

Concept note 3

AGRICULTURE IN A TIME OF WATER SCARCITY

GOAL

At the same time that some cities around the world are about to reach their “Day Zero”, the day when water stops flowing from the taps, food production has collapsed in some countries due to a lack of irrigation. There are many threats to the availability of water for agriculture, including pollution, losses and shortages. Given the seriousness of the situation, FAO has urged the stakeholders involved in food production to address these challenges and work on the transformation of food systems to increase their resilience. Regional governments have extensive experience in this area and ORU Fogar has long been advocating for greater decentralisation of competencies related to water management.

CONCEPTUALISATION

Water constitutes an essential resource throughout the entire food chain. For agriculture, although it is essential to have fertile soils and a favourable climate, it is indispensable to have access to water. Likewise, its role in the food industry is crucial, either as a component in production or as a cleaning agent, and its presence is equally vital in the subsequent stages of food handling by the consumer. However, nowadays, the supply is not guaranteed.

The adoption of Sustainable Development Goal 6 “Ensure availability and sustainable management and sanitation for all” within the framework of the 2030 Agenda reflected the urgency of addressing the provision of drinking water all around the world. In a context in which around 2 billion people lack access to safe water services, and water scarcity has worsened in various areas due to the effects of climate change and resource exploitation, the goal remains fully valid.

FAO’s report on SDG 6 reveals water scarcity in various regions of the world, with approximately a third of the global population living in areas affected by water stress, and a significant fraction, 733 million people, facing critical situations. Given that 70% of freshwater is used for agriculture, the FAO has highlighted the urgent need to implement efficient and resilient management systems, especially in irrigated and rainfed agricultural production. FAO Director-General Qu Dongyu explained it as follows: “Water challenges in agriculture, such as water scarcity, pollution and waste, must be urgently addressed to transform food systems and increase their resilience, especially in the face of the alarming climate change complications we are facing.”

Faced with these challenges, regional governments competent in this area recognise the urgent need for adequate water management. Many efforts have focused on resolving the deterioration of water infrastructure, the deficiency of which could affect public health in many parts of the world. This work should allow not only the improvement of agricultural production, but also ensure an adequate supply for food preparation and other related facilities. Regional governments are also dedicating great efforts to improving irrigation. In this area, the abundance of water at other times has meant that losses and uncontrolled irrigation were given little importance. Now the catchcry is to use every single drop of water.

An additional challenge that ORU Fogar has repeatedly insisted on is the decentralisation of water management. In many countries, the planning and management of water resources continues to be highly centralised, which in many cases leads to inefficiency. The threat that is being faced by many countries should be an opportunity to rethink the distribution of powers in the field of water management, so that regional governments can assume a more leading role.

In a context in which we are reaching the warmest temperatures ever recorded, it is evident that we need to go beyond water management. If we want to feed the world of the future, at an agricultural level, adaptation and the search for crops that are more resistant to climate change is essential. In different areas, from India to Southern Europe, it is being observed that increasing temperatures, extreme heat waves and decreasing rainfall are significantly reducing crop productivity. These phenomena are expected to occur more often in the future as a result of the effects of climate change. According to some studies, in the coming years, the decrease in agricultural yields in southern Europe may be significant (while in the north of the continent they may increase). Faced with this situation, there is no time to lose: crops need to be identified that can produce good yields in the expected stress situation. Varieties are needed that are resistant to heat and drought, but also to climate eventualities that may occur.

In this context, cooperation between institutions and regions becomes utterly crucial. Some regional agricultural research institutes, such as the 'Institut de Recerca i Tecnologia Agroalimentària' (IRTA) of Catalonia, the hosts of this summit, are experimenting with different varieties of many types of vegetable crops. ORU Fogar is committed to cooperation and the exchange of knowledge between regions to achieve the SDG Zero Hunger, in which the extensive experience of institutions and regions can make great contributions to a common objective: feeding humanity in the future.

QUESTIONS AND CONCERNS

- What situation does your region have in relation to water management?
- What actions are being carried out in relation to water management to optimise food production in the face of the climate emergency?
- What other actions could be carried out to optimise water consumption for food production?
- There are countries that do not depend on rainwater to produce food. Is this the objective that regions that are suffering from persistent droughts should pursue?
- How can we help communities modernise their irrigation?
- Should we invest in infrastructure that allows the recirculation of water from areas with greater water resources to others with less water availability?
- Should clear action protocols be established based on certain levels of water scarcity by territory?