

Flood-based Farming Systems From Subsistence to Significant Contributors for Food Security and Enhanced Ecosystem Services

The Journey we have travelled and the road ahead



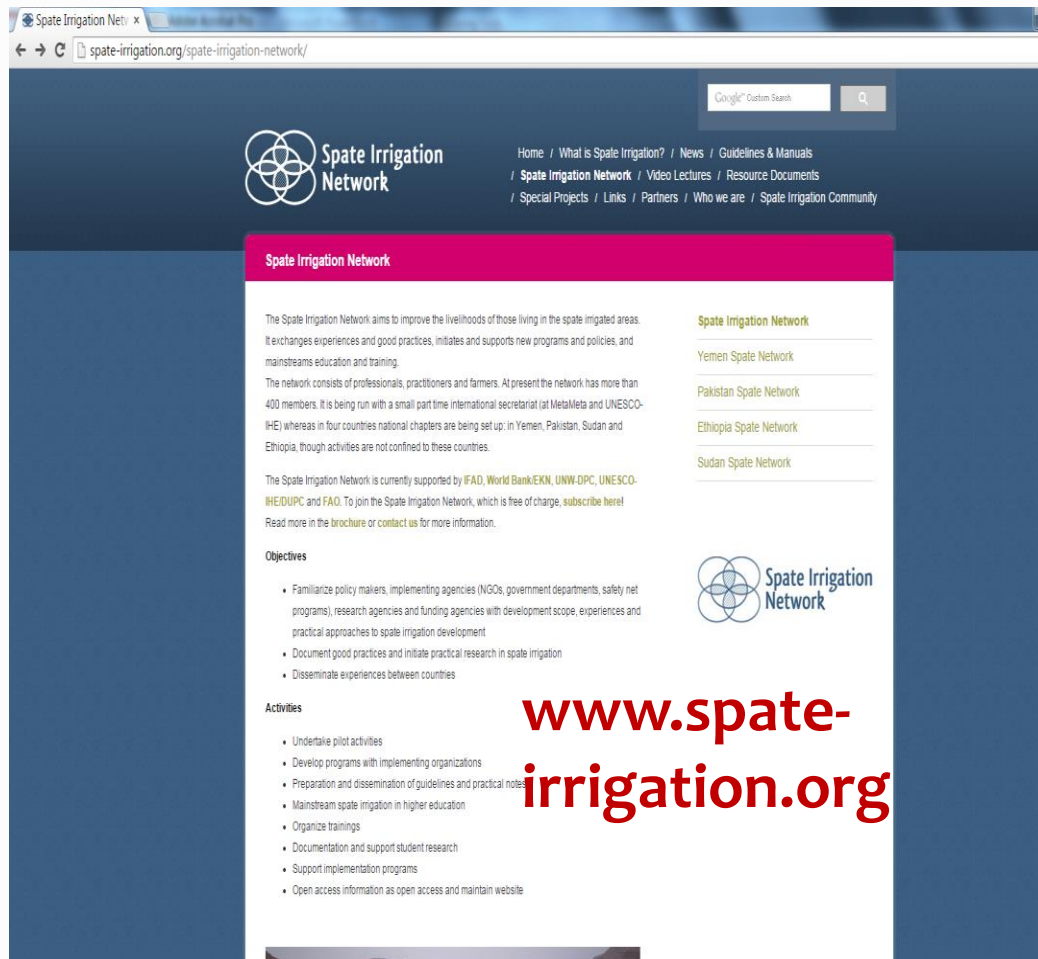
**Research
Program on
Water, Land and
Ecosystems**



Launch Workshop: Harnessing Floods for Enhanced Livelihoods and Ecosystem Services



Spate Irrigation Network Born in 2004



The screenshot shows the homepage of the Spate Irrigation Network website. The browser address bar displays "spate-irrigation.org/spate-irrigation-network/". The website features a navigation menu with links to Home, What is Spate Irrigation?, News, Guidelines & Manuals, Spate Irrigation Network, Video Lectures, Resource Documents, Special Projects, Links, Partners, Who we are, and Spate Irrigation Community. The main content area includes a search bar, a description of the network's mission, a list of objectives, and a list of activities. The website logo is visible in the top left and middle right sections. A large red watermark "www.spate-irrigation.org" is overlaid on the bottom right of the screenshot.

Spate Irrigation Network

Home / What is Spate Irrigation? / News / Guidelines & Manuals
/ Spate Irrigation Network / Video Lectures / Resource Documents
/ Special Projects / Links / Partners / Who we are / Spate Irrigation Community

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 the network has 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-IHEDUPC and FAO. To join the Spate Irrigation Network, which is free of charge, subscribe here! Read more in the brochure or contact us for more information.

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 as open access and maintain website

Spate Irrigation Network

www.spate-irrigation.org

Familiarize policy makers, implementing agencies, research and educational institutions, donors with development scope, experiences & practical approaches to spate irrigation development

Launch Workshop: Harnessing Floods for Enhanced Livelihoods and Ecosystem Services
Mekelle, Ethiopia, 17 March, 2015

Objectives

The mission of the Spate Irrigation Network Foundation is to promote stability and socio-economic development in areas that are dependent on flood based farming. These areas are in most cases among the poorest in the countries where they are situated and in many cases are areas where insecurity is high.

The Spate Irrigation Network Foundation aims to streng the networks of farmers and other stakeholders in flood based spate irrigation areas and to support and help implement programs on exchanging good economic and social practices and settling issues of water distribution and conflict mitigation.

FBFS are productive

First harvest :

4 ton/ha

Second

harvest

(ratoon):

2 ton/ha



Konso spate irrigation, SNNP

FBFS are productive – there are bright spots?



Chick pea yield:

- Rainfed: 0.4 to 0.6 ton/ha
- Conventional irrigation: 2- 5 ton/ha
- FBFS: up-to 3.5 ton/ha



Fogera Flood plain - Flood recession:
North West Ethiopia, East of Lake Tana

A short history

- 2004-2010: voluntary activities
- 2010-2014: informal network of professionals with 4 country networks
- 2014-2019: informal network of farmers and professionals, with 8 country networks and supported by formal foundation

At the start

The Challenge

Spate Irrigation
“largely”
dismissed as
unreliable
systems merely
supporting
subsistence
farming

The Approach

Establishing a
network
create platform for
knowledge and
experience sharing
Document bright
spots – success
stories

The Overarching approach

Working in
partnership with
varied
stakeholders
“Agents of
Change”

Next phase

The Challenge

Where is the technical know-how to develop FBFS

Where are the credible technical references

The Approach

Solutions oriented scientific research

Institutionalizing Spate Irrigation

Creating platform for knowledge-sharing platforms

The Approach

Working in partnership with varied stakeholders
“Agents of Change”

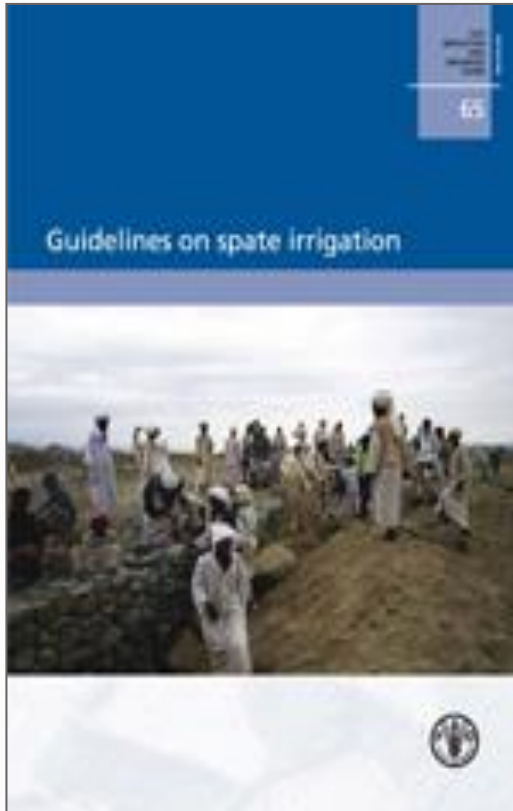
2010-2014 – some highlights

Activities	
Network development	900 members – mainly professionals Four country networks New generation of professionals
Research	Practical Notes – translated (20) Country. Regional overview papers (14)
Capacity building	Delft Short Course Mekelle Short Course MSc courses in five universities
Policy support	FAO Guidelines for Spate Irrigation Country Policies in 3 countries Thematic support: prosopis program

Innovations from Pakistan: Porous Spillway



Some achievements at Global, Regional Level



Short course on Spate Irrigation at UNESCO-IHE, the Netherlands launched in 2009

*IFAD Large Grant:
Spate Irrigation for Rural Economic Growth and Poverty Alleviation: Ethiopia, Sudan, Yemen and Pakistan*

Stockholm Water Week



Model Farmer from Ethiopia

Model practitioner from Sudan



A Pro-poor local political leader (Pakistan)



Knowledge sharing among farmers and policy makers



2012: Sudan; 2013: Yemen

Knowledge products: Videos and brief notes in local languages

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Water Rights In Spate Irrigation

This is Anambar Weir, Balochistan (Pakistan)

What happened here?

00:00 00:00

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"Floods are not always a hazard. They may also sustain aquatic life and riverine biodiversity, recharge aquifers, enrich soils and in some of the world's poorest areas they are the main source of irrigation." -- Global Water Partnership (2000) 'Toward water security: a framework for action.

Spate irrigation is the art and science of managing floods for irrigation. It is unique to arid and semi-arid environments, found in the Middle East, North Africa, West Asia, East Africa and parts of Latin America.

Unpredictability is inherent to spate irrigation, yet water distribution rules regulate the distribution of the unpredictable water supplies. They impose a pattern and reduce uncertainty and potential conflict by regulating the relations between the landowners that have access to flood water. Particularly where flood water users depend on one another in maintaining flood channels and reconstructing diversion structures, agreement on how water is distributed is a precondition for cooperation between different parties in this respect.

More info: <http://www.spate-irrigation.org/library/spate-notes>
Produced by: TheWaterChannel

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2344 Views

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Embed Code

Drinking Water From Spate Irrigation

اناچ کے مقامی ذخیروں کو بہتر بنانا

الثروة الحيوانية في مناطق الري أسيلي في اليمن

ورقة عامة تطبيقية في الري بمياه السيول

የጉርፍ-መስኖ የእርሻ ማሳን ማሻሻል እና የአፈሩን እርጥበት መጠበቅ

Command Area Improvement and Soil Moisture Conservation in Spate Irrigation

ورقة عامة تطبيقية في الري بمياه السيول

Practical Note

Regular Short-course on FBFS in the region

Regular Short Course Sustainable Development of Flood-based Farming Systems in Arid and Semi-arid Regions

Mekelle University, Ethiopia



Implementing Partner Institutions

					
Mekelle University www.muu.edu.et Eyasu Yezzer eyezzer@yahoo.com	UNESCO-IHE Institute for Water Education www.unesco-ihc.org Abraham Mekari Halle a.mekarihalle@unesco-ihc.org	Spate Irrigation Network - Ethiopia http://spate-irrigation.org Tesfaye-selam G. Embraye tesf_s_lem@ethio.com	Meta Meta www.metameta.nl Frank Vanoterenbergen frankvanoterenbergen@metameta.nl	GIZ international www.giz.de/en Rudolf Guntter rudolf.guntter@giz.de	International Fund for Agricultural Development www.ifad.org Rudolph Cleveringa rcleveringa@ifad.org

Regular Short Course Sustainable Development of Flood-based Farming Systems in Arid and Semi-arid Regions

Demand driven and relevant

This short course was initiated in 2013 in Mekelle following an extensive field research to the arid lowlands of Ethiopia in 2012. The varied stakeholders consulted justified the need for the short course as follows:

- Acute shortage of flood-based farming system (FBFS) designers, managers and researchers.
- Limited participatory planning, implementation and monitoring of FBFS.
- Lack of capacity in basin-wide approach for the development of FBFS

50 engineers and managers benefited from the August 2013 pilot course conducted by local and international experts. They appreciated the quality of content, delivery and organization of the modules including the interactive group discussions and content-rich field visits. They recommend that the course be offered on annual basis and up-scaled into regional (Africa) level.

Key learning objective

Produce professional leaders with a broader understanding of a participatory and river basin approach and specific skills to design and manage FBFS.

Course delivery

It follows practical approach where key experts present their case studies and share their best practices for extensive discussion with the participants. It is tailored at generating new ideas and practical dilemmas of a technical, economic, environmental, social and managerial nature.

Course duration

In 2014: 11 – 22 August

Registration fee

600 USD

Location

Mekelle University
PO Box 231, Mekelle
Tigray, Ethiopia

Course content – six modules with clear focus

MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5	MODULE 6
Introduction to flood-based farming systems	Participatory planning, implementation and monitoring	Land and water management	Participatory design	Watershed management	Field visit
Gives comprehensive overview and clear-cut differences with conventional irrigation systems.	Provides concrete skills in Participatory Rural Appraisal (PRA), stakeholder analysis and triangulation techniques.	Focuses on command area development, water rights based on-farm water management, FBFS relevant soil moisture conservation practices and modeling tools.	Pinpointing key differences with conventional design concerning dependable flood analyses, intake and canal design, sediment management.	Gives the bigger picture - analyses the impact of different watershed management measures on the sustainability of FBFS and vice versa.	On-site in bright spots and failed systems, gain practical know-how through observation and discussion with real experts – farmers, site engineers, managers and extension workers.

Started in 2013
(35 participants)

2014 (47 participants)

2015 (52 Participants)

In 2014 Participants came from Kenya, Sudan, Uganda, Somaliland

FBFS potential in Kenya: Mission by Mekelle University experts

13 sites visited and potential identified: 174 000 ha

Training delivered for 7 experts and more trainings are planned in Kenya and Ethiopia



The Journey Ahead – new frontier with our partners

We are off he take-off appears to be good

2015 to 2016: Harnessing Floods for Enhanced Livelihood and ecosystem services

- From Scheme to landscape level
- Increasing agricultural production while safeguarding the health of the Environment



Phase 4: 2015 ... The Journey Ahead – new frontier with our partners

The take-off appears to be good

2015 to 2016: Harnessing Floods for Enhanced Livelihood and ecosystem services

- From scheme to landscape level
- Increasing agricultural production while safeguarding the health of the Environment

Phase 4: 2015 ... The Journey Ahead – new frontier with our partners

2015 to 2019: From Africa to Asia & Back Again:



Testing adaptation of FBFS



Some concrete deliverables expected for Sudan

1. Research in action activities on the ground – not only Gash
2. One new MSc Programme covering Spate Irrigation started-up
3. One vocational training and farmer learning schools strengthened
4. Support to development of investment programmes