

The Maikaal bioRe Cotton Research Project

Growing Organic Cotton under Groundwater Stress: Lessons from the Maikaal bioRe Project, Madhya Pradesh, India

Project Partners:



Maikaal bioRe, India



FiBL, Switzerland



**Intern. Water Management
Institute (IWMI), India**



Mandated by:



**Swiss Agency for
Development and
Cooperation (SDC)**

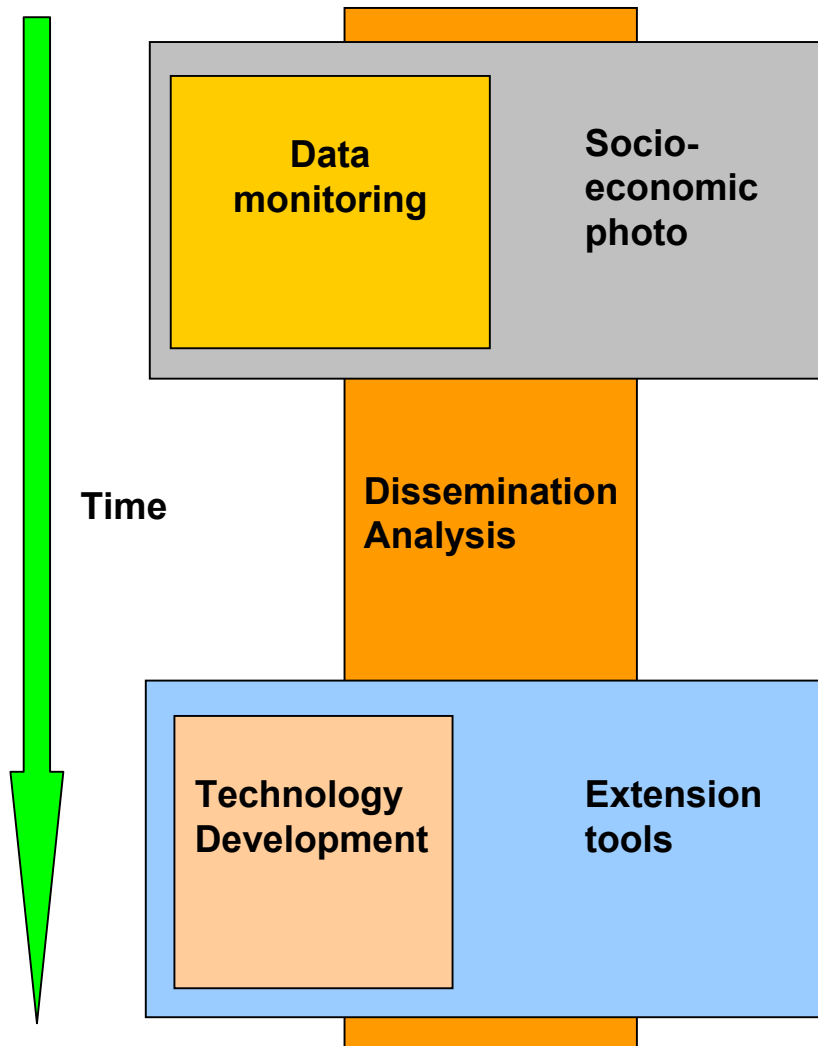


**Remei AG,
Switzerland**



**World Wide Fund
for Nature (WWF)**

Set-up of the Research Project



System comparison:

With which system is a farmer better off?

Dissemination Analysis:

What are the obstacles and success factors in conversion and dissemination?

Facilitating Extension:

How can the production system and the extension be improved?

Why to study Maikaal bioRe?

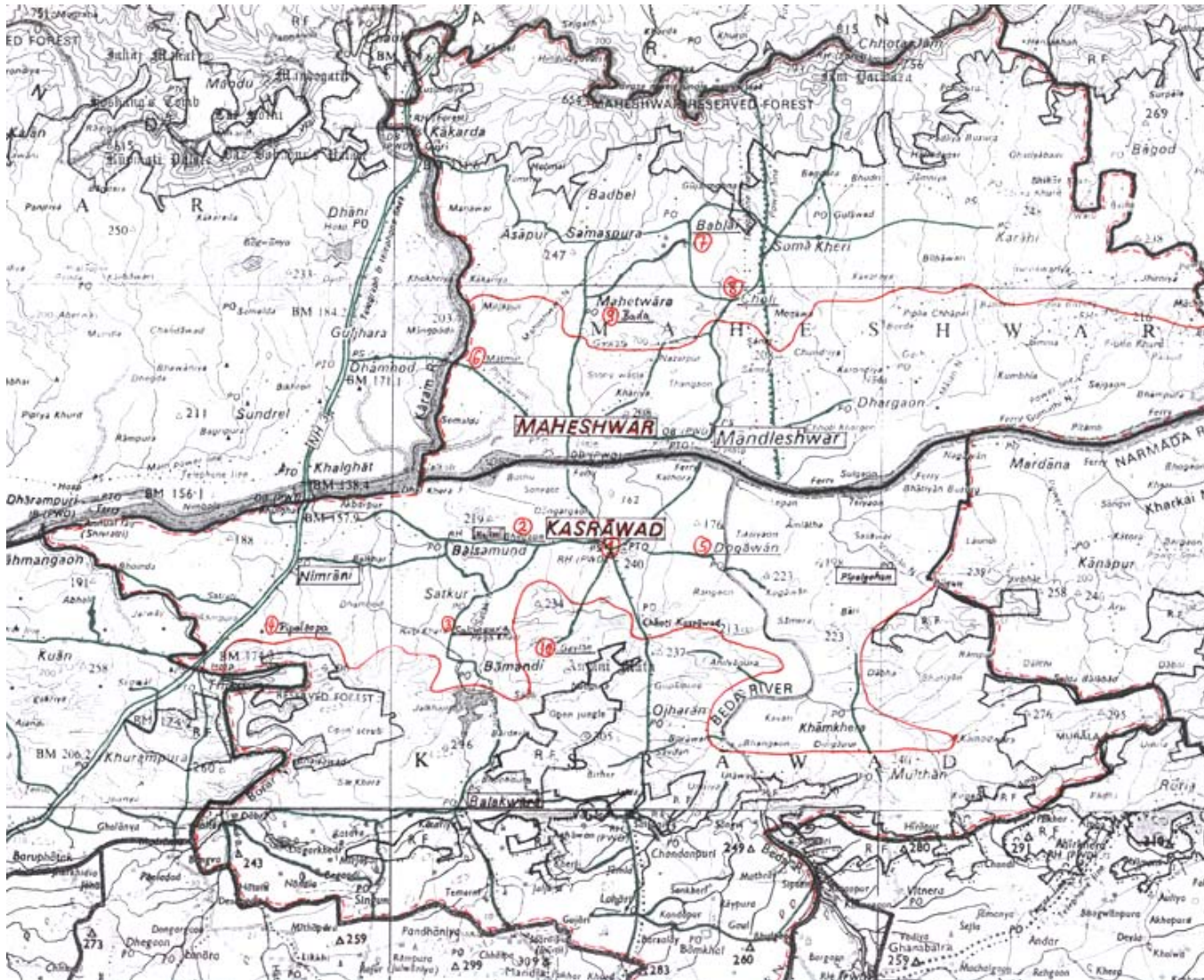
- **Long experience:** Started 1992 as a private sector initiative of P. Hohmann (Remei, Switzerland) and M. Jalan (Maikaal, India)
- **Large size:** involving 1'100 small and medium farmers in 75 villages; 7'500 acres certified organic cotton
- **Extension component:** Maikaal bioRe team provides training and advice to the farmers
- **Credibility:** Sophisticated Internal Control System (ICS); external inspection by bio.inspecta (CH)



Maikaal bioRe - assisting the farmers through:

- **Organizing the farmers; quality management**
- **Providing advice and information**
- **Supplying organic inputs**
- **Buying organic cotton at 15 – 20 % higher price**
- **Organizing the certification and ICS**
- **Identifying organic markets for the food crops**
- **Farmers are in the process of becoming stakeholders in the company**
- **In 2004: Construction of a Training Centre of the bioRe Association**

The Nimar Region



Location:

- 100 km South of Indore
- Narmada Valley

Regions:

- Narmada belt
- Upland

Soils:

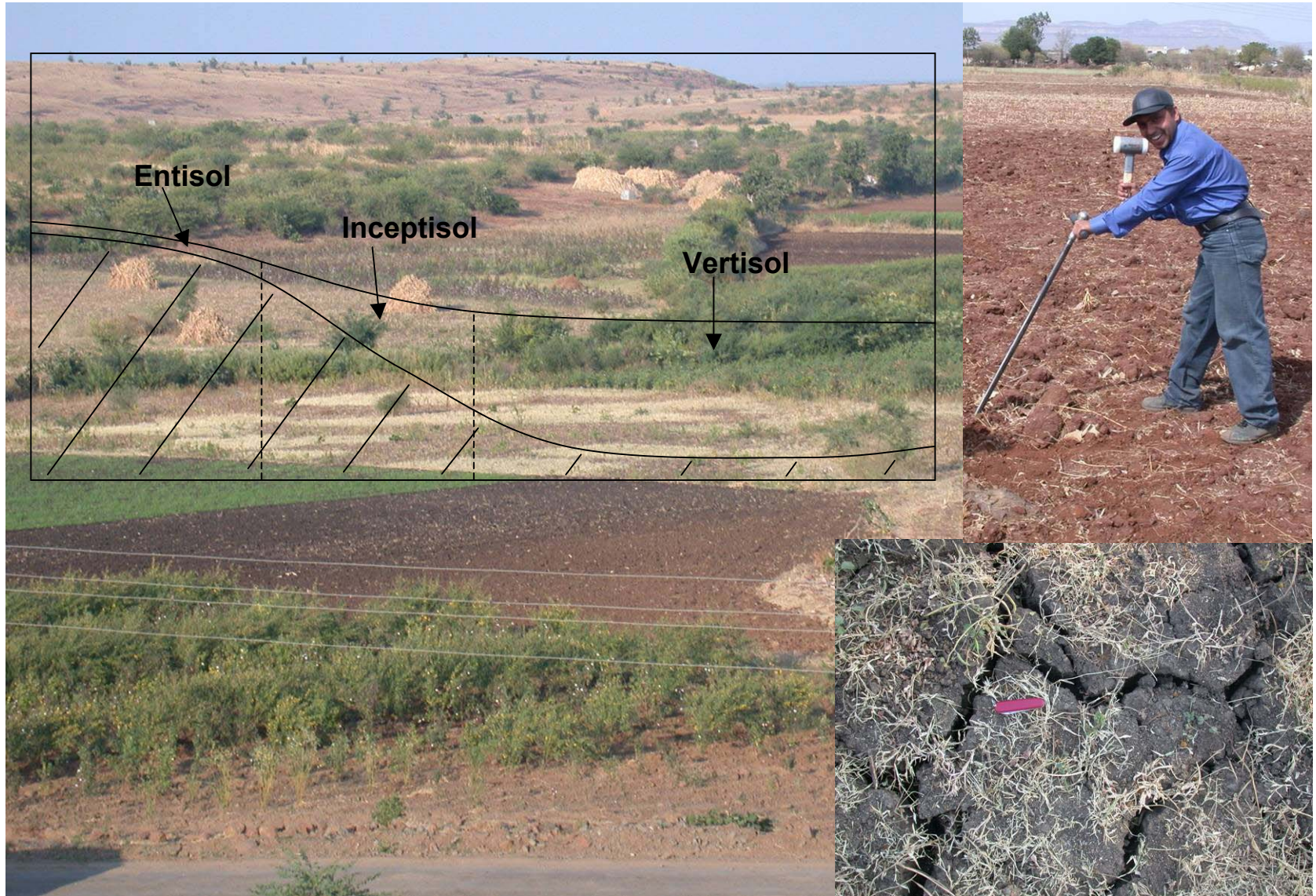
- Vertisols
- Inceptisols
- Entisols



People in the Nimar Region



The Relevance of Soils



Agronomic Data Monitoring

- Analysis of inputs (cash, material, labour), outputs (yields, income) and soil properties
- 120 farms, 10 villages, random selection
- Initial interviews, record keeping
- Multiple regression analysis considering soil and water parameters



Socio-economic Photo

- To compare adopting and non-adopting households based on interviews
 - Considering qualitative statements, observations, perceptions etc.
 - Survey of approx. 400 farm families, various focus groups
 - Combine with the findings of the agronomic data monitoring
- ➔ A holistic view
- To profile and characterize the adopters and non-adopters to organic farming and drip irrigation



Development and Extension

- ☐ Improving the production technologies (Field trials and Participatory Technology Development)
- ☐ Developing dissemination strategies
- ☐ Elaborating manuals and training tool kits
- ☐ Guidelines for efficient smallholder certification
- ☐ Exchange of experience among farmers



Organic Cotton Field Trials 2003/04 at Maikaal bioRe

Path	Tr	Trees				Trees			
		V1-1	G1-1	V5-0	C-3				
	Trees	V2-1	G2-1	M1-2	V1-3				
		V3-1	G3-1	M2-2	V2-3				
	Trees	V4-1	N-2	M3-2	V3-3				
		C-1	G1-2	M4-2	V4-3				
	Trees	M1-1	G2-2	M5-2	N-4				
		M2-1	G3-2	C-2	M1-3				
	Trees	M3-1	V1-2	G1-3	M2-3				
		M4-1	V2-2	G2-3	M3-3				
	Trees	M5-1	V3-2	G3-3	M4-3				
		N-1	V4-2	N-3	M5-3				
	Pipe								
		Trees	Trees	Trees	Trees	Trees	Trees	Trees	Trees

Variety trials

- H8 (norm)
- JK4
- H10
- Jawahar Tapti

Manure trials

- Vermi-compost
- Vermi-wash
- NADEP compost
- Cow urine-slurry

Green manure trials

- Nagpur mixture
- Sesbania
- Moong intercrop

Extension Tool Kit for Organic Cotton

- **Guidelines for Organic Cotton Production**
- **Training Manual on Organic Cotton**
- **Training Manual on Soil Issues in Cotton**
- **Video for Group Discussions**
- **Training and Extension Approach**
- **Concept for farmer-to-farmer exchange**



Stakeholder Meetings

- Sharing experience
- Getting feedback
- Joint initiatives



➔ **Final Workshop in 2005**

The Relevance of the Rotation Crops



- Wheat, soya, moong, gram, sorghum, maize, chilli, sugar cane, fruits
- Production systems?
- Yields? Economy?
- Organic Markets?