



# **WP2 Direct impacts on the life and health of the population and the wealth of the nations**

## **Droughts and water scarcity**

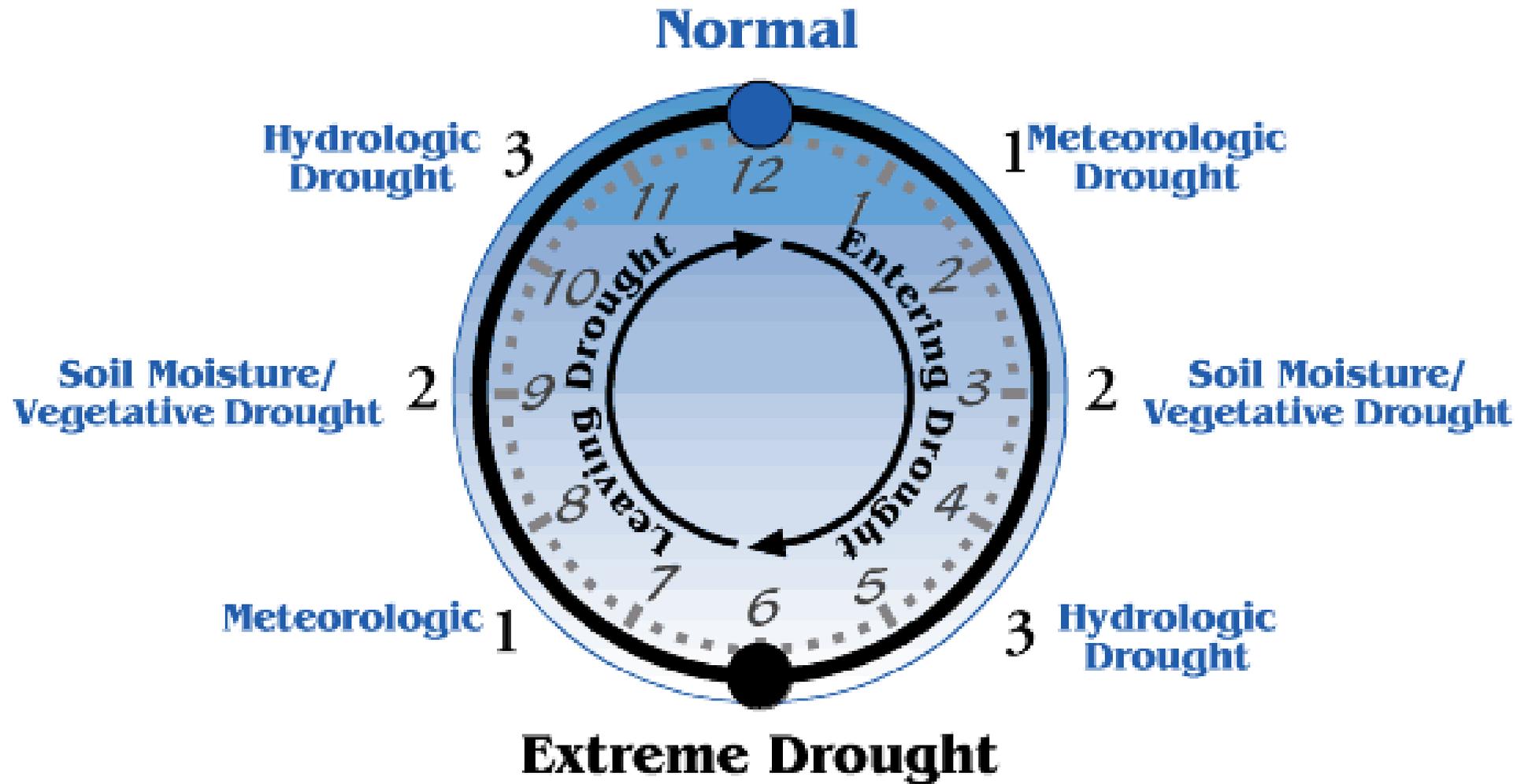


**CLIMATEWATER**

*Bridging the Gap between Adaptation Strategies of Climate Change Impacts and European Water Policies  
Final Symposium of the project, 13 – 14 October 2011, Budapest*

## 2.1.1. DIRECT IMPACTS ON THE LIFE AND HEALTH OF THE POPULATION AND THE WEALTH OF THE NATION

### DROUGHT AND WATER SCARCITY



## Droughts and water scarcity

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Although it is recognized that drought may occur independently from climate change, it is also very likely that drought can be greatly aggravated by the changing climate.

Drought is a recurrent feature of the European climate, occurring in both high and low rainfall areas and season and is predicted that it will increase in intensity across Western and South Europe.

Drought in itself represents a direct impact of climate change on water resources; in addition, it can be also responsible for indirect impacts, that are listed below divided into three main categories – environmental, economic and social.

# Main impact of droughts

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- Environmental Impacts of drought
- Social Impacts of drought
- Economic Impacts of droughts

# Environmental Impacts of drought

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## ■ Hydrological effects

lower water levels, reduced flow from springs, reduced streamflow, loss of wetlands, increased groundwater depletion, water quality effects

## ■ Damage to animal species

reduction and degradation of fish and wildlife habitat, lack of feed and drinking water, disease, increased vulnerability to predation, migration and concentration, loss biodiversity

## ■ Damage to plant communities

loss of trees from urban landscapes, increased number and severity of fires, wind and water erosion of soils, reduced soil quality

# Social Impacts of drought

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## ■ Health

mental and physical stress, health-related low-flow problems, reduction in nutrition, loss of human life, increased respirator ailments, increased disease caused by wildlife concentrations

## ■ Increased conflicts

water user conflicts, political conflicts, management conflicts

## ■ Reduced quality of life, changes in lifestyle

increased poverty in general, population migrations, loss of aesthetic values, reduction or modification of recreational activities

# Economic Impacts of droughts

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- **Costs and losses to agricultural producers**

annual and perenial crop losses, damage to crop quality, reduced productivity of cropland, plant disease, increased irrigation costs

- **Costs and losses to livestock producers**

reduced productivity of rangeland, limitation of public lands to grazing, increased feed transportation costs, disruption of reproduction cycles, decreased stock weights, increased predation, range fires

- **Loss from timber production**

wildland fires, tree disease, insect infestation, impaired productivity of forest land, direct loss of trees, especially young ones

- **Loss from fishery production:** damage to fish habitat, loss of fish and other aquatic organisms due to decreased flows

# Economic Impacts of droughts

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- **Loss to recreation and tourism industry** - related to reduced activities, such as hunting and fishing, bird watching, boating.
- **Energy –related effects:** increased energy demand and reduced supply because of drought-related power curtailments.
- **Water Suppliers**
- **Transportation Industry**
- **Decline in food production, food supply**



SLOVENSKÝ HYDROMETEOROLOGICKÝ ÚSTAV  
SLOVAK HYDROMETEOROLOGICAL INSTITUTE

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**THANKS YOU FOR ATTENTION**