### **Flood Based Farming – Spate Irrigation** System

# Introduction to course objectives and procedures

By: Abebe Demissie

abebe@metameta.nl/ abedeme@yahoo.com/

Arba Minch Universty March 2012





Network



#### Introduction/ መግቢያ

#### Flood is known for its distractive image





#### Can flood be trained for beneficial use ?

## **Course Objectives**

- Learning the beneficiary side of flood -"Spate"/ Flood recession farming,
- Introduction to flood recession farming
- Importance of seasonal flood as a resource for crop/pasture production, and etc.
- Introduction to spate hydrology and sediment management

## **Course Objectives**

- Understand the uniqueness of spate irrigation- compared with conventional irrigation
- Familiarizing design criteria for modernizing and implementing new spate irrigation system
- To create a platform for sharing knowledge and experiences among the participants and facilitators

## Key learning's in this particular module

- Spate Irrigation/ Flood recession farming
- Water diversion and control structures (Traditional and modern system)
- Spate Hydrology
- Field water management
- Spate Sediment management
- Practical attachment:
- Videos followed by discussions
- Problem based Group exercises and presentations
- Site visit: Konso

# Module Content: Contents

#### INTRODUCTION

1

- **1.1** Introduction to flood based farming
- **1.2** Definition and Concepts
- 1.2.1 Flood Recession Farming, & 1.2.2 Spate Irrigation
- 1.3 Extent and Distribution of Spate
- 1.4 Classification of Spate Irrigation Schemes
- 1.5 Hydrology of Spate
- **2** SPATE IRRIGATION SCHEMES INFRASTRUCTURE
- 2.1. Traditional Spate Irrigation Scheme
- 2.1.1. Traditional Structures (intakes)

2.1.2. Traditional canals and water control structures

2.2. Modernization and Introducing New Spate Irrigation Scheme

# Module Content: Contents

- 2.2.1. Why Modernization or New Spate Irrigation2.2.2. Diversion Structures (INTAKES)
- 2.2.3. Improved traditional canals and water control structures
- 2.2.4. Wadi bed retrogression and wadi training
- **3** SPATE AGRONOMY AND FIELD WATER MANAGEMENT
- 3.1 Spate Agronomy
- 3.2 Field water Management
- 3.3 Moisture Conservation
- 4 SPATE SEDIMENT TRANSPORT AND MANAGEMENT
- 4.1 Sediment Transport
- 4.2 Estimating sediment loads
- 4.3 Sediment Management

#### Facilitators

Habtamu Tsegaye

Samuel Dagalo

Abebe Demissie (my self!)

