MSc in Water and Sustainable Development

MODULE

Water in agriculture

Crop production requires an enormous amount of water. With increasing water scarcity, several measures are proposed to cope with dry spells and ensure efficient use of water and improved productivity in irrigated and rainfed agriculture. This module introduces agricultural water management (AWM) types and evaluates the effect of different measures, such as irrigation scheduling, deficit irrigation and soil-water conservation, on water use and productivity. It addresses the different types and scales of irrigation and water management in rainfed agriculture and covers soil-water-plant relationships and crop water demand. In this module students will learn how to use the simulation models Cropwat and Aquacrop for scenarios on irrigation scheduling and deficit irrigation, and for evaluating the impact of dry spells on crop yields. The final assignment includes an assessment of measures to improve irrigation efficiency & productivity, using Aquacrop.