

Ethiopian Institute of Agricultural Research

Contributions and Plans from Ethiopian Institute of Agricultural Research In Improving Irrigation and Water Harvesting Management

Lessons presented on AFRHINET Project kickoff Meeting,

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Outline



Organizational Set up

Objectives of the program and Projects

Achieved Results

Future Plans

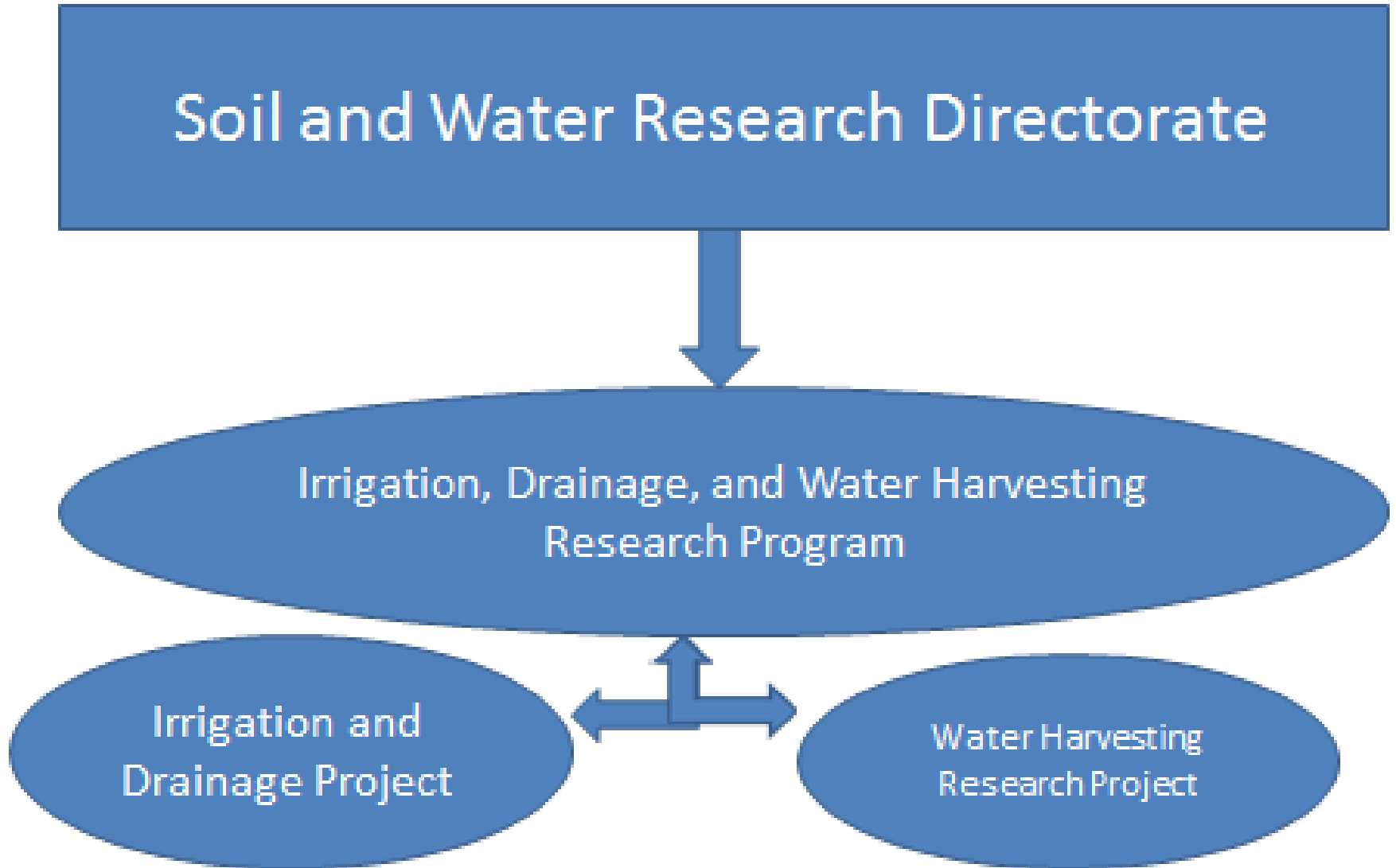
Organizational Set up

Soil and Water Research Directorate

Irrigation, Drainage, and Water Harvesting
Research Program

Irrigation and
Drainage Project

Water Harvesting
Research Project



Objectives.....

General objective(s)

- ❑ To enhance agricultural productivity through sustainable management of soil and water resources with the ultimate aim of improving the food and livelihood security of smallholder farmers while maintaining the quality of environment

Objectives of the Program (Projects)



The research program has been conducting activities for most of the agro ecologies, with the special emphasis to arid and semiarid arid areas of the country. It has a total of 48 activities , all of them are supposed to be demand driven, and with the following objectives:

Specific Objectives

- ❧ To estimate crop water requirement and establish crop coefficient
- ❧ To evaluate the responses of crops to different irrigation regime
- ❧ To evaluate crop response to soil moisture stress
- ❧ To evaluate crop response to deficit irrigation
- ❧ To evaluate crop response to supplemental irrigation
- ❧ To evaluate coffee genotype to drought tolerance

Specific objectives....

- To characterize the existing rainwater harvesting systems
- To evaluate the technical efficiency and economic importance of the rainwater harvesting systems
- To select most effective water saving techniques
- To determine the minimum water harvesting pond required for smallholders
- To improve water productivity of irrigated crops through water harvesting practices

Achieved Results

In exercising any irrigation and water harvesting works, the primary job is organizing valuable meteorological and hydrological data that could assist the practice to meet its target. In this regard, the program has collected, summarized and analyzed long term weather elements for all its research Centers located over different agro ecologies of Ethiopia.

Accordingly, the Long-term reference evapotranspiration, crop water requirements of the majors crops(Vegetables, Cereals, and Spices) have already been determined.

Achieved Results

The Work on developing Irrigation Scheduling for Major crops (Vegetables, Cereals, and Spices) will soon be finalized for most regions of the country.

Water Application Techniques that can assist Water Saving Irrigation Practices will soon be identified for some of the regions.

Future Plans

Getting farmers involved in exercising of the developed irrigation scheduling program under farmers conditions (where this has already been done)

Extending the development of the irrigation scheduling for the rest of the regions

Keep on working for concluding the rest of the objectives for the projective(mentioned above)

Working with Farmers on the results of the concluded projects

Future Plans

- ❧ Developing practices for improving existu and Institu
water harvesting practices (Rainfall, flood and ground
water harvesting)
- ❧ Extending participatory water resources management
for enhancing agricultural development

Future Plans

Linking hydrological and meteorological data analysis for assisting efficient irrigation and water harvesting management in drought prone areas of Ethiopia under changing climate (PhD topic)