

Thank you for your attention!



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University of Catania,

Italy



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Challenge:

- To produce technical documents that are easily understood by the non-technical audience and help stakeholders in taking decisions



European Commission - EuropeAid Co-operation Office
Euro-Mediterranean Regional Programme For Local Water Management (MEDA Water)
Mediterranean Drought Preparedness and Mitigation Planning (MEDROPLAN)

Drought Management Guidelines

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The Guidelines

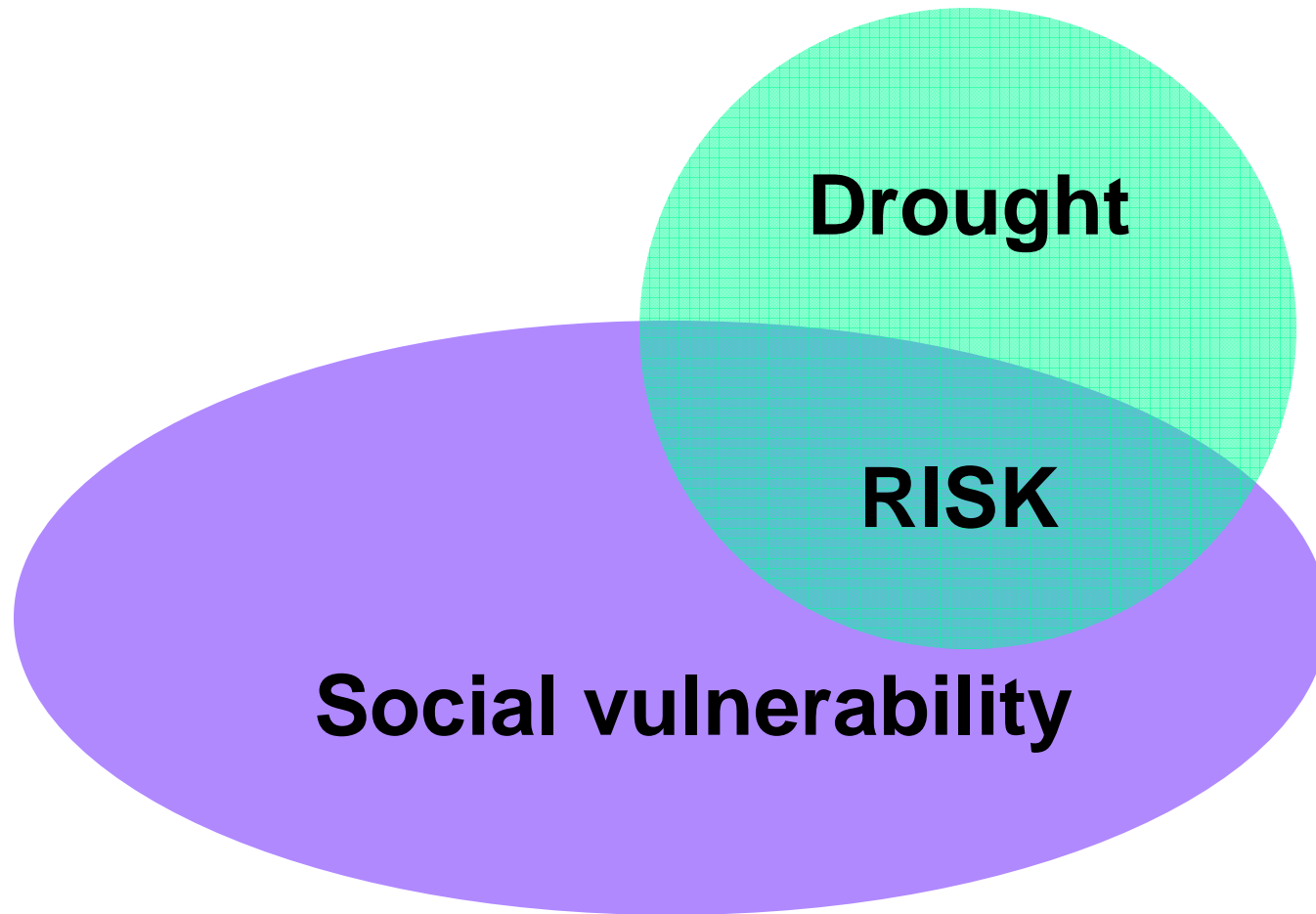
- ***Are based*** on the broad experience technical knowledge about drought management in the Mediterranean region
- ***.... are*** a complement, a flexible product that allow incorporation of different criteria
- ***... are not*** a solution to eliminate drought
- ***Help formulate drought management plans*** based on risk management and not crisis management

Using the Guidelines by stakeholders

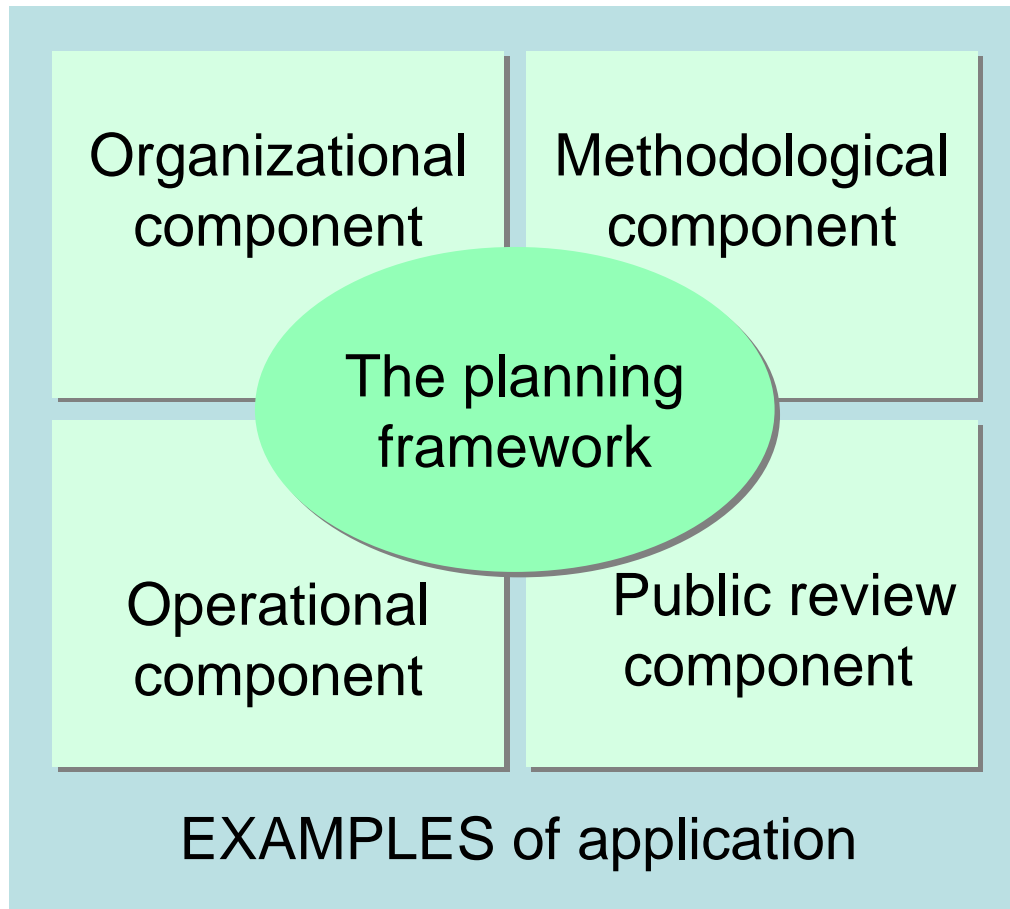
- The “Technical Report on Water Scarcity and Drought Management in the Mediterranean and the EU Water Framework Directive” has included the MEDROPLAN Guidelines as an element for drought planning
 - “The Mediterranean Water Scarcity and Drought Report” prepared by the Mediterranean Water Scarcity and Drought Working Group, March 2007
- Other stakeholder groups are evaluating the Guidelines to include their protocol into the planning process

The impact of drought depends on the social vulnerability ...

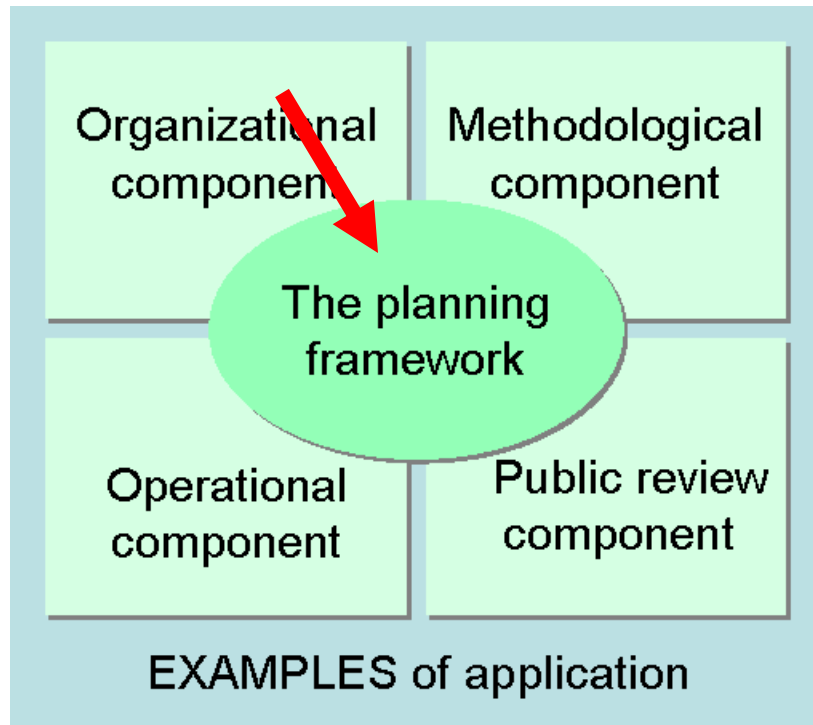
- 800 million people suffer malnutrition
- 1,3 billion people live without safe drinking water; 2 billion without sanitation



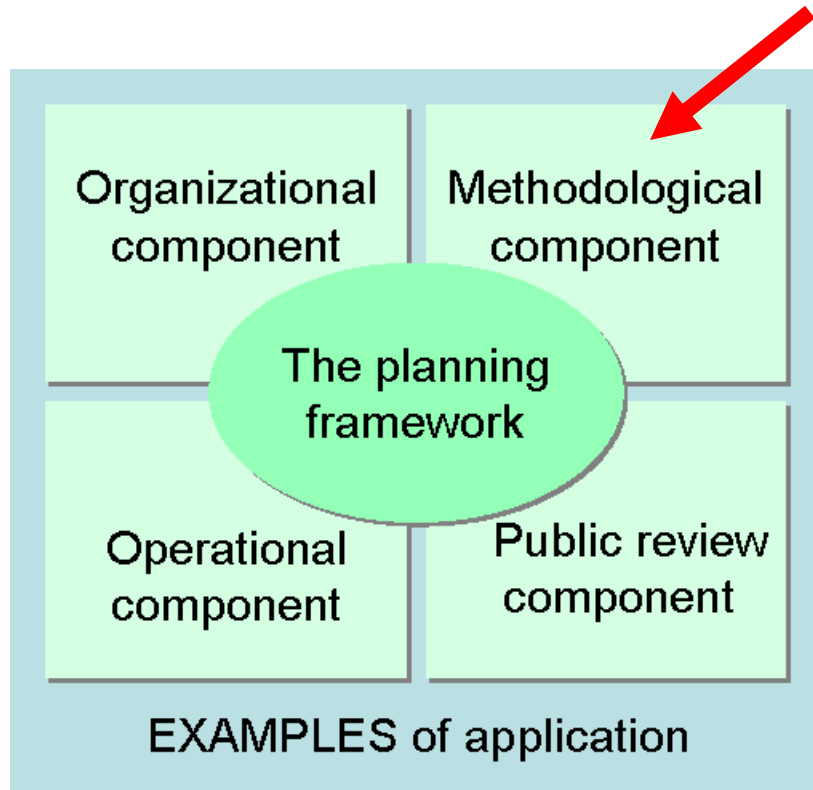
Components of the Guidelines



The guidelines are translated into Arabic, English, French, Greek, Italian, Spanish

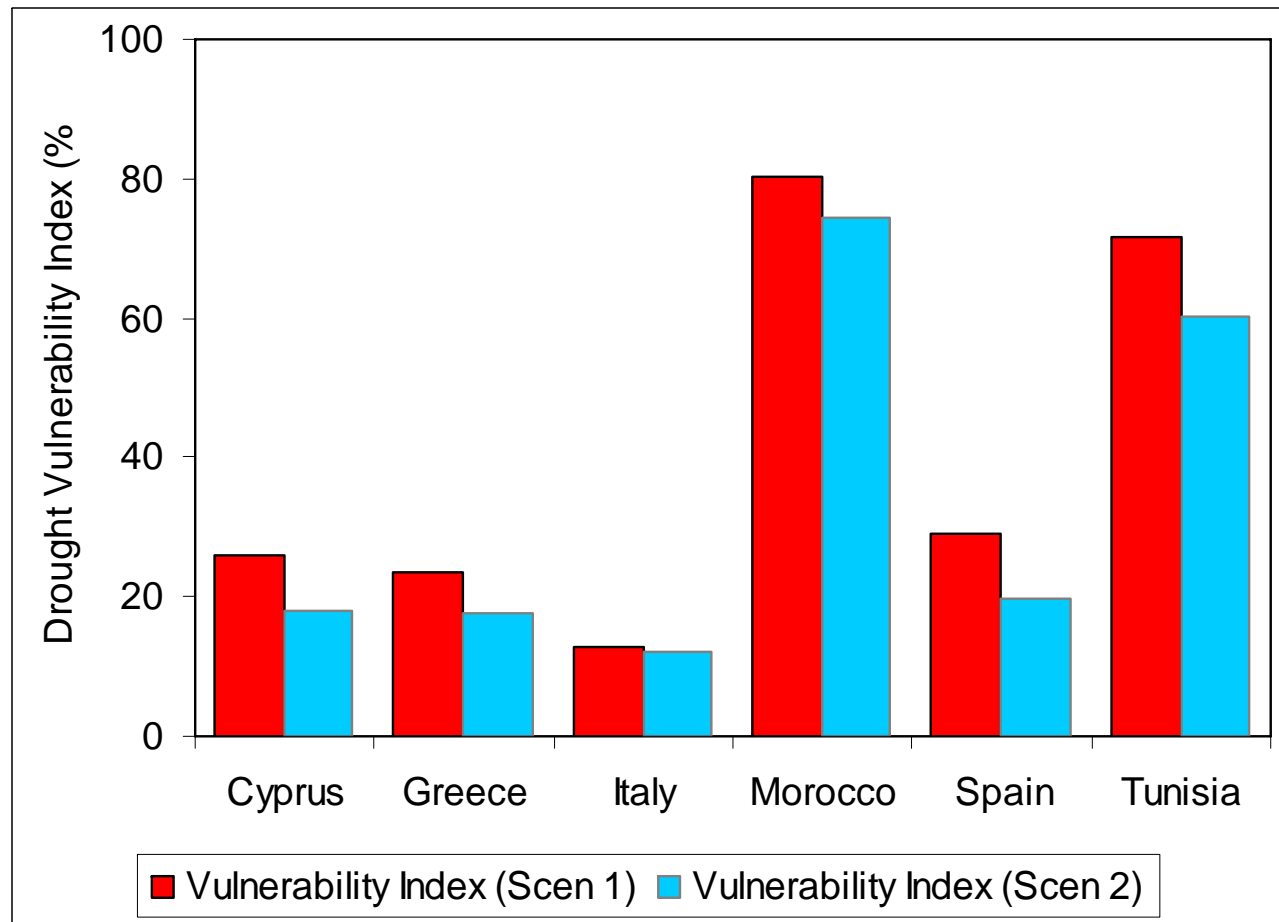


- Defines the local, regional and national **purpose** for developing drought plans
- Highlights the **dynamic processes** of the environment and society
- Key issues:
 - Concepts
 - Dialogue among stakeholders
 - Analysis of challenges and opportunities



- Defines the **technical approach** to link drought and management actions
- This includes:
 - Drought characterisation
 - Risk and vulnerability analysis (diagnostic)
 - Data, models, and tools

Drought Vulnerability Index

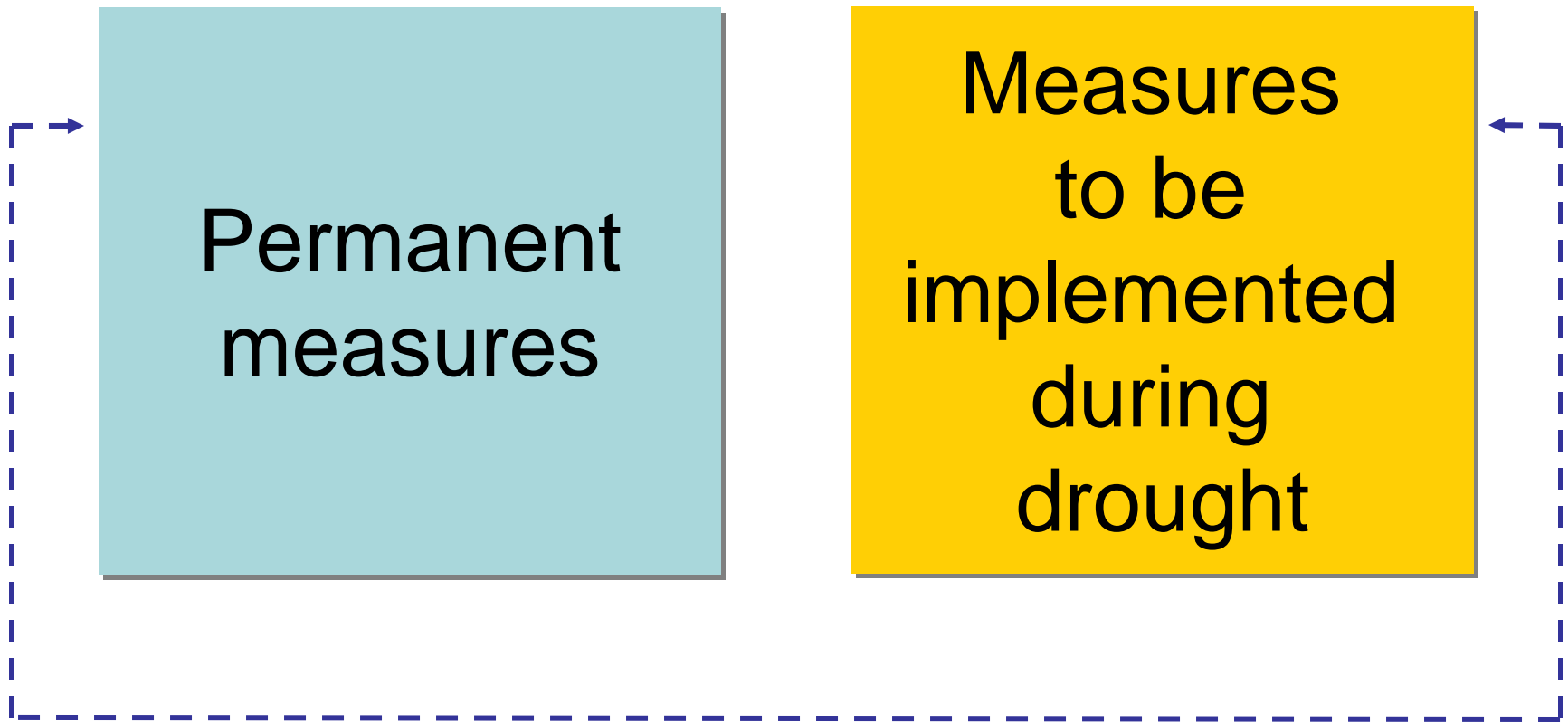


Scen 1 All components weighted equally

Scen 2 Human and civic resources more important

Operational component

Defines strategies to adopt drought management actions



Drought levels & Measures

PRE-ALERT

- Low cost, indirect, **voluntary**
- Non structural directed avoid worse situations
- Focus on communication
- Intensification of monitoring

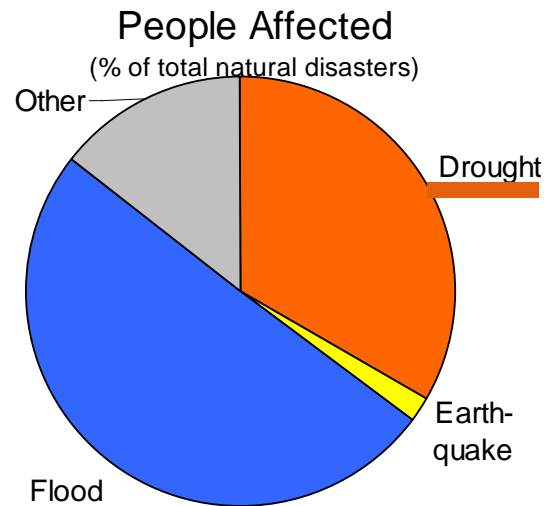
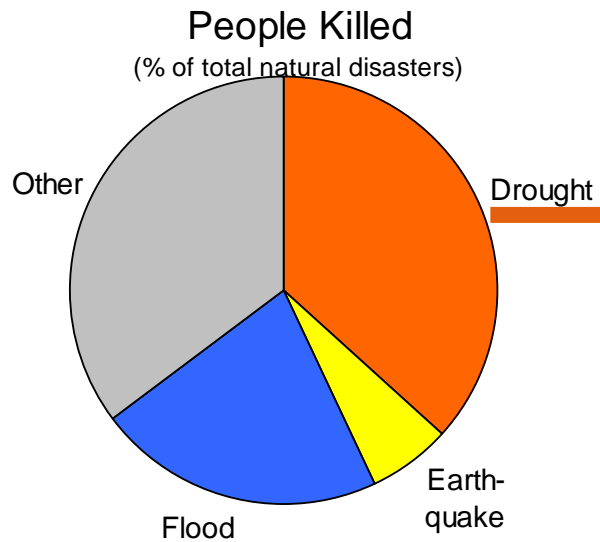
ALERT

- Low cost, direct, **coercive**
- Non structural directed to specific groups
- Water restrictions except for drinking
- Changes in management, revision of tariffs, rights exchanges

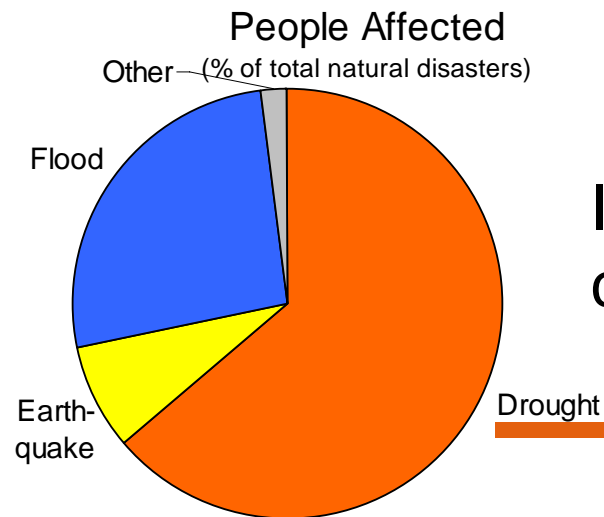
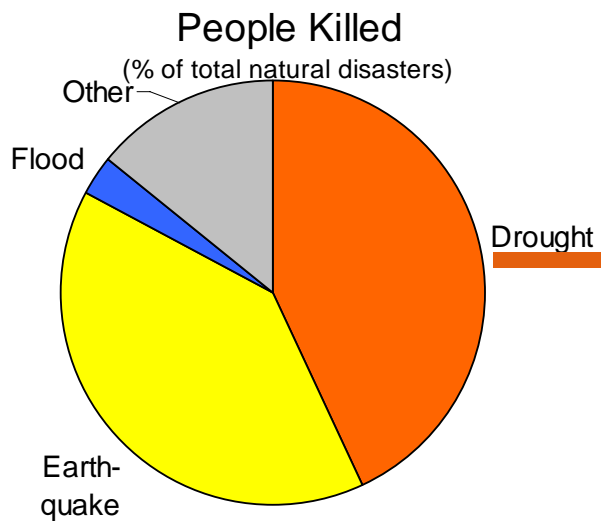
EMERGENCY

- High cost, direct, **restrictive**
- Structural, new infrastructure, water transfers
- Non structural, new groundwater abstraction
- Water restrictions for all users

Natural disasters (1996-2006)



In the world



In Mediterranean countries

Moving forward ...

- Proposal for development of a Multilateral Environmental Agreement (MEA)
 - agreement between more than two countries to take certain steps to protect environment or conserve natural resources
- Hard MEA: binding (conventions, protocols, etc. i.e., UNFCCC, 1992)
- Soft MEA: non-binding, do not require ratification (i.e., Rio Declaration, 1992)
 - Rules of international law that do not stipulate concrete rights or obligations
 - Description of those values, guidelines, ideas and proposals that may develop into rules of international law but have not yet done so

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