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**From vision to action**



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# Drought Management Plans

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## Short summary

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The case study deals with the preparation and implementation of drought management plans. It is based on the MEDROPLAN project, carried out between 2007 and 2010. The objective of the project was to provide Mediterranean countries with a framework. The project produced a set of Drought Management Guidelines for effective and systematic approach to prevent and/or minimize the impacts of drought on people, which were published in 2010 in six languages. The Guidelines outline both long term and short term measures that are to be used to prevent and mitigate the effects of drought. The Guidelines provide an integrated approach to face droughts from a risk management perspective and therefore minimizing the impacts of drought in the population and resources. The integrated drought planning concept addresses the planning framework and four specific components: the organizational, methodological, operational and public review components.

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## Key Words:

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*Drought, drought management, drought planning*

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## Issues addressed:

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**Water resources management (water-use efficiency, integrated water resources management, transboundary cooperation, sustainable extraction and supply of freshwater)**

The main issue is to provide a complete framework to cope with drought through the design and application of pro-active drought management plans. This includes the long term and short term measures that are to be used to prevent and mitigate the effects of drought.

**Risks (mortality, economic losses caused by natural and human-induced disasters)**

The Guidelines are intended to mitigate the socio economic impacts caused by drought through reduction of drought vulnerability and strengthening of drought resilience.

# Tools for implementation

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**Financing/economic instruments:** highly dependent on local conditions. Therefore the Guidelines did not prescribe specific instruments.

**Governance: Institutions / legal framework:** The Guidelines emphasized the importance of a deep analysis to understand the institutional and legal framework within which the drought plan will be designed and implemented and to define an efficient organizational structure to implement the plan in an efficient manner.

**Technology:** The methodological component of the Guidelines presents a scientific approach to risk evaluation, including (1) comprehensive technical and scientific approaches to drought characterization, and development of indicators of risk in water resources and agricultural systems; (2) methods used for risk management in the context of the Mediterranean region; and (3) academic methods for evaluating social vulnerability based on indicators that include the capacity to anticipate, cope with and respond to drought.

**Capacity development:** The public review component presents a methodology to revise the application of the previous components when developing a drought plan. Our approach suggests a public multistakeholder dialogue and includes a protocol for developing dialogue workshops, guided interviews, and questionnaires aiming to collect feedbacks. Dissemination of information is also essential in this component.

**Who is involved?:** The goal of the MEDROPLAN Guidelines was to reach the full range of national planners, policy makers and stakeholders related to drought in the Mediterranean, and especially oriented to the support of policy making.

**What were the objectives of the intervention?:** The main objective of the intervention was to strengthen the capacity of national planners and policy makers to formulate national drought policies, to improve the institutional setting and to design and implement efficient drought management plans to reduce vulnerability and to improve resilience.

**Implementation challenges:** The main challenge was reluctance to shift from reactive to proactive drought management in the Mediterranean region. Traditional approaches were based on releasing emergency funds to mitigate drought impacts once the effects are apparent. This approach is not effective to reduce vulnerability because decisions of stakeholders usually account for public compensation of damages and therefore there are no incentives to manage risk.

**Main task/activities undertaken:** The main activity was the preparation of the Drought Management Guidelines, which were translated into six languages (English, French, Spanish, Italian, Greek and Arabic) as freely distributed to stakeholders in the Mediterranean region. A set of training workshops was organized in different countries to present the Guidelines to local stakeholders in Syria, Tunisia and Morocco and to receive feedback on the approach and tools selected.

**Main outcomes / impacts (what has changed?):** Drought management in the region is moving from a reactive to a proactive approach. A proactive or preventive approach includes all the measures designed in advance, with appropriate planning tools and stakeholder participation. It consists of planning the necessary measures to prevent or minimize drought impacts in advance. The proactive approach is based both on short term and long term measures and includes monitoring systems for a timely warning of drought conditions. Such an approach includes preparedness of planning tools enabling the consequences

of a possible water emergency to be avoided or reduced, as well as the implementation of such plans when a drought occurs.

## Lessons learned

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**Triggers:** In case of natural disasters, the most effective trigger is always the damages caused by a recent event. Drought planning initiatives usually occur following a devastating drought, since damages caused to the exposed population call for immediate intervention.

**Drivers:** The major drivers for action are usually the stakeholders. Designing effective risk-based strategies that mitigate the effects of drought in agriculture and water supply systems ultimately depends on the role of organizations, institutions, and civil stakeholders involved in drought in each case.

**Barriers:** The most significant barrier to the implementation of effective drought management plans is the inadequacy of the institutional setting. The ineffective coordination and cooperation between institutions and the lack of policy to implement a proactive plan may lead to an inadequate planning. Lack of training in risk-based approaches is also a significant barrier in some regions.

**What has worked well?:** The experiences in the development and implementation of drought management plans highlight the success and challenges of coping with drought for societies with different vulnerabilities and emphasize risk-based drought management as a critical approach to mitigate the impacts associated to drought-induced water shortages. It is evident that a proactive approach, even if more complex, is more efficient than the traditional approach, since it allows drought mitigation measures (both long term and short term) to be defined in advance, improving the quality of the interventions.

**What can be improved?:** Many stakeholders expected the Guidelines to be a first draft of a drought management plan suitable for their region. This was obviously not the case, since the Guidelines were only intended to provide assistance in the process of formulating and implementing the plan, but were not a plan on their own. These stakeholders experienced difficulties in assimilating the content of the Guidelines and adapting them to local conditions.

**The way forward:** Following the MEDROPLAN project, the UN Department of Economic and Social Affairs coordinated a project to strengthen the capacities of national planners, policy makers and stakeholders in water-scarce and in transition settings countries in West Asia/North Africa, and to enhance their effectiveness in the formulation, implementation and monitoring of mitigation and preparedness drought management strategies. Five countries took part in the initiative: Jordan, Morocco, Palestine, Tunisia and Yemen. The organization of projects and workshops similar to the one promoted by the UN Department of Economic and Social Affairs seems like a good option to help local stakeholders assimilate the principles of the Guidelines and provide assistance during the process.

### Links:

<http://www.iamz.ciheam.org/medroplan/>