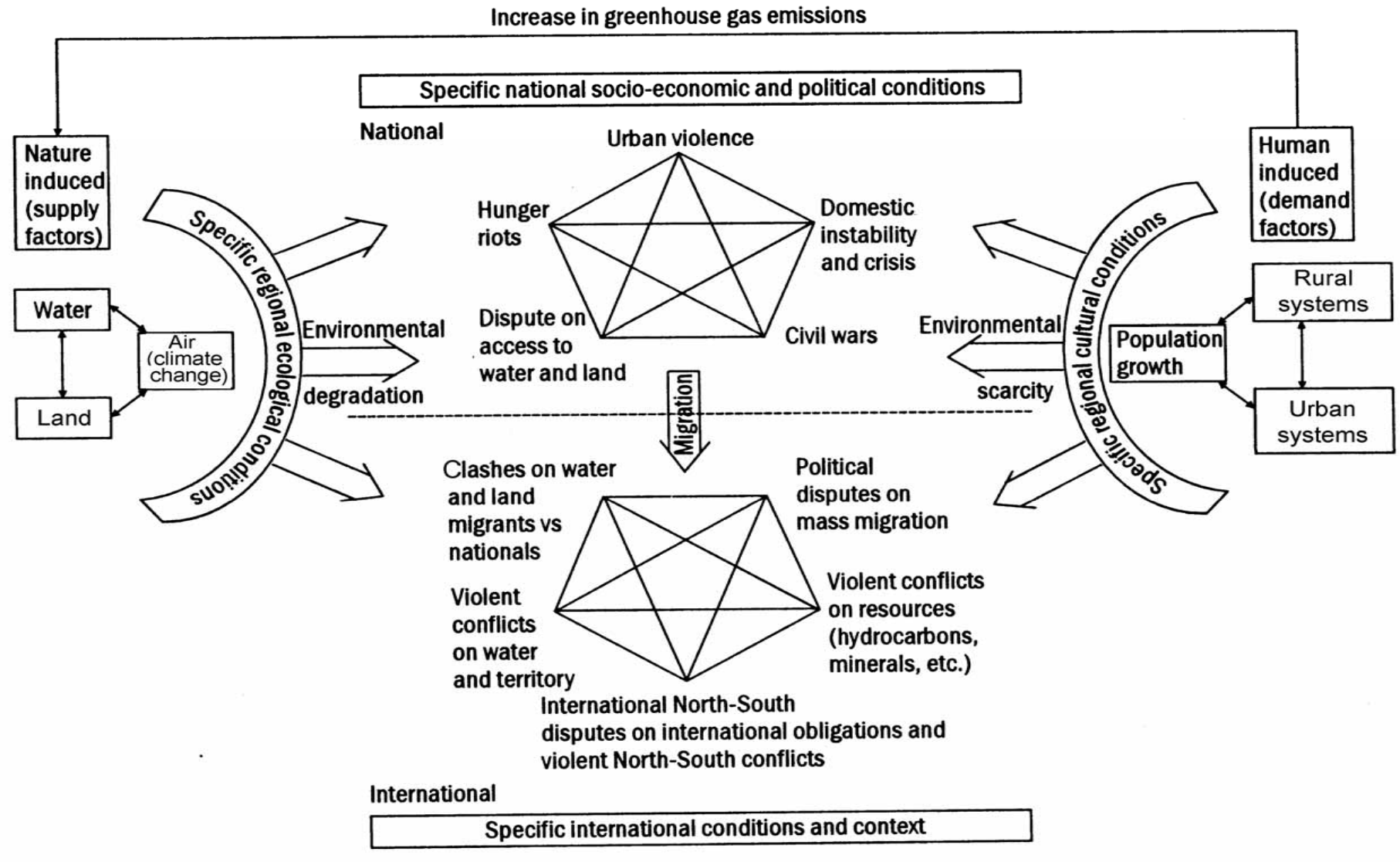
- Water scarcity, stress and vulnerability has been severe in many parts of Africa in 2000
- **Water scarcity, stress & vulnera-bility will become extreme in parts of Africa by 2025**

2. Modified Pressure & Response Model

Climate Change <> Desertification ➔Extreme Weather Events > Hydro-meteorolog. hazards/disasters (drought & famine)



2.1. Potential Violent Outcomes of Environm. Stress



3. Desertification as a Cause and Drought as an Impact of Global Environmental Change

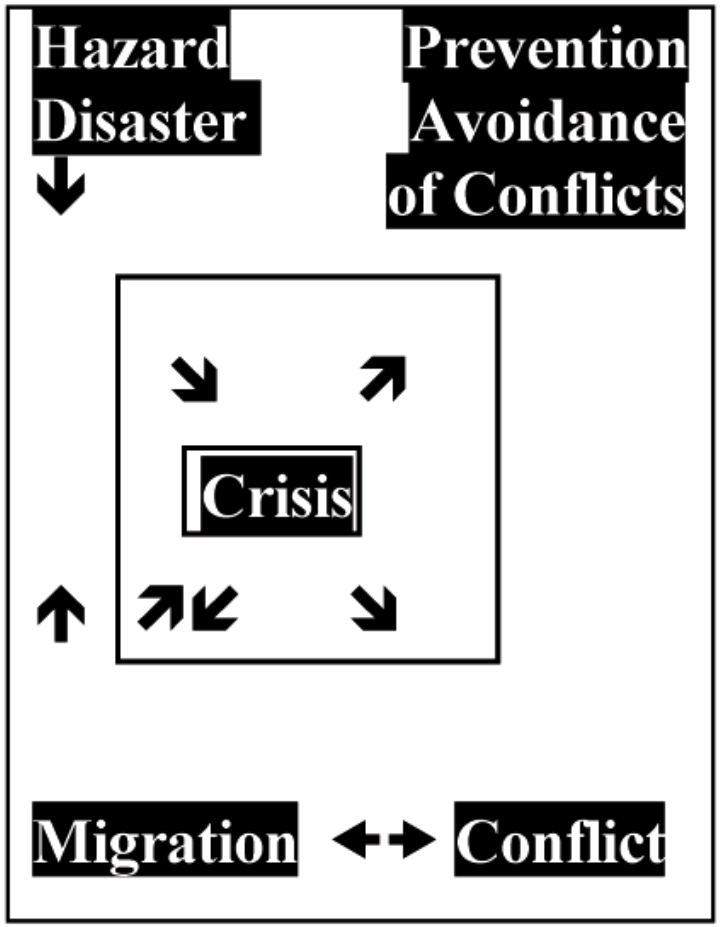
- Desertification: nature (natural variability) & human-induced (anthropogenic) concept
- Six Factors of Global Environmental Change: Complex Causal Interaction within the Hexagon
- Linkages between desertification and other factors: e.g. climate change & population growth, urbanisation and agriculture & food needs
- Desertification: is a contributor to environmental degradation, scarcity and stress
- Drought: is a cause of famine, migration, hunger revolts, domestic crises and violent conflicts

3.1. Linkages: Climate Change & Desertification

Interactions between desertification and climate change were analysed by Williams and Ballings (1996) for WMO/UNEP & assessed by IPCC.

- **IPCC, SAR (1995) & TAR (2001): Climate Change and Desertification**
- **WG II (IPCC 1996): Most deserts are likely to become more extreme.**
- **Most desert regions: become hotter & will probably not become wetter.**
- **Changes in frequency or intensity of rainfall events are likely to cause changes in the flora and fauna. … Any reduction in the intensity of rainfall could also be detrimental to this set of organisms due to false starts in their life cycles.**
- **Human-induced desertification may counteract any ameliorating effect of CC on most deserts unless appropriate management actions are taken.**
- **Human-induced factors: (population growth, urbanisation & agriculture & food) contribute to processes of soil erosion and desertification.**

4. Interactions among Extreme Outcomes:
Linking Drought & Famine with Societal Consequences



Much knowledge on these factors:

- ✓ Drought, migration, crises, conflicts

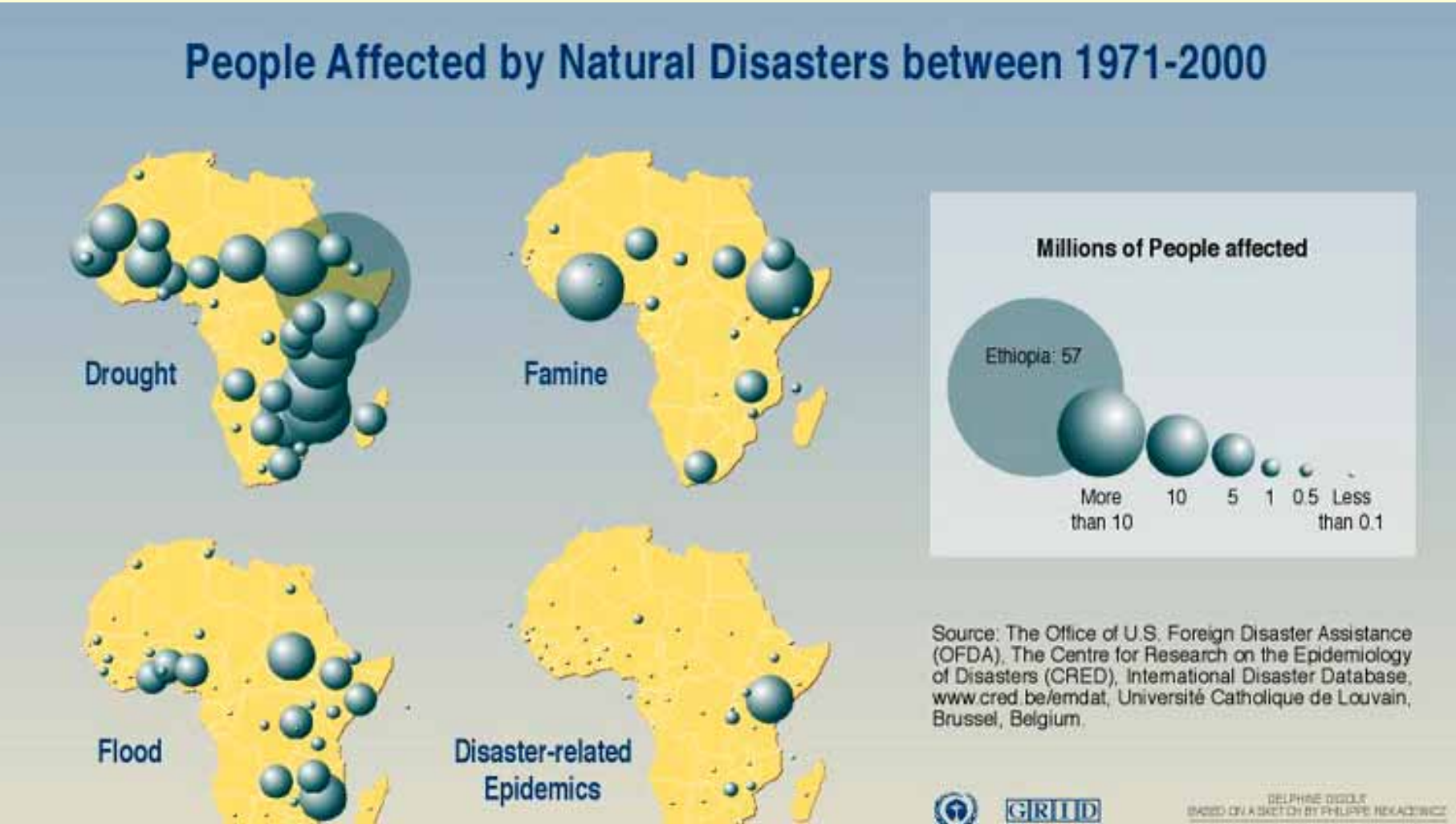
Lack of knowledge on linkages among extreme & fatal out-comes

- ➢ Drought & drought-ind. migration
- ➢ Famine & environm.-ind. migration
- ➢ Conflicts & conflict-induced migration

Lack of knowledge on societal consequences: crises/conflicts

- ➢ Domestic/international crises/conflicts
- ➢ Environmentally or war-induced migration as a cause or consequence of crises and conflicts

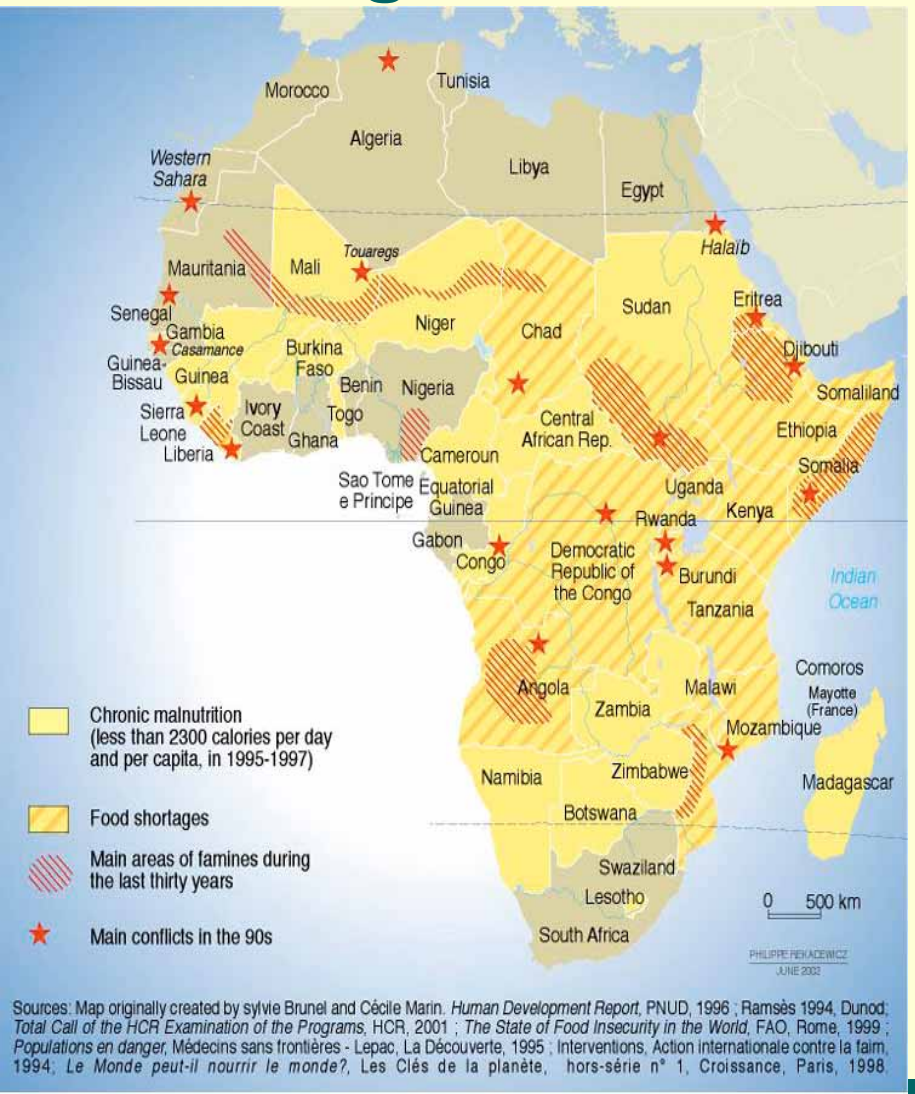
4.1. People Affected by Drought & Famine in Africa (1971-2000)



5. Desertification-induced Drought, Migration & Famine and Conflicts

- Desertification is a slow-onset environmental challenge to security and survival, especially for the poor.
  - **Affects the individual, family, village, region and their security**
  - **Affects survival of rural population: contributes to rapid urbanisation**
  - **Vicious circle: Poverty contributes to desertification and desertification often intensifies poverty**(dual cause and effect relationship)
- Drought, migration and famine are situational challenges to security and survival, especially for the poor.
  - **Drought as a hydro-meteorological hazard** (partly caused by climate change and its interaction with desertification) has forced people to leave their home and livelihood
  - **Drought has often resulted in famine and/or food price increases that often led to strikes, hunger revolts, domestic crises and conflicts.**

5.1. Impacts of Desertification: Drought, Famine, Crises & Conflicts



Sources: Map originally created by sylvie Brunel and Cécile Marin. *Human Development Report*, PNUD, 1996 ; Ramsès 1994, Dunod; *Total Call of the HCR Examination of the Programs*, HCR, 2001 ; *The State of Food Insecurity in the World*, FAO, Rome, 1999 ; *Populations en danger*, Médecins sans frontières - Lepac, La Découverte, 1995 ; Interventions, Action internationale contre la faim, 1994; *Le Monde peut-il nourrir le monde?*, Les Clés de la planète, hors-série n° 1, Croissance, Paris, 1998.

- **Coincidence between famine areas & major wars in Africa in 1980s?**

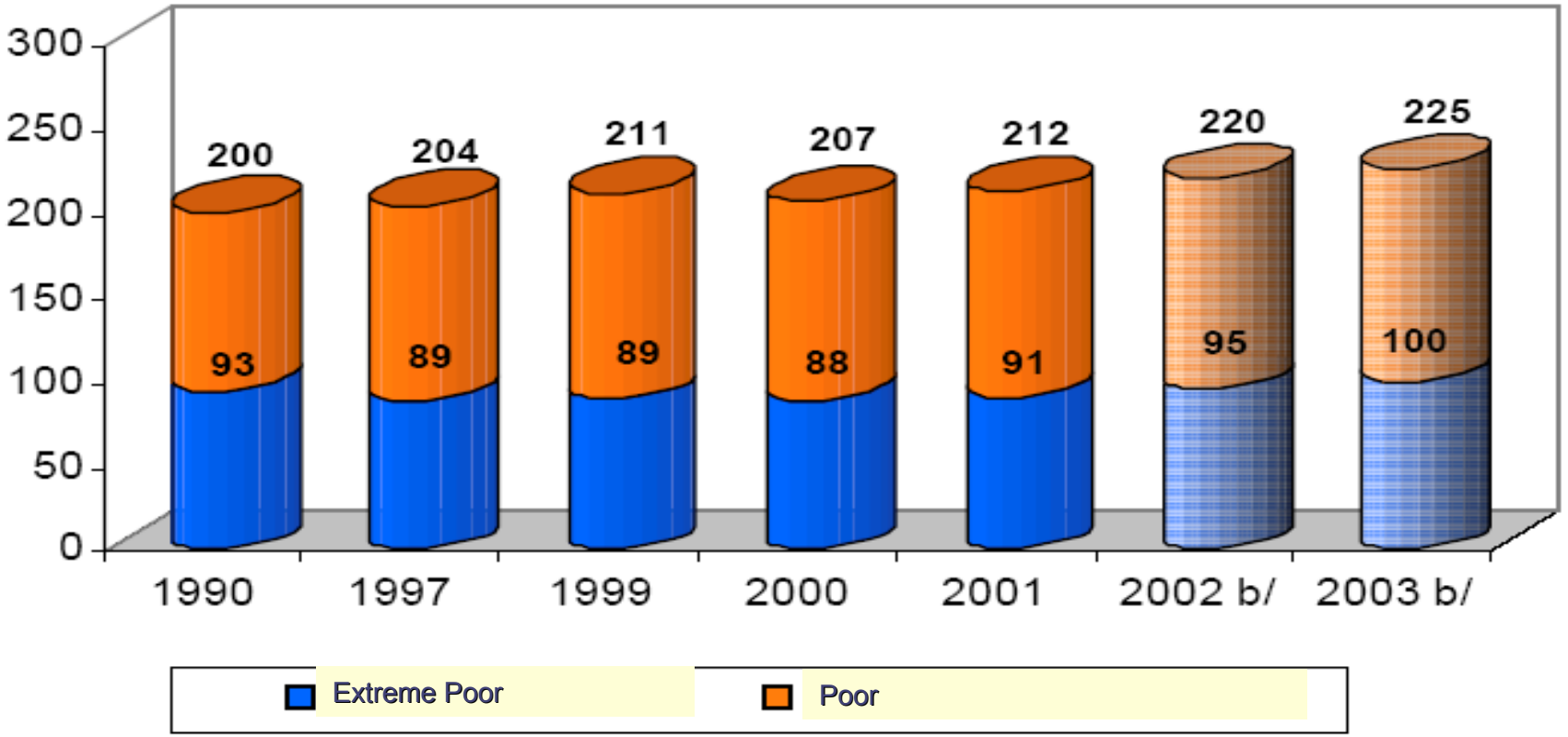
M. Garenne: „Mortality in Sub-Saharan Africa:Trends & Prospects“

I.L. Griffith: „Famine and war in Africa“, in: Geography, 73,1:59-61:

- **„Famines, political unrest, and civil wars occur simultaneously in the same countries regions.**
- Rapid urbanisation rates
- Migration: rapid spread of diseases, especially also AIDS

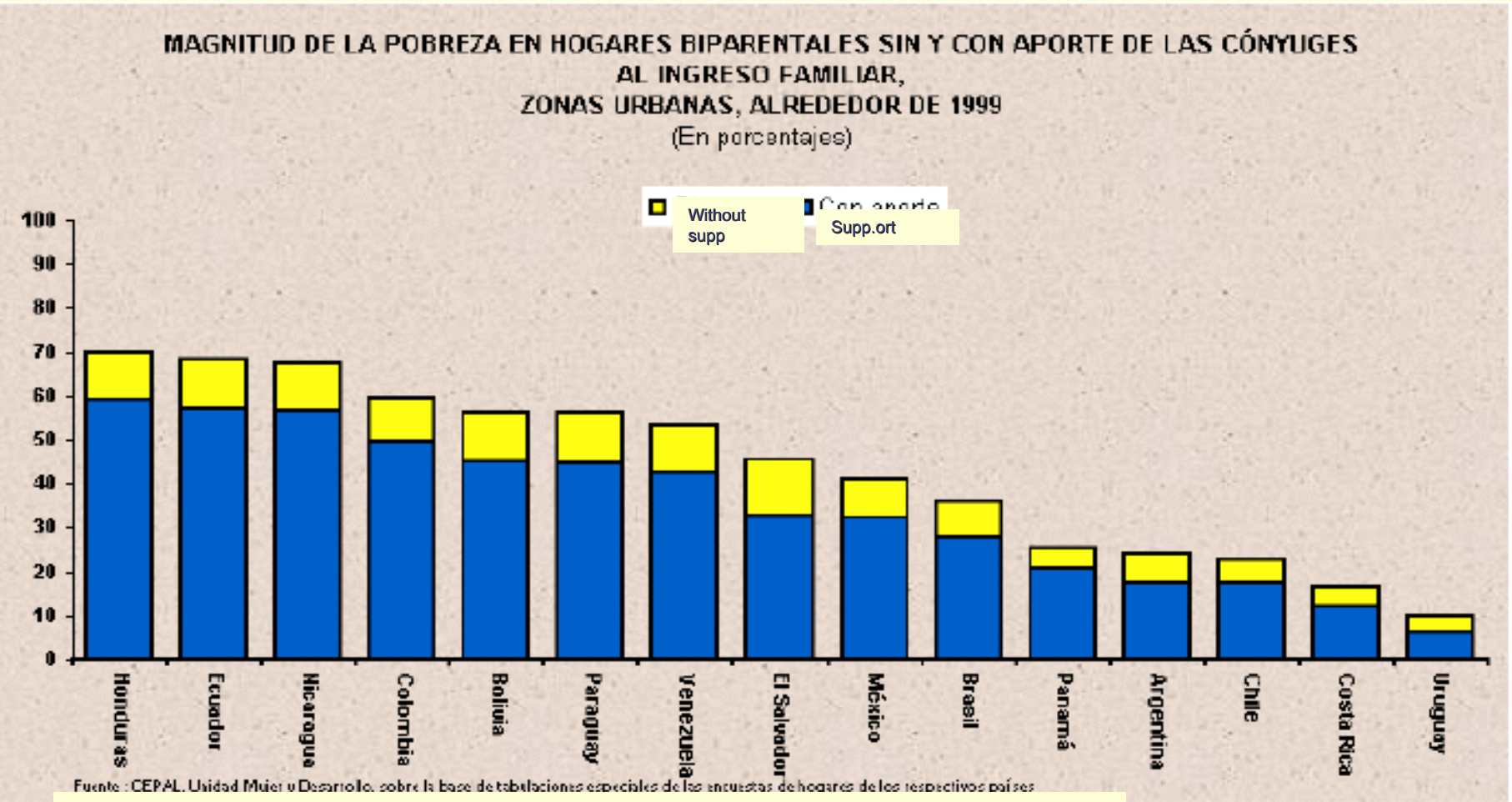
➢ **Empirical research is needed on the relations among the outcomes: drought, famine, migration, crises & conflicts.**

6. Evolution of Poverty in Latin America and Mexico (Million of persons)



Source: CEPAL, 2004, b) Data for 2002 and 2003 are projections

6.1. Poverty in Households with both Husbands and with Economic Support of Women (%)

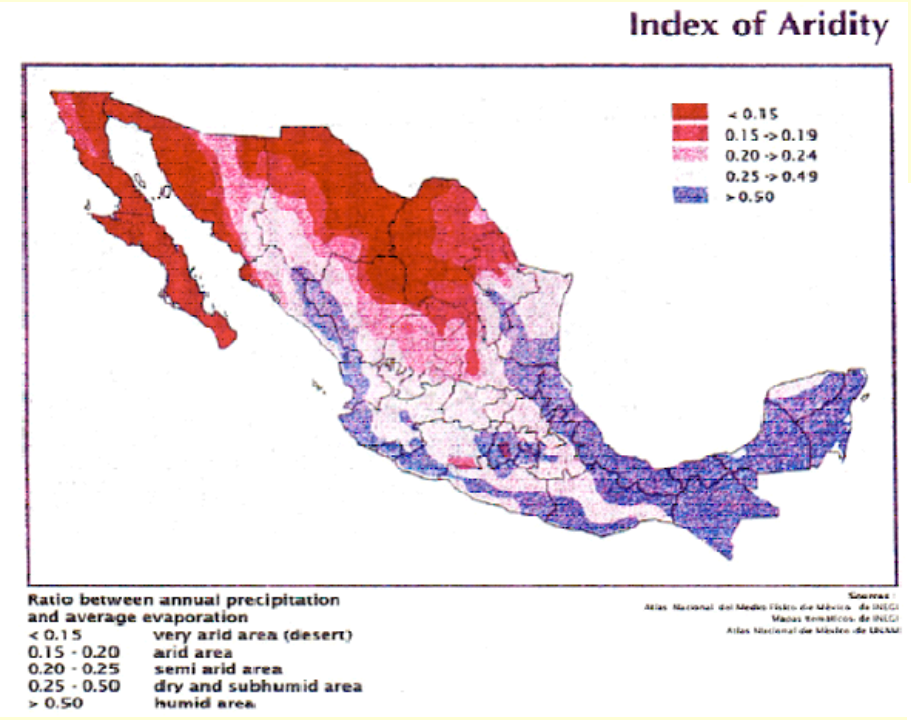


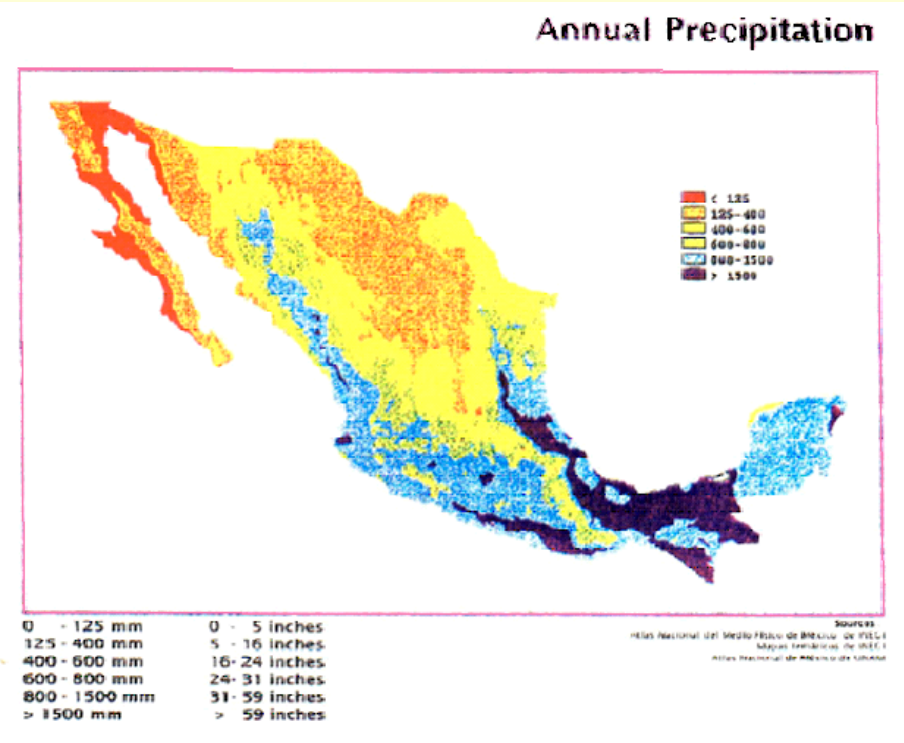
Source. CEPAL, 2004, Unity or Women and Development

6.2. Poverty in Mexico

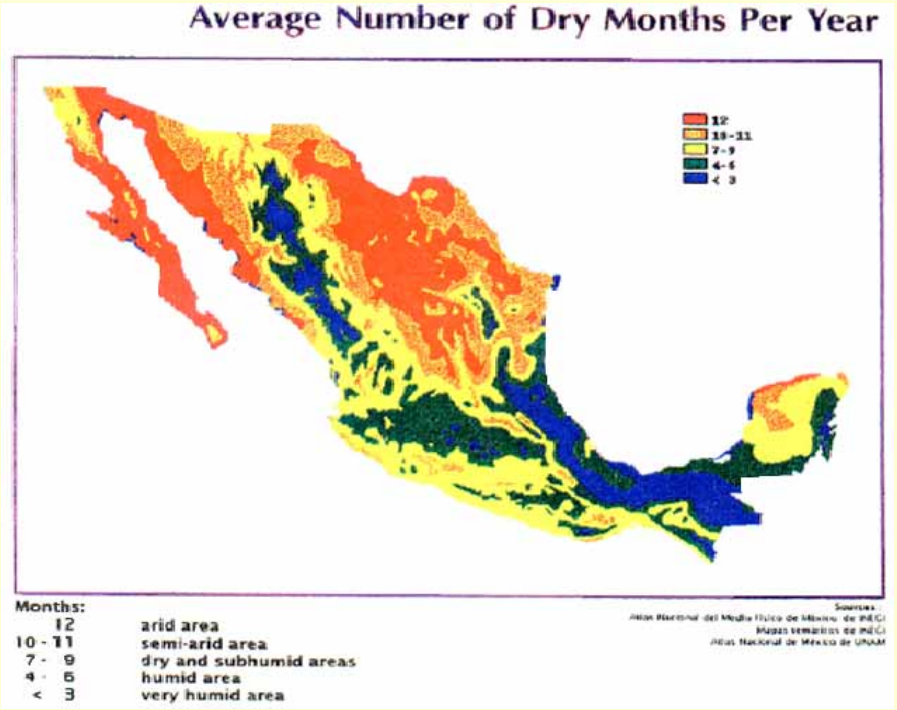
- 28% of Mexican children are poor (UNICEF, 2005)
- Infant poverty: place 80 (behind South Africa: 76; World Bank –WB- 2005*)*
- Income *per capita*: place 80 (WB, 2005)
- National Income 637,200 million dollars; place 10, WB, 2005)
- 20% of rich concentrate 43% of consumption: structural induced scarcity (Homer-Dixon, 1998:351-353)
- Minimal requirement to live 70 pesos (6.2 US$)
- Economic Active Population: 43 million: 12.5 million in formal sector
- Occupied population: 26 million: 7% less than 1 minimal salary (MS: 42 MN or 3.7US$); 20.7%: 1-2 MS; 46.2%: 2-5 MS; 26.1: more than 5 MS (INEGI, 2005)

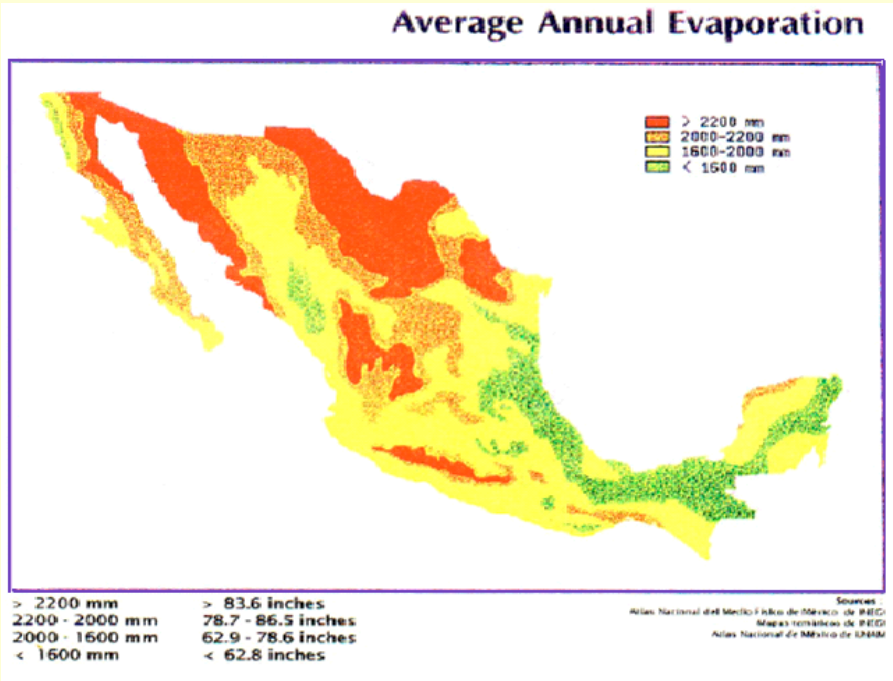
7. Desertification, Migration and Conflict – Case Study on Mexico: Annual Aridity & Precipitation



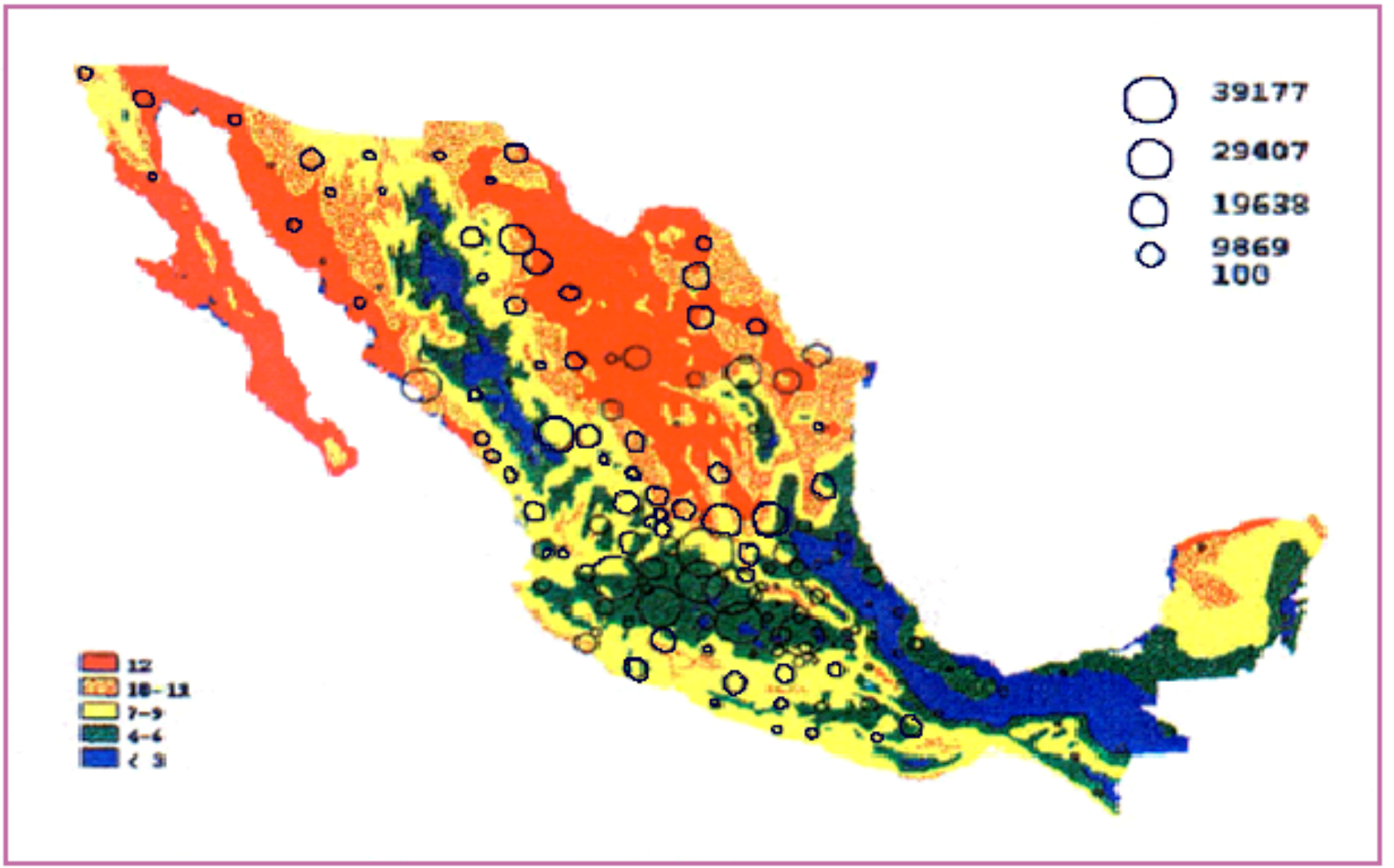


7.1. Desertification, Migration and Conflict – Case Study on Mexico: Number of Dry Months & Evaporation





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).

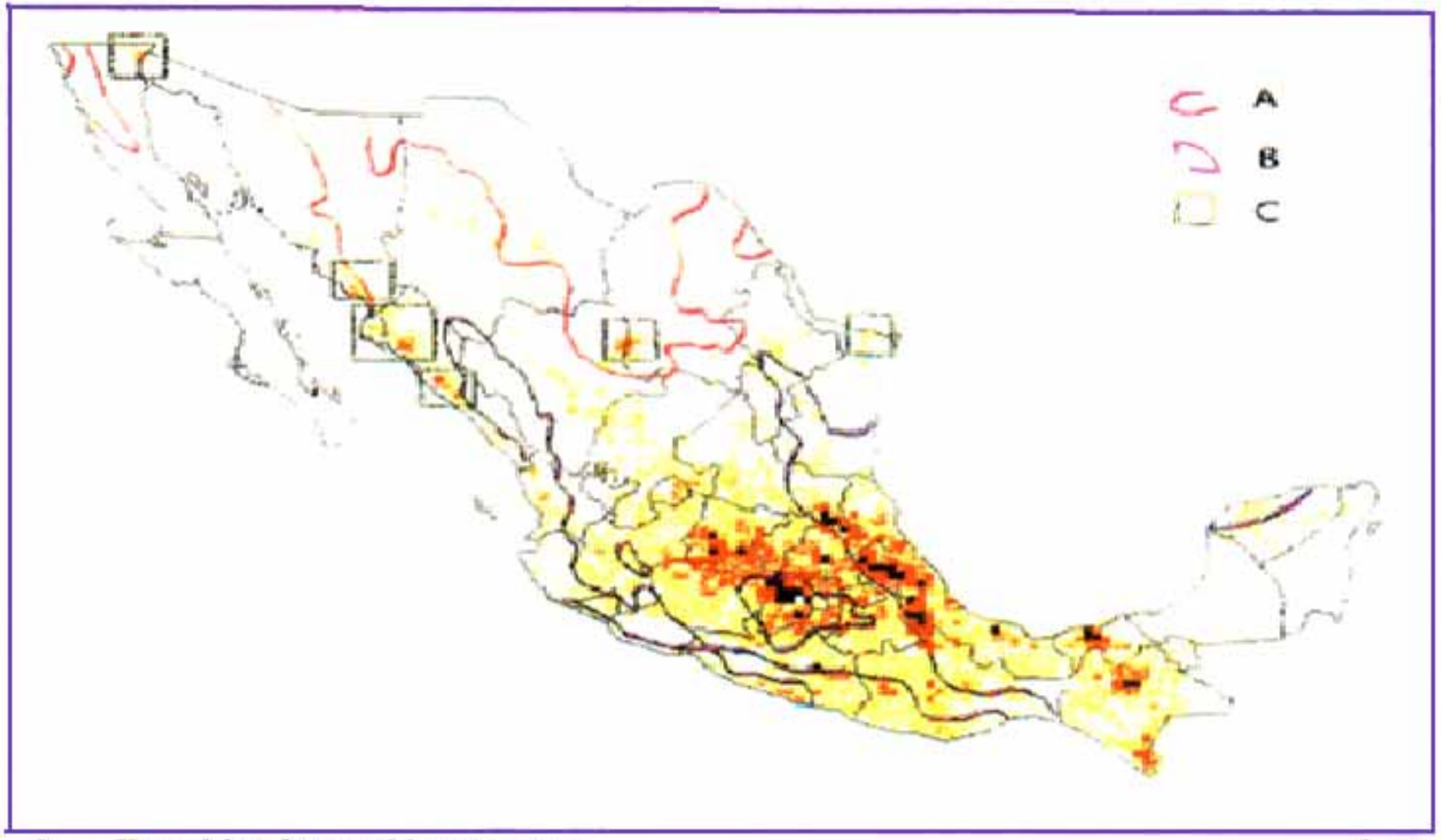
Sources:
Survey on Mexican-US migratory flow (COLEF);
Atlas Nacional de México de (INEGI);
Sistema de Información Geográfica y Estadística de la Frontera Norte (COLEF-CRIT-ORE)

Rural Migration and Aridity

- Arid and dry areas (< 0.50)
- Humid area (> 0.50)
- Flow of Mexican migrants in 1995, living and working in the US, surveyed on the border on their return to Mexico (spatial distribution according to the region of last residence in rural localities of Mexico.

Sources

Aridity and Density of Rural Population

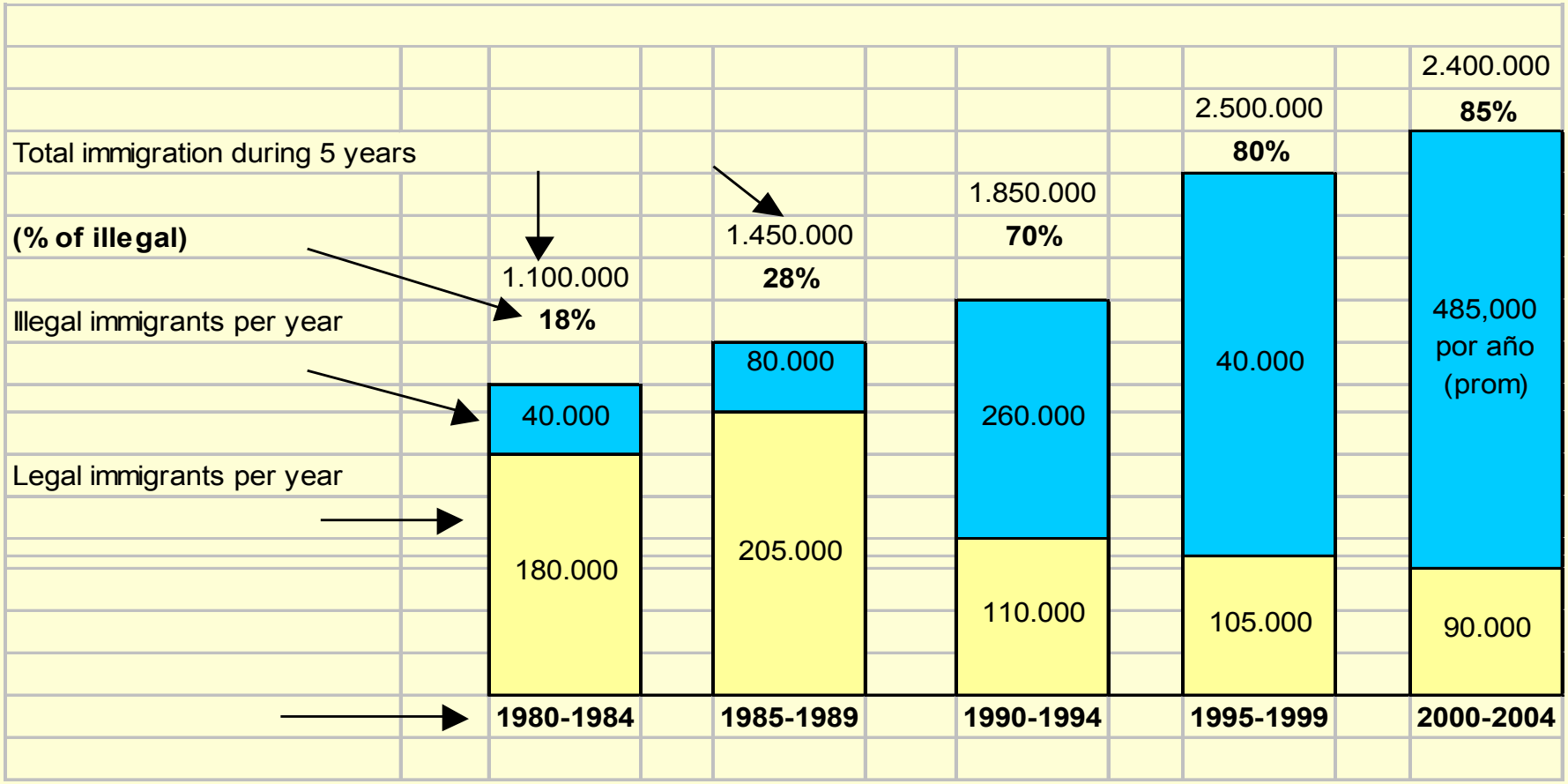


A· Transition from arid to dry area
B· Transition from dry to humid area
C· Arid area with irrigation

Density of rural population (living in localities of less than 2500 inhabitants) in 1990 (X Mexican Census).

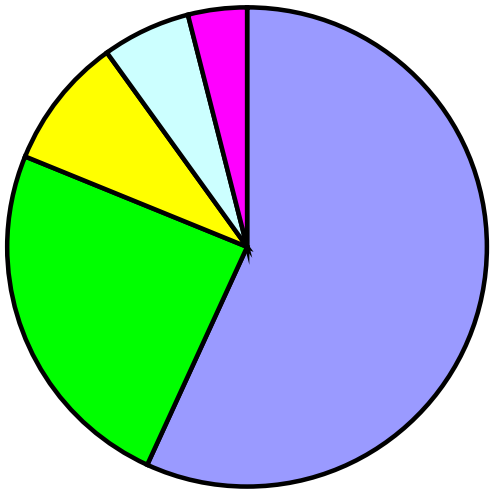
Sources

7.5. Migrants to USA from Mexico by Legal Status



Source: Pew Hispanic Center, Estimation of the Amount and Characteristics of Undocumnetated Population Living in USA

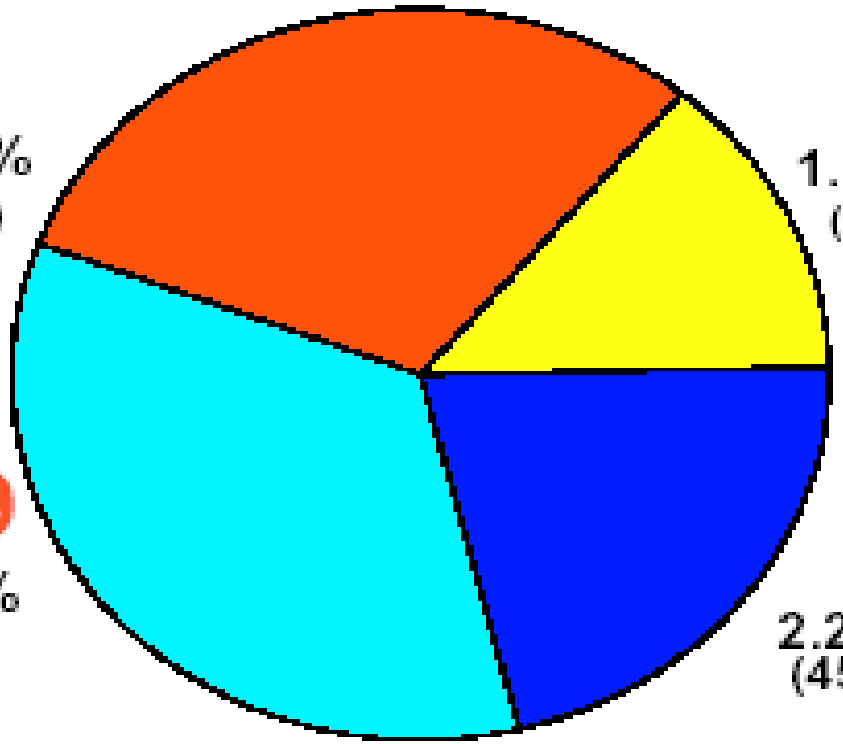
7.6. Undocumented Immigrants by Origin (Total 10.3 million, March, 2004)



- Mexico (5.9 millones)
- Latin America (2.5 millones) without Mexico
- Asia (1 millon)
- Europe and Canada (0.6 millones)
- Africa and others (0.4 millones)

Source: Pew Hispanic Center, Estimation of the Amount and Characteristics of Undocumnetated Population Living in USA

7.7. Years of Arrival of Undocumented Migrants



2000-04
3.1 million – 30%
(700,000 per year)

1980s
1.3 million -- 14%
(130,000 per year)

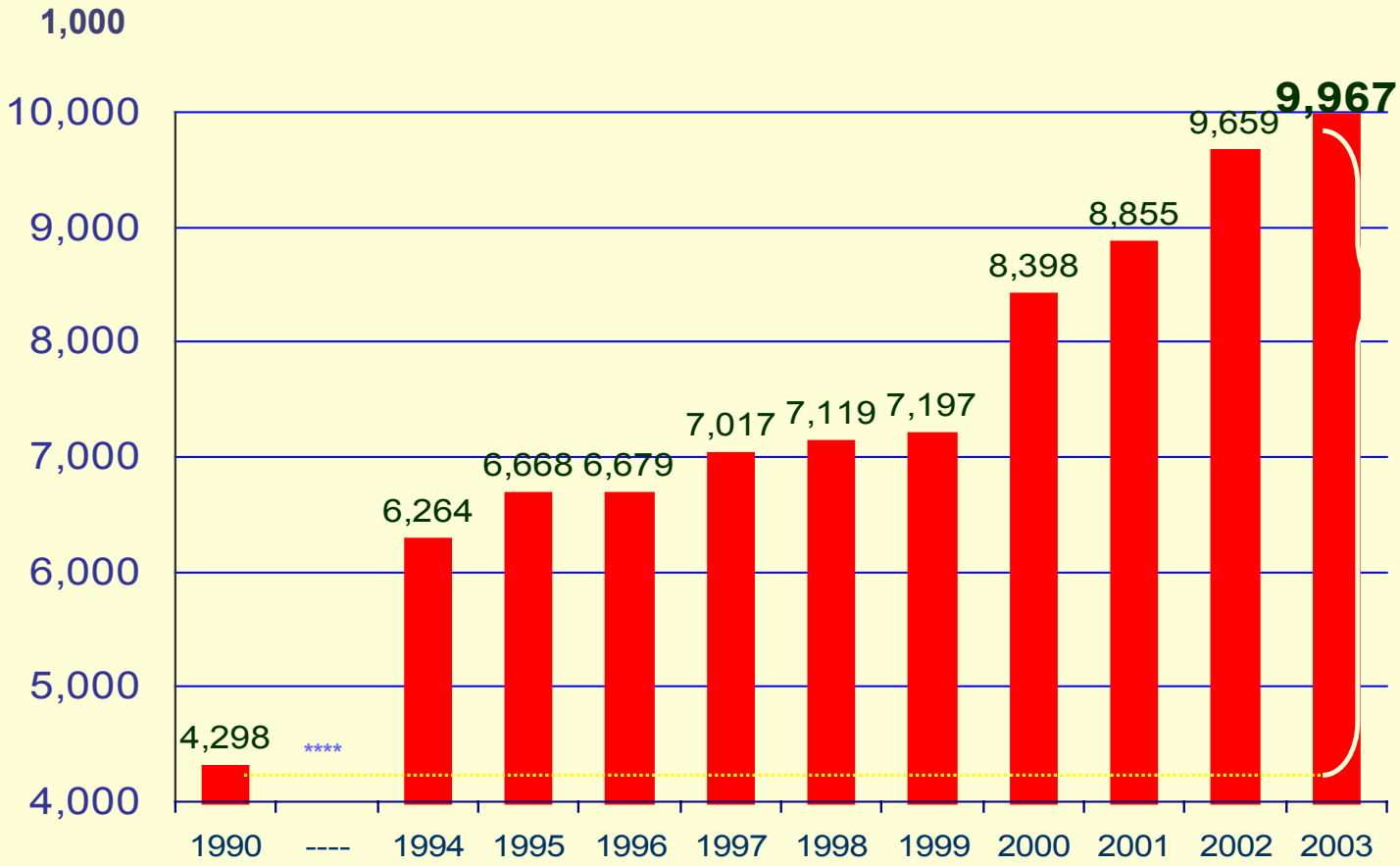
1995-1999
3.6 million -- 35%
(750,000 per year)

1990-94
2.2 million -- 21%
(450,000 per year)

10.3 Million in March 2004

Source: Pew Hispanic Center, Estimation of the Amount and Characteristics of Undocumetated Population Living in USA

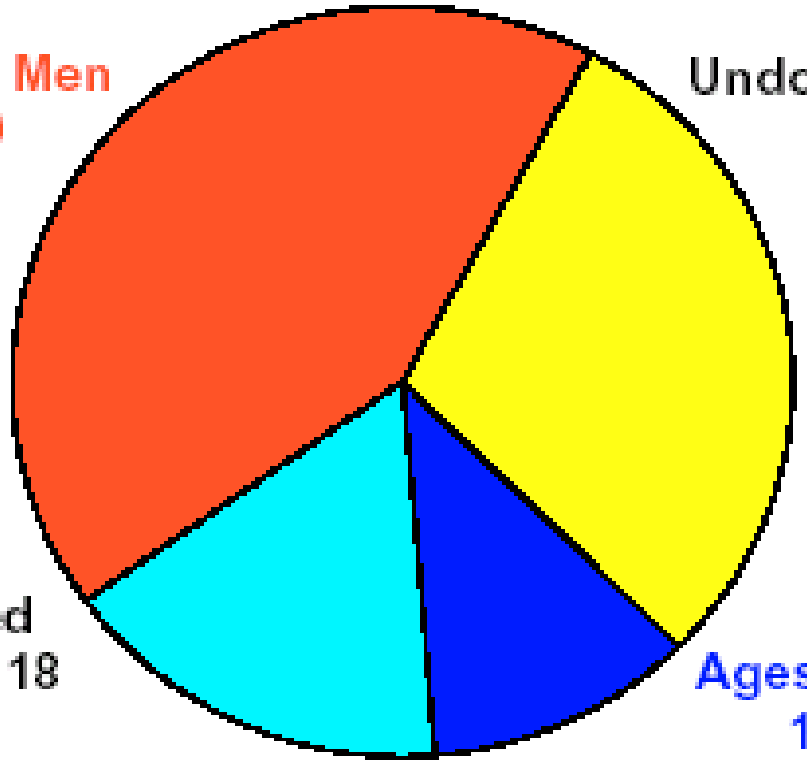
7.8. Mexican Migrants to USA 1990- 2003 (1000 Persons)



5.7 million of migrants in 13 years, annual growth of 438,000 persons: 1990-2003

SOURCE: Public-use files from the US Census Bureau, Current Population Survey, March Supplement, elaborated by Fernando Lozano, 2005

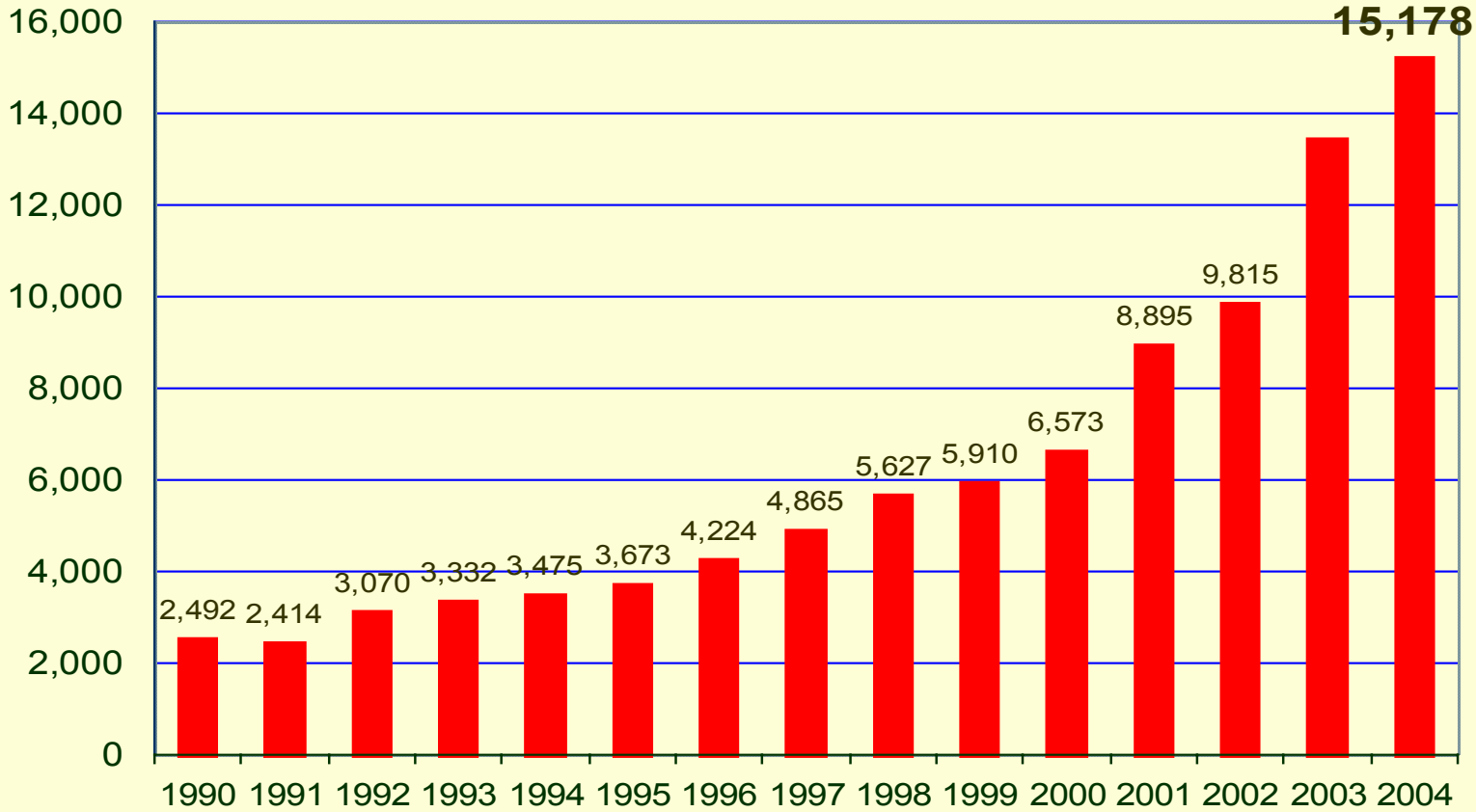
Undocumented are Children and Younger Adults



10.3 Million in March 2004

Source: Pew Hispanic Center, Estimation of the Amount and Characteristics of Undocumetated Population Living in USA

7.10. Remittance From Migrants Sent to Mexico, 1990-2004 (1'000,000 US $)



January-Nov., 2004

Average 2004: **1.380 billion dollars**

SOURCE: Informes Anuales Banco de México, varios años. www.banxico.org.mx, elaborated by Fernando Lozano, CRIM, 2005

8. Combating Desertification & Drought - Resolving, Preventing & Avoiding Violence: A Long-term Task

- **Desertification, drought, famine & hunger riots must be analysed as part of : Global Environmental Change & extreme or fatal outcomes**
- **Desertification & drought are no hard security threats!**
  - **They require long-term cooperation among scientists & policy makers using traditionaland advanced technological knowledge.**
  - **They require a long-term, pro-active local capacity-building.**
- **Desertification & drought are emerging soft security challenges, they cause environmental and social vulnerabilities and they may trigger under specific global, national, regional & local conditions violent societal consequences: e.g. general strikes and hunger revolts that may challenge regime stability and the survival of governments!**

8.1. Desertification > Drought > Famine > Migration > Violent Events: Research Needs

- Much knowledge on individual factors of GEC and individual fatal outcomes but little on interactions and linkages between global environmental change & fatal outcomes (disciplinary constraints)
- Lack of multi-, trans- and interdisciplinary research integration
  - Within global change community: between desertification & climate change specialists: among specialists of six factors of my survival hexagon
  - Within the fatal outcome communities: on nature & human-induced hazards/ disasters, environmentally-induced or triggered migration, crises and conflicts
  - Between the climate change (desertification) and disaster community
    - ✓ June 2002: Foreign Ministries of Germany & Netherlands & IFRC-RCS
    - ✓ UNISDR project: adaptation & mitigation to climate change & disaster
  - Between early warning communities on disasters and conflicts
- Need for a broad *Earth Systems Analysis*: Natural & Social Scientists
  - Schellnhuber/Wenzel: (1998)Potsdam (PIK): to Hadley Centre in UK: ESA
  - Manifold methods: quantitative modelling and qualitative comp. case studies

8.2. P.L.G.Vlek: UNU-EHS: InterSecTions 1 International Panel on Land Degradation

- **Proposal: UNU & UNEP to establish a IPLD (IPCC):**
- **Task: „to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-econ. information relevant to understanding the scientific basis of risk of human-induced land degradation, its potential impacts and options for adaptation and mitigation.“**
- **Assessment based on peer-reviewed & published scien-tific/technical literature**

- **WG I: scientific aspects**
- **WG II: vulnerability of socio-economic, food & natural systems to land degradation, consequences of land degradation & options adapting to it**
- **WG III: assesses options for limiting land degradation and resulting land cover change.**

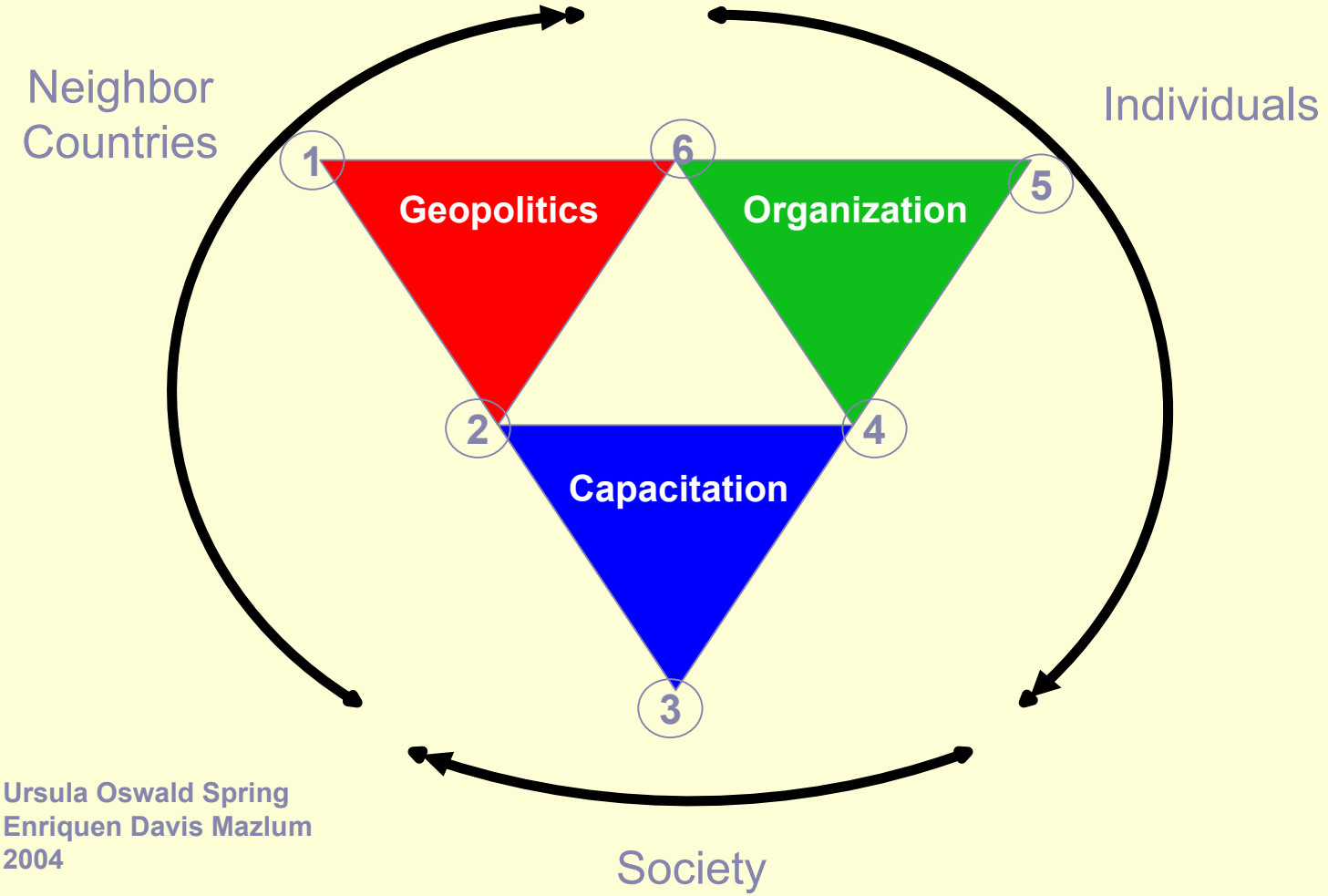
8.3. H.G.Brauch: UNU-EHS: InterSecTions 2:
4th Phase of Environmental Security Research

- After 2 decades of research environmental security to a fourth stage of **synthesis & reconceptualisation**
- New phase of research on Human and Environmental Security and Peace (HESP) combine: structural factors from the natural and human dimensions of GEC based on expertise from the natural & social sciences
- Social science research on extreme or fatal outcomes: hazards, migration, crises and conflict constellations.
- Fourth phase of social science research on HESP may aim at ten conceptual and policy goals:

8.4. Desertification & Drought Mitigation: Some Policy Conclusions

- **Combating Desertification & Drought**: A non-military human & environmental, food, health, livelihood & gender security task for social, agricultural & environment policy
- **Coping with Drought & Famine**: OCHA, ECHO, WFP et al.
- **Coping with environment.-induced migration**: UNHCR, IOM
- **Avoiding violent conflicts**: A joint task of international institutions for hydrodiplomacy
- **Combating desertification** is a major environmental, development and a security task
- **Need pro-active policies** by states & international organisations on causes of desertification: **population growth** (South), **market forces** (North) & **climate change impacts**.

9. Resolution of Conflicts



Ursula Oswald Spring
Enriquen Davis Mazlum
2004

Thank you

for inviting us and giving us an opportunity to share with you our emerging conceptual ideas.

Thank you

for your attention and patience.

Send your comments to:

uoswald@gmail.com

Brauch@onlinehome.de