



Preface

The challenges of poverty and hunger remain as great and compelling as ever. The number of the world's under-nourished is still on the increase, despite the remarkable progress made in agricultural development in developing regions in recent years. Increasing food production to meet the needs of the increasing world population on a sustainable basis remains the primary goal of all nations.

In this context the importance of irrigated agriculture needs no emphasis. Currently, production from the irrigated lands, which constitute about 17 percent of the total arable lands, accounts for 35 percent of the global food harvests. Irrigation has the ability not only to increase production per unit area of land but also to stabilize production. Indeed many countries will look to irrigated agriculture as the only reliable means to increase production on a sustainable basis.

However, irrigation requires water and this is an essential commodity in increasingly short supply. There is now growing realization that an increasing number of countries are approaching full utilization of their conventional surface water resources and that the quantity of good quality water supplies available to agriculture is diminishing. What is left is water of marginal quality such as saline groundwater and drainage waters. The question that needs to be answered is: "can agriculture make use of marginal quality water such as saline water in a way that is technically sound, economically viable and environmentally non-degrading; in other words, is it a viable proposition to use saline water for agricultural production?"

FAO convened an Expert Consultation in October 1989 to seek answers to these pertinent questions. A few very select experienced and "dyed in the wool" professionals in the subject area analysed the current status of saline water use in irrigation and examined water, soil and crop management techniques relating to the use of saline water for crop production. The conclusion of the Expert Panel was that there is good potential for the safe use of saline water for crop production. The Panel recommended the integrated management of water of different qualities at the levels of the farm, irrigation system and drainage basin, with the explicit goals of increasing agricultural productivity, achieving optimal efficiency of water use, preventing on-site and off-site degradation and pollution and sustaining long-term production potential of land and water resources.

This publication, "The use of saline waters for crop production: guidelines on water, soil and crop management", is written by three experts who participated in the Expert Consultation. In preparing this publication, they have drawn heavily on the papers presented in the Expert Consultation as well as on the recommendations that came out of the Consultation. It is hoped that this publication will provide guidelines to many developing as well as developed countries in order that they may manage their saline waters for productive purposes in a sustainable manner.

