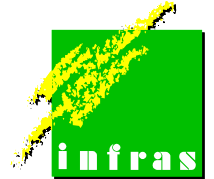




The Freshwater & Cotton Project



SDC/SHL information event:

Making a difference to the poor?

Low cost micro-irrigation technology can do it!

By

Nicole Santer-Németh (WWF Switzerland) and
Nicole North (INFRAS Zurich)

SHL, Zollikofen, May 31st, 2001



Content



- WWF and its international programmes
- Freshwater and cotton interlinkages
- The “Freshwater & Cotton Programme” of WWF
- Field case studies within the Programme
- The experience of Maikaal/India with drip irrigation in cotton farming
- Final words



WWF's mission

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural sources is sustainable
- promoting the reduction of pollution and wasteful consumption



WWF International Programmes

- Freshwater
- Forest
- Oceans & Coasts
- Species
- Climate Change
- Toxic Chemicals



Freshwater & cotton interlinkages

WWF has chosen cotton as model crop, because

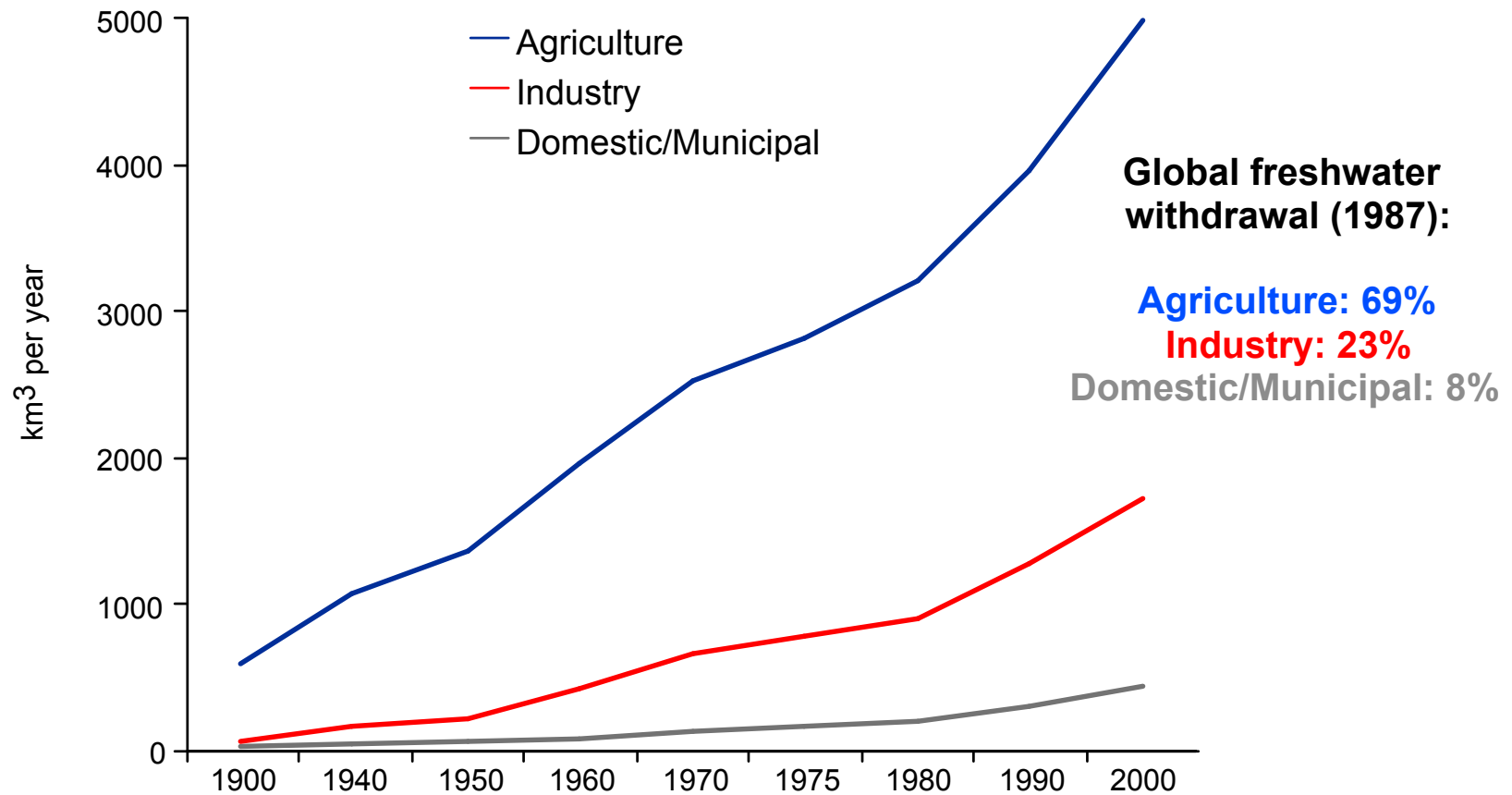
- cotton is grown, processed and traded worldwide
- inefficient freshwater use
- high input of pesticides
- biodiversity threats
- degradation of wetlands, rivers and lakes



ecological & social dimension



Global freshwater withdrawal by sector, 1900 – 2000





Irrigation of cotton

- 53 % of global cotton area irrigated
- 73 % of global cotton harvest from irrigated fields



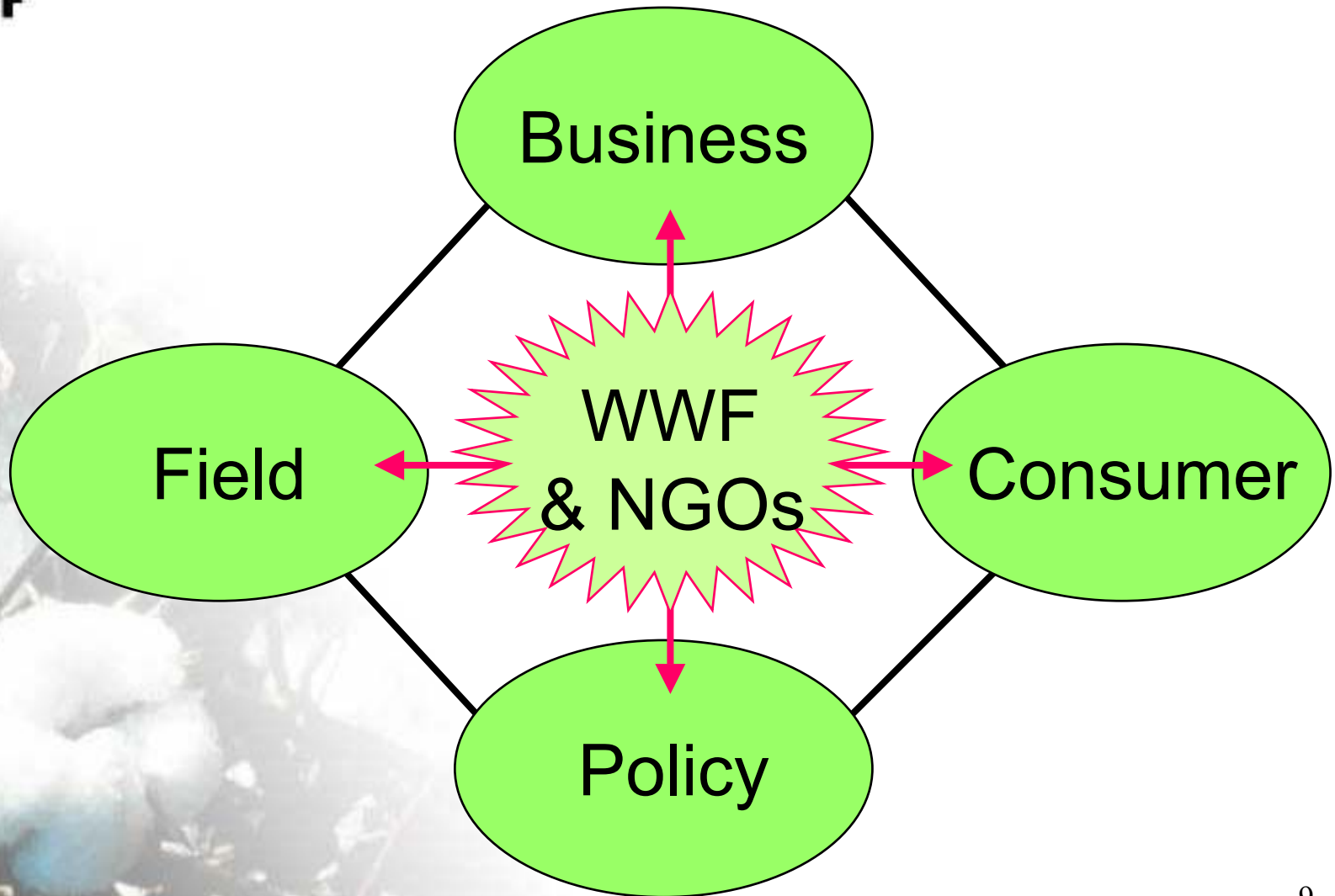


Strategic goals of the „Freshwater & Cotton“ programme

- raise awareness
- demonstrate best practice for water management
- partnerships with business, NGOs and government agencies



„Freshwater & Cotton“ Programme





Field case studies INFRAS



- Objective: To identify key success factors that pro-mote conversion from conventional to certified organic or ecologically improved cotton cultivation along the product chain from the farmer's field to the ginning/spinning mill.
- Subject: Ecological improved or organic cotton projects in India, Turkey and Pakistan.
- Focus: Project operation, markets, and
freshwater resources and ecosystems



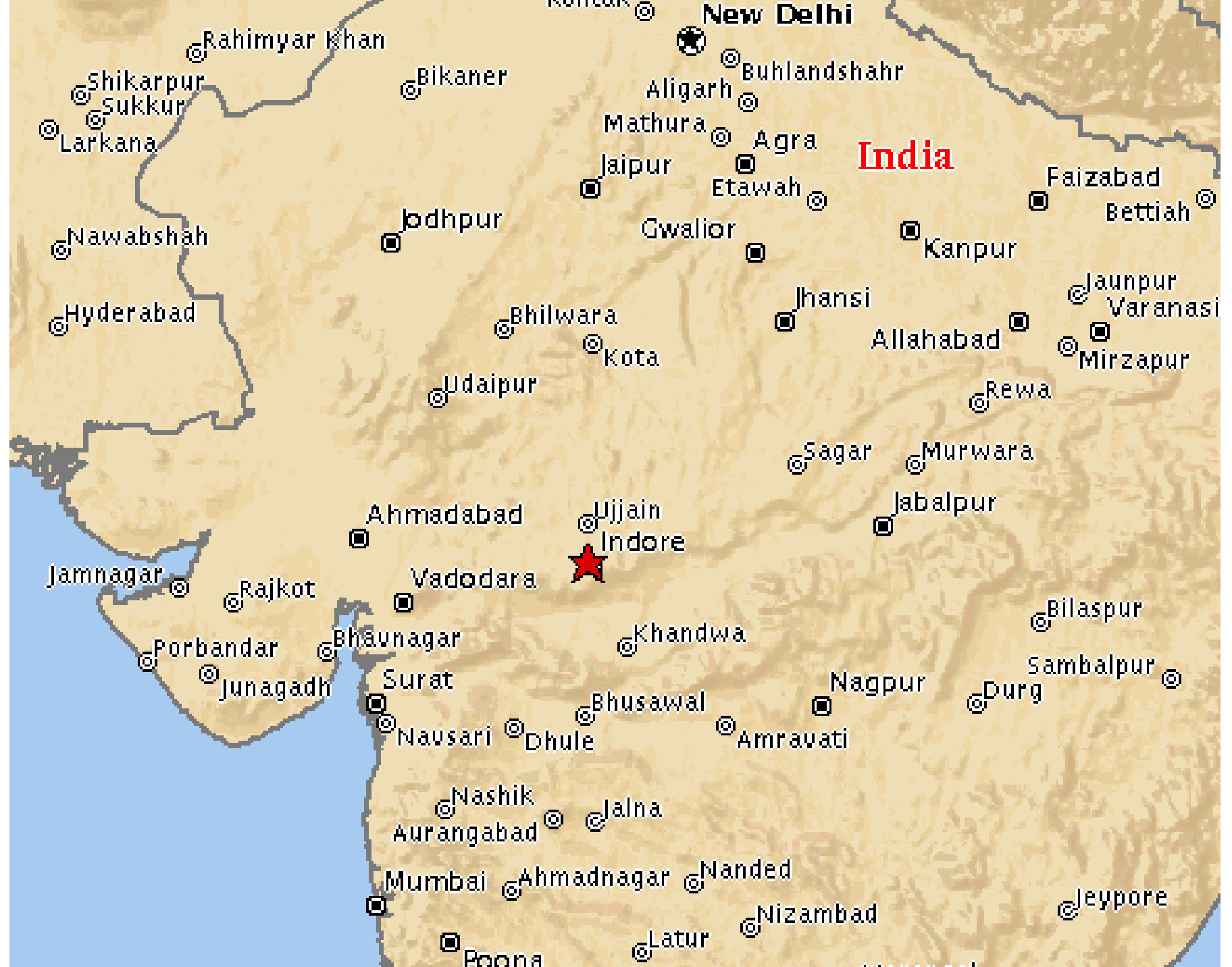
Results related to freshwater resources and ecosystems



By applying best practices in organic cotton cultivation:

- Less eutrophication of freshwater resources is achieved.
- Flora and fauna biodiversity increases.
- Fertility, quality and water retention capacity of soils is improved.
- Healthiness, resistance and water retention capacity of plants is improved.

Less irrigation required with regard to
(i) amount of water, and (ii) frequency of irrigation





Organic cotton from Maikaal



- Launched in 1991, with the vision to provide a sustainable alternative to chemical intensive farming.
- 90 villages, 8'000 acres, 1'100 small and medium farmers, 2'500 tons of certified cotton, 350-800kg/ac.
- Incentive mechanisms (premium, extension service, guaranteed acceptance of produce)
- Marketed by Remei -> Coop "Natura Line"

Availability of water for irrigation is limited

Open wells



Furrow irrigation

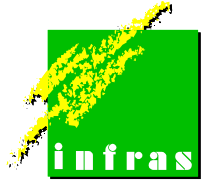


Drip irrigation





Small-scale irrigation in Maikaal



- Since 4 years drip irrigation systems for cotton production enjoy an encouraging response.
- Investments into drip systems have short pay-back period due to resulting higher yields per acre.
- Costs could be reduced by half because of introduction of paired row cropping patterns.
- Farmers started to buy components and assemble the systems on their own which again brings down the cost significantly (9'000 INR/acre).



Key messages



- Organic cotton farming is a viable economic solution.
- Varying water availability and limited freshwater resources have become major driving forces for adaptive measures in local farming systems.

Drip irrigation supports to reverse the trends towards water resource depletion, but equally important is the conversion to more sustainable farming methods.



For more information

Nicole Santer

Project Manager Freshwater & Cotton

WWF Switzerland

Phone: 0041 1 297 22 56

Fax: 0041 1 297 21 00

E-mail: nicole.santer@wwf.ch