

## Spate irrigation

Spate irrigation is a type of water management that is unique to semi-arid environments. Flood water from rivers and from mountain catchments is diverted from ephemeral river beds (wadi's) and spread over large areas – for agriculture, forestry, rangeland, groundwater recharge and drinking water. Spate systems are very risk-prone. The uncertainty comes both from the unpredictable nature of the floods and the frequent changes to the river beds from which the water is diverted. It is often the poorest segment of the rural population whose livelihood and food security depends on the spate flows. Substantial local wisdom has developed in organizing spate systems and managing both the flood water and the heavy sediment loads that go along with it.

Spate irrigation occurs in areas as varied as South Asia, the Middle East, West Africa, North Africa, the Horn of Africa, Central Asia and Latin America. Estimates for the area under spate irrigation are not easy to make, as the area under spate irrigation changes from year to year – depending on the occurrence and patterns of floods, The most reliable estimate put the area under spate irrigation as close to 3 Million hectares - serving close to 11 Million people.

## The future of Spate Irrigation

The management of spate irrigation areas is very different from other system such as rain-fed farming or perennial irrigation systems. The challenge is to make use of the unpredictable floods, store soil moisture and manage sedimentation processes. This requires local organizations that can cope with unpredictability and overcome the special challenges. Though spate irrigation is more difficult, there are also large opportunities to improve economic returns and livelihoods – by appropriate diversion and water control structures, better agronomic practices, field water management, improved local breeds and seeds, by conjunctive use of spate and groundwater, better flood protection and drinking water ponds.



Working on Soil Bunds

## What is the Spate Irrigation Network

The Spate Irrigation Network aims to improve the livelihoods of those living in the spate irrigated areas. It exchanges experiences and good practices, initiates and supports new programs and policies, and mainstreams education and training. The network consists of professionals, practitioners and farmers - at present more than 400 members.

It is being run with a small part time international secretariat (at MetaMeta and UNESCO-IHE) - whereas in four countries national chapters are being set up - in Yemen, Pakistan, Sudan and Ethiopia, though activities are not confined to these countries.

The Spate Irrigation Network is currently supported by IFAD, World Bank/EKN, UNW-DPC, UNESCO-IHE-DUPC and FAO.

## Objectives

- Familiarize policy makers, implementing agencies (NGOs, government departments, safety net programs), research agencies and funding agencies with development scope, experiences and practical approaches to spate irrigation development;

- Document good practices and initiate practical research in spate irrigation;
- Disseminate experiences between countries.

## Activities

- Undertake pilot activities;
- Develop programs with implementing organizations;
- Preparation and dissemination of guidelines and practical notes;
- Mainstream spate irrigation in higher education;
- Organize trainings;
- Documentation and support student research;
- Support implementation programs;
- Open access information and maintain website

To join the Spate Irrigation Network, which is free of charge, subscribe at: [www.spate-irrigation.org](http://www.spate-irrigation.org).



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