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The consideration of Qualitative and Quantitative aspects in the WFD Implementation

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QUALITATIVE ASPECTS IN THE DIRECTIVE

The directive is strongly focused on the protection of water quality

QUANTITATIVE ASPECTS IN THE DIRECTIVE

WFD Article 1:

The purpose of the Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which:

(...)

(b) promotes sustainable water use based on a long-term protection of available water resources;

(...)

(e) contributes to mitigating the effects of floods and droughts and thereby contributes to:

- the provision of the sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use

(...)

QUANTITATIVE PROTECTION

of water resources is closely linked to

QUALITATIVE ASPECTS

It guarantees ecosystems through:

- typical habitats
- dilution
- prevention of extreme situation

• Pollution diminishes available resources causing:

- imbalances within the hydrological cycle
- water stress

Key questions:

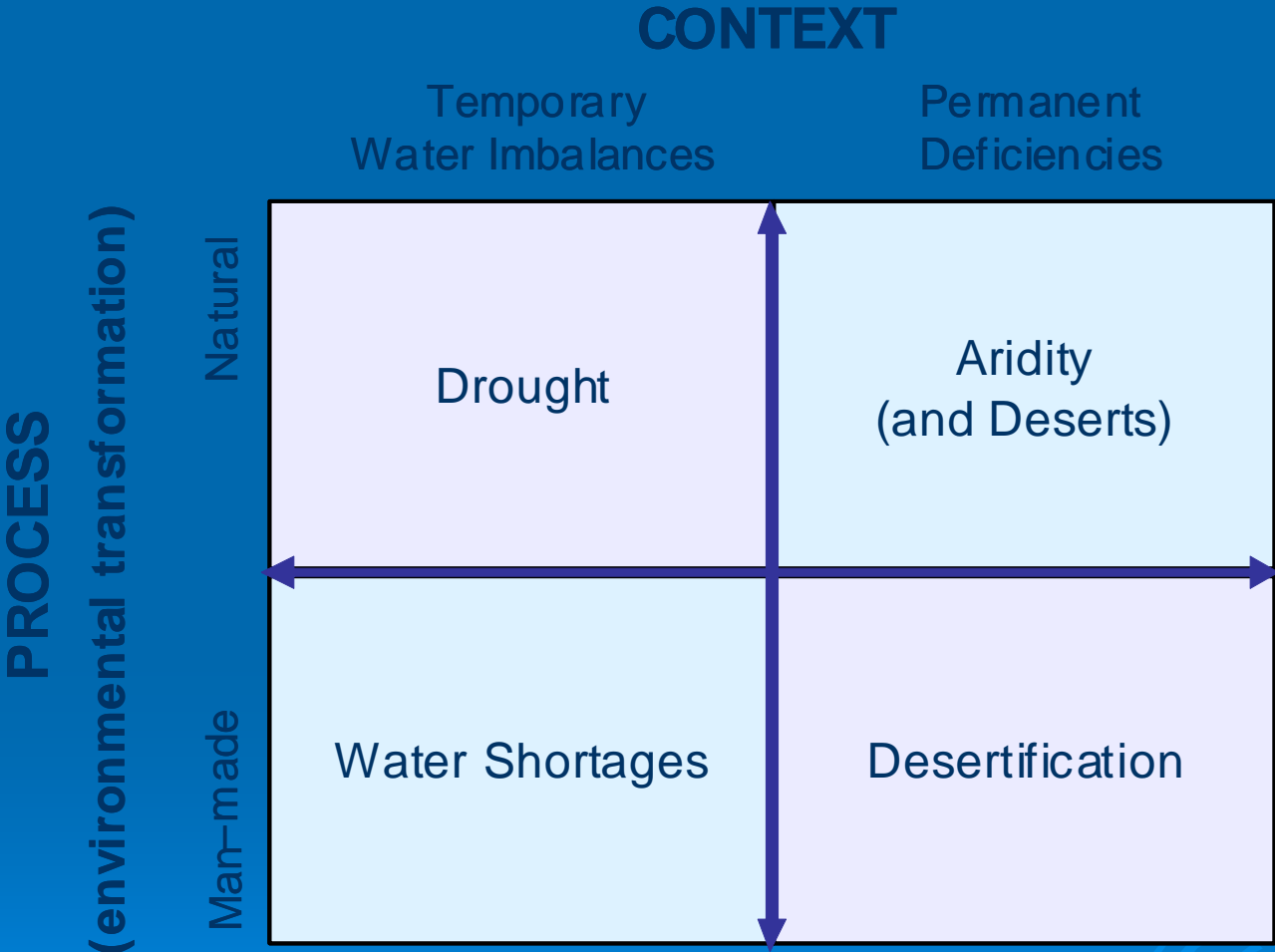
- ❖ It is possible to meet the good ecological status for surface water bodies without considering properly the quantitative status?
- ❖ How to implement an integrated approach for quantitative and quality protection?
- ❖ How to make economic assessments while achieving the GES in a Water Scarcity situation ?
- ❖ Which is the correct way to consider “exemptions” due to quantitative aspects?
- ❖ Is this just a Mediterranean issue?

What kind of problem are we facing ?

- **Imbalances** : water demands exceed the supply capacity of natural system
- **Aridity** : natural phenomenon (low water availability)
- **Drought situation** : deviation from the average situation, still within the ecosystem natural variability

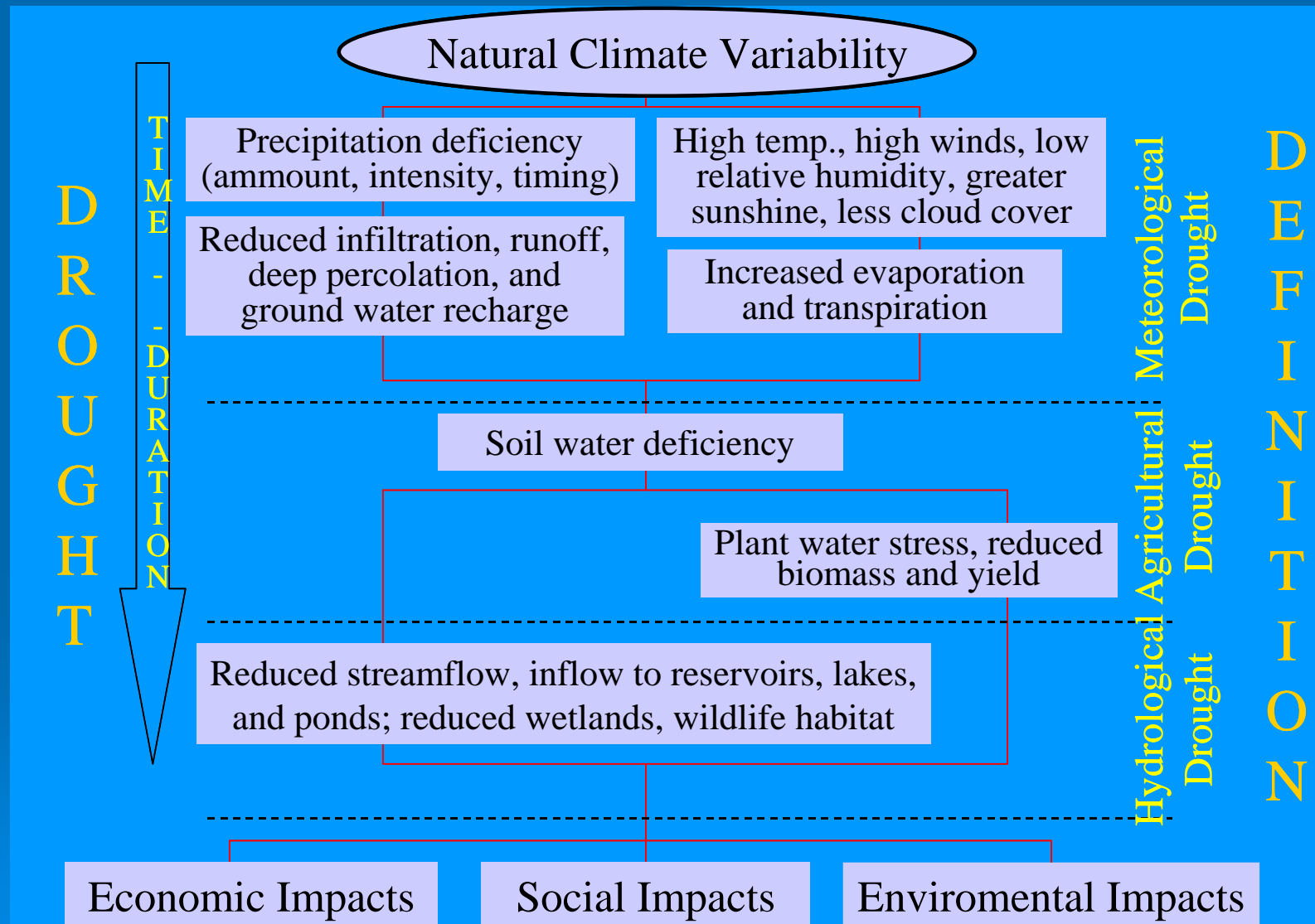
***Transitory periods of water deficiency
<> long-term imbalances***

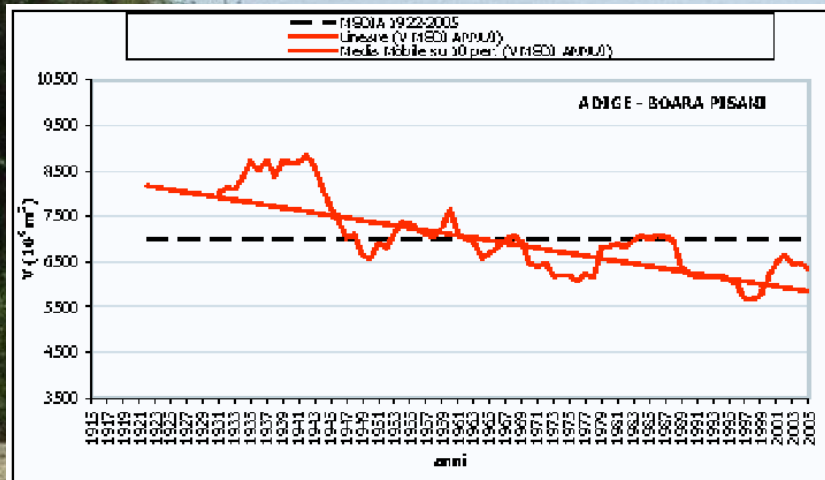
Definition and Assessment of the different phenomena



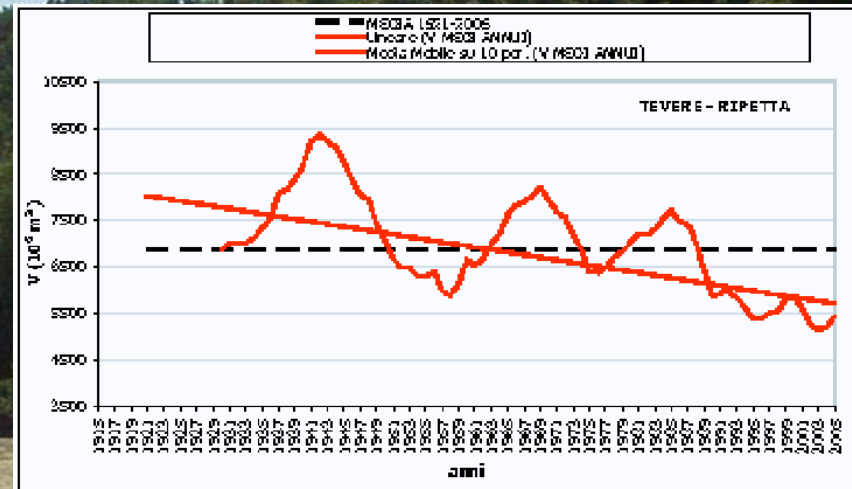
Typology of water stress condition

Definition and Assessment of the different phenomena



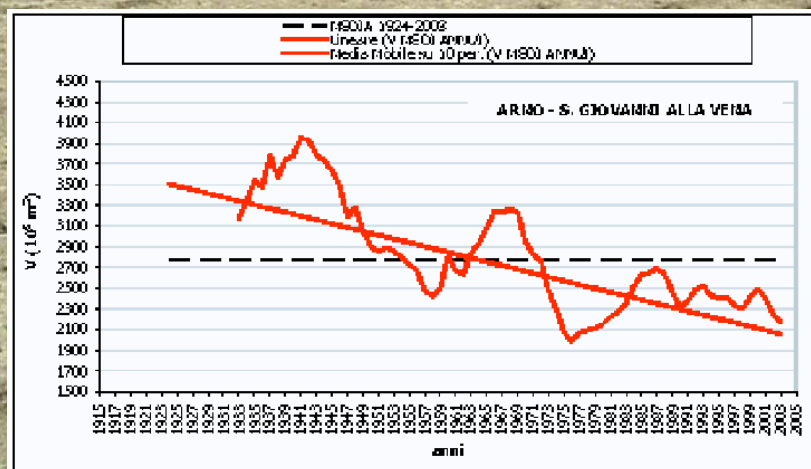


ADIGE

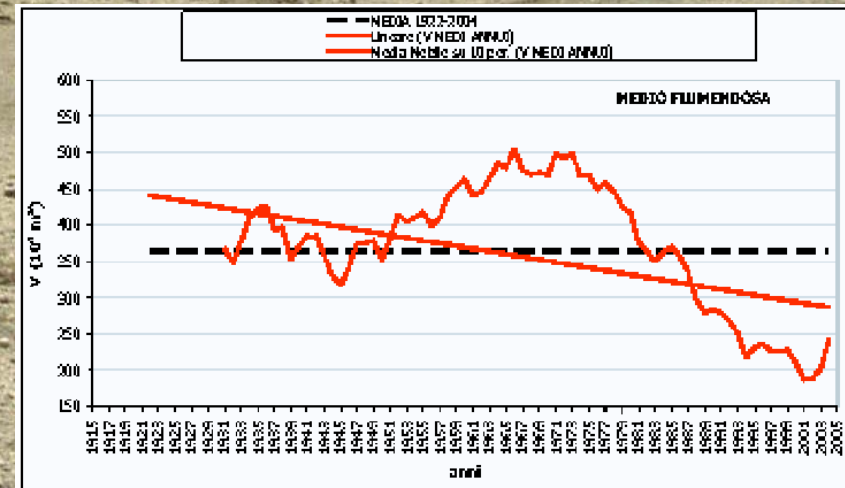


TEVERE

Inflow and outflow trends for some italian significant rivers



ARNO



FLUMENDOSA

MANAGEMENT PLAN CONTENTS

WFD recognises as essential for RBMP arrangements:

- evaluation of water resource availability
 - consideration of quantitative aspects in the definition of the reference conditions



HYDROLOGICAL BALANCE APPROACH

INFLOW

(natural flow and anthropic discharges)

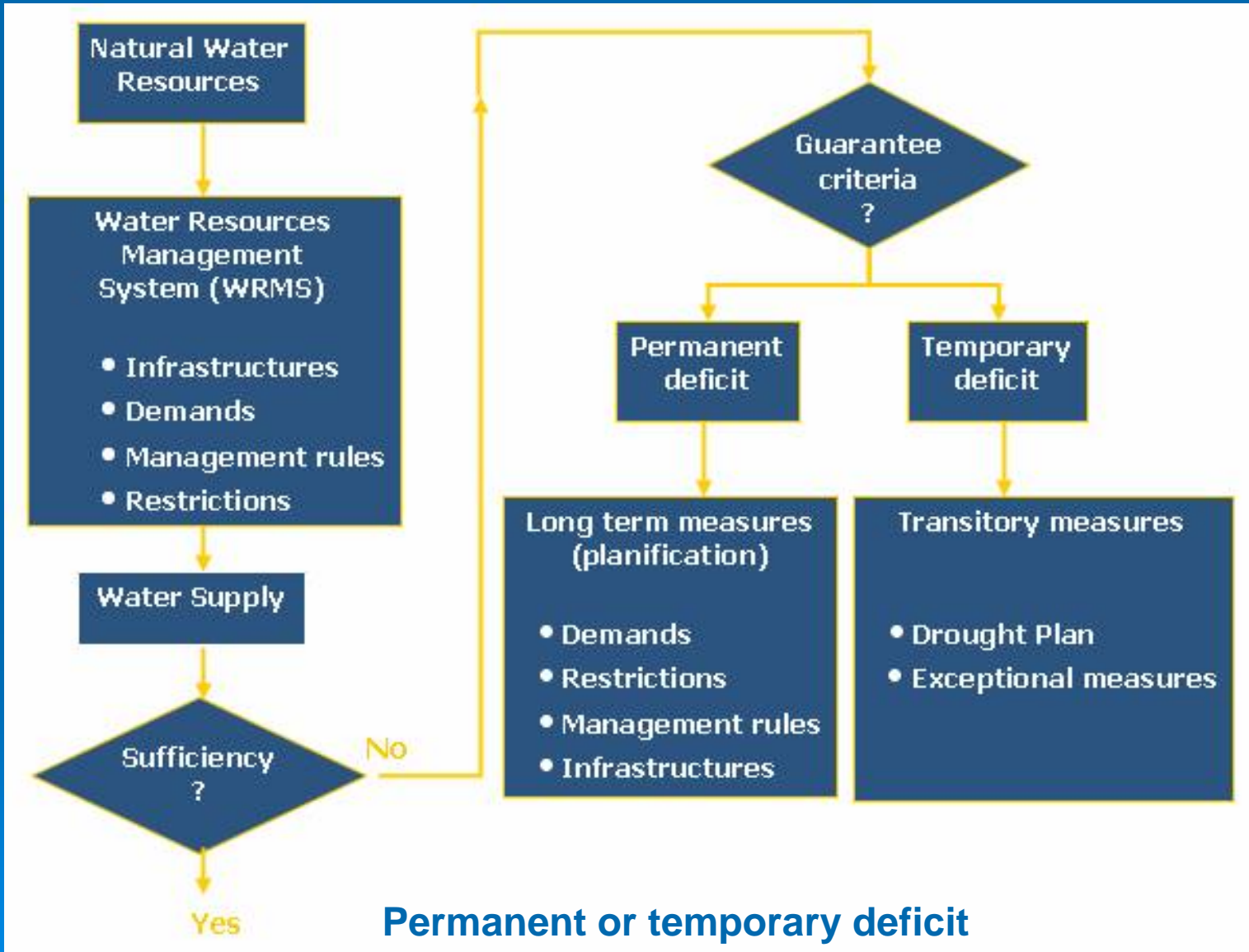
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OUTFLOW

(civil, agricultural, industrial uses, etc)

the difference must guarantee on each homogenous stretch a flow which protects the typical biocoenosis of the water body considered

Drought planning and management



Permanent or temporary deficit

Strategic planning

- LONG-TERM ACTIONS



to reduce the vulnerability of water supply systems to drought

- Water conservation and demand management (efficient use and resource protection)
- Educational Programs
- Social awareness
- Research

- SHORT-TERM ACTIONS



to face an incoming particular drought event within the existing framework of infrastructures and management policies

- monitoring system (Drought Plan Monitoring)
- impact assessment system
- response system requires:
 - ✓ legal framework
 - ✓ organisational structure
 - ✓ measures and infrastructures

- **Emerging actions on demand side**

- ✓ Reduction of leakages
- ✓ improvements of irrigation technologies
- ✓ Improvement of water reuse technologies
- ✓ Evaluation of water bank and quotas system
- ✓ Establish adapted tax system and pricing policy
- ✓ Development of education and awareness campaigns

- **Emerging actions on supply side**

- ✓ Preservation of the functioning of natural catchments and restoration of lost catchments
- ✓ Improvement of an efficient use of water infrastructures (dams, inter basin water transfer,...)
- ✓ Establish an obligation for a costs/advantages/alternative solution analysis for every new water resource creation project

Issues in the implementation of WFD

- When and where needed, a specific “drought management (sub)plan” should be included in the WFD RBMP (art. 13.5).
- Public participation (art. 14) should also be organised around water scarcity management issues, as required by the WFD.
- When developing the WFD POM and associated RBMPs (art. 11 and 13), quantitative and qualitative aspects should be jointly considered for the plans and programmes to be coherent and to create synergies where possible.
- The integration of specific quantitative management measures inside the POM could add supplementary constraints (technical and financial) for concerned countries to take into account.
- When setting the environmental objectives in the RBMPs, these additional constraints should be taken into account when justifying the potential exemptions.
- Drought plans must establish objective thresholds in order to implement the specific measures that are related to an indicator system and also included in the RBMPs

Available Documents developed under the WFD-CIS

A – Technical Document

B – Policy Summary _ Endorsed by the EU Water Directors

C – Document prepared by the Commission
(Questionnaire)



Main further development needed

- Evaluation of the efficiency of measures (methodologies)
- Link with Climate changes
- Link with the research sphere
- Drought Exemptions /Drought Monitoring and appropriate indicators for a common assessment
- Link with other policies (agriculture, land planning, industry...)
- Explore the EU funding instruments for WS and Drought
- Public Awareness
- Best Combination of measures

