



## Chapter

# „Water use in agriculture“

### Introduction

Water. Primordial element. Basis for life. Commodity. Cause of conflict.



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Without water, life is impossible. Yet only freshwater is fully utilisable by mankind. It is becoming increasingly scarce. More and more people need it and use it. As drinking water. For irrigation. For watering livestock. For industrial production. Ecosystems are dying.

Climate change. Rainy seasons and amounts of rainfall are changing. Some regions are becoming drier, others wetter. Competition for water and for land is mounting. Land that can be supplied with sufficient water. Conflicts are arising, overlapping and intensifying.

Almost three quarters of the water that is withdrawn from groundwater, rivers and lakes around the world is used in agriculture.

In some developing countries the figure is actually over 90%. The population of the world is rising. The great majority of the food and agricultural commodities needed by the expanding human race is produced with the aid of irrigated agriculture and intensified rain-fed farming. The use of water for agricultural purposes is often in competition with the minimum amount of water needed to conserve local ecosystems. In many cases these needs can no longer be met unless savings are made in the amount of water used for agriculture. Then there is the fact that water is becoming increasingly scarce. Even today, people in over 30 countries have less than one thousand cubic metres of renewable water resources at their disposal per person per year. Many of these are ranked among the poorest countries in the world. Climate change is exacerbating this situation. Rising temperatures are causing higher levels of evaporation, and more irregular rainfall patterns are resulting in major changes to water availability. The effective use of water in agriculture is therefore a key issue in international cooperation.

More efficient water use in farming in conjunction with integrated water and land management helps to ensure that water is used productively, fairly and sustainably in agriculture. More needs to be produced with the available water resources, while at the same time the environment and ecosystems have to be protected. This calls for innovative concepts and new, resource-conserving cropping practices.



GIZ advises and supports its partners in devising their national policies, their programmes in irrigated agriculture and their approaches to agricultural water use based solely on rain-fed farming. We strengthen the capacity of our partners to exert institutional, technical and economic control over water use and to increase water productivity. We also advise organisations of water users, thus enhancing their capabilities. Organisational development is one important theme in this connection. Others include cropping practices that conserve water and soil, and value chains involving products from irrigated agriculture. As a result, agricultural producers are put in a position to engage jointly in managing and maintaining irrigation systems with the aim of conserving resources. In combination with secure markets for agricultural inputs and produce, irrigated agriculture can thus be made economically sustainable.

It has become more important than ever to make better use of rainfall in rain-fed agriculture. There are tried-and-tested means of achieving this, particularly for smallholders. These measures contribute to improving food security and reducing poverty in rural regions.

For more detailed information about specific issues to Water use in agriculture, you can read through the 'briefing notes'. Please contact the person named at the bottom of the briefing note if you have further questions.

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