

## **Synthesis note by the secretariat - Policy-oriented recommendations resulting from evidence on the approaches for the assessment and monitoring of the resilience of vulnerable populations and ecosystems to drought**

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As agreed at COP14, the Science-Policy Interface (SPI) has produced a technical report on methods for assessing and monitoring the resilience of vulnerable populations and ecosystems to drought, based on existing scientific evidence. This note summarizes the main elements of the report.

### **I. Resilience and the impacts of drought**

Drought is the costliest of natural hazards. If its direct effects (human mortality, economic losses due to reduced crop yields) are well known, its indirect effects (on human security, poverty, human health, social inequalities and migration) are far less known, but are nevertheless significant. The effects of drought become particularly severe where terrestrial reserves of water have been depleted and not yet replenished following previous droughts. Under certain conditions, these droughts can overwhelm the resilience of ecosystems and lead to major shifts in ecosystems or even their collapse.

Monitoring and assessing the resilience of ecosystems and vulnerable populations to drought helps to strengthen this resilience, and also informs decision makers and institutions on the right decisions to take in order to respond appropriately, in an anticipated and coordinated manner to the occurrence of these natural hazards. In short, it contributes to moving from 'reactive' to 'proactive' regimes to anticipate and adapt to changes through sustainable land and water management while preserving the functioning of ecosystems and societies.

### **II. Measuring drought resilience: options and limitations**

The report highlights that there is currently no single universal measurement system that can be recommended for measuring resilience to drought. However, there is a set of relevant indicators with methodological guidance, some of which are mapped to relevant Sustainable Development Goal (SDG) targets and indicators. This allows countries to decide which resilience measurement frameworks and assessment tools to adopt depending on the context, or the key resilience component of interest (disaster risk reduction, farmer resilience, connectivity, social-ecological systems capacity, ...). These different indicators are applicable at all levels, from local to national to global. The report also provides practical examples of their application.

### **III. Roadmap for drought resilience assessments**

The report also includes a roadmap on how to define, select, and use the different indicators, using an approach that is flexible and scalable to adapt to specific national and local conditions and contexts. The 5 steps to conduct a resilience assessment are as follows:

- Assess current and future drought risks, and define the objectives and priorities of this assessment, as well as the target area of interest
- Conduct a thorough review of existing policies, climate disaster risk studies, and an inventory of indicators already in use in the country
- Conduct a self-assessment of the capacities (technical, financial and institutional) that could be mobilized to conduct this resilience assessment, which will serve as a basis for securing the necessary funding and resources
- Select a relevant set of indicators to measure and assess resilience
- Enter the collected data and assess resilience, using one of the resilience assessment frameworks presented in the report, and rank the resilience of societies and ecosystems according to 5 levels of resilience (from very low to very high).

### **IV. Conclusions and recommendations**

- Collecting data on the impacts and costs of past droughts is essential for building country capacity to mitigate the effects of future droughts.
- All the information collected by countries in this area will allow for the structuring of better national drought policies and plans, and will contribute to ongoing international discussions on the issue of loss and damage.
- Monitoring ecosystem drought risk is particularly important in areas that are on the brink of ecological collapse and more vulnerable to climate change and the effects of drought.
- Data provided by drought early warning systems, including changing weather patterns, remain valuable resources for assessing and monitoring drought resilience.
- These data should help guide investments in drought-smart sustainable land and water management designed to enhance overall resilience.
- The assessment of drought resilience can be made more effective by harmonizing the terminology and definitions used.