



People and Resource Dynamics Project (PARDYP)

Participatory options for sustainable sloping
land management promoted
in 5 watersheds in the Himalayas

ICIMOD

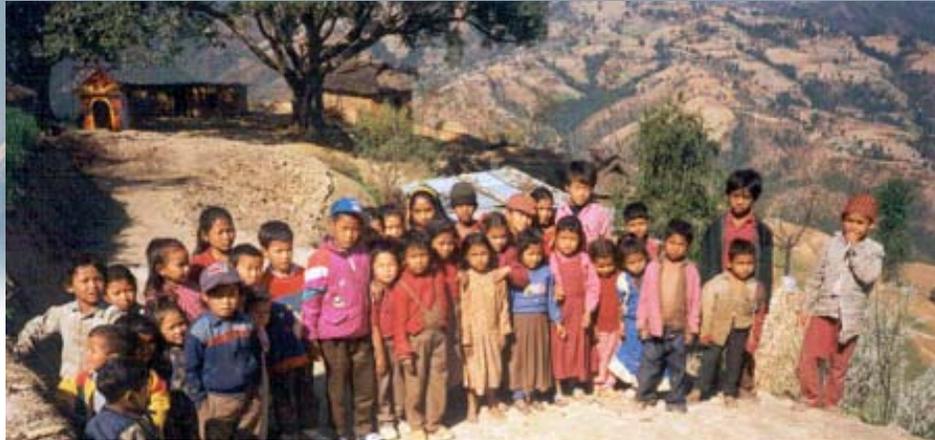
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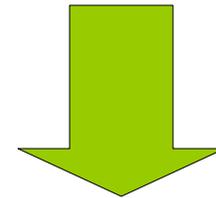
Outline

- >> Introduction**
- >> PARDYP - project**
- >> Promoted options**
 - >> Soil fertility**
 - >> Water scarcity**
 - >> Increasing income**
- >> Participatory approach**
- >> Conclusions**

Introduction



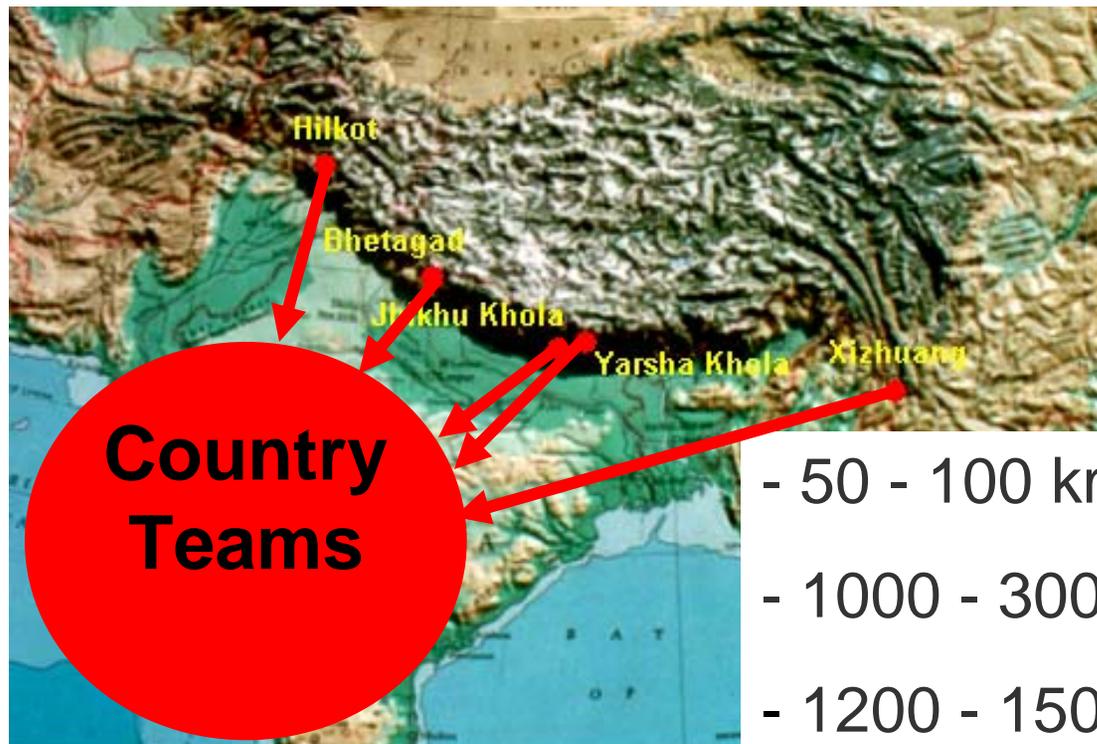
- Increasing population pressure
- Agricultural intensification



- Water scarcity
- Rapid degradation
- Unsustainable land management

PARDYP – People and Resource Dynamics project

- Focus on Natural resource degradation in the “Middle Mountains”
- Research for development project
- 5 watersheds (Pakistan, India, Nepal (2), China)



- 50 - 100 km²

- 1000 - 3000 m asl

- 1200 - 1500 mm rainfall / y

Options addressing soil fertility



Black Plastic Composting

- Mixture of cattle dung, urine and plant material
- Black polythene sheet

- Less nutrient leaching
 - Favorable environment for microbes
 - Reduced evaporation
- + Decomposition within 45-60 days
+ Better compost quality
- Plastic expensive for farmers
 - Local market not available



Options addressing water scarcity

INCREASING AVAILABILITY

Increasing infiltration



Eye brow pits

Water harvesting



Fish pond

Drinking Water supply



Spring box



Contour hedgerows



Conservation pond



Roof water harvesting



Terracing



Plastic line pond



Water collection in spring

IMPROVING WATER USE EFFICIENCY

Irrigation methods



Drip irrigation



Sprinkler irrigation



Pitcher irrigation



SRI (System of Rice Intensification)

INCREASING AVAILABILITY

Increasing infiltration

Water harvesting

Drinking Water supply



Eye brow terraces



Fish pond



Spring box



Contour hedgerows



Conservation pond



Roof water harvesting



Terracing



Plastic line pond



Water collection

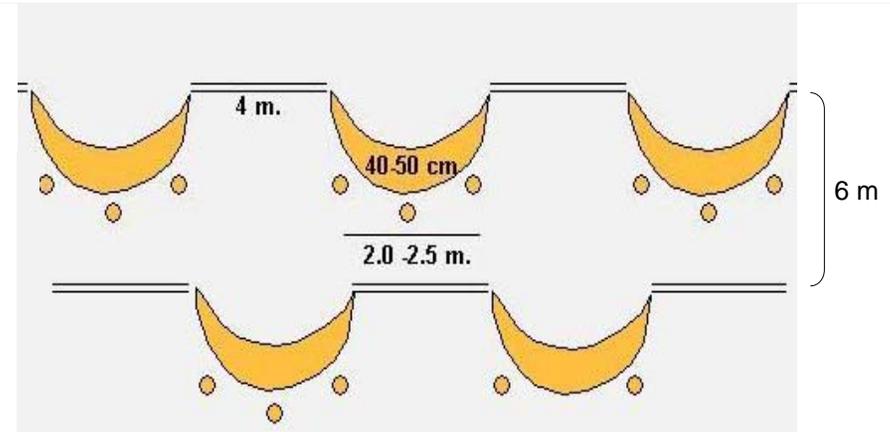
... increasing infiltration



Eye brow terraces



- pits
 - > Rainwater harvesting
 - + Improves infiltration
 - + Soil moisture
 - + Plant growth
 - + Ideal for degraded land
 - Labor intensive



... water harvesting



Earthen pond

Conservation ponds

Seepage



Plastic line pond

- Stores excess runoff water, reducing erosion
- Improves soil moisture down slope

Pond used for:

- Cattle pond
- Irrigation
- Fisheries

- + Simple, low cost and durable
- Labor intensive

... drinking water supply

Roof water harvesting



Tin sheet roof, 20 m²

Pipes

Storage tank (2000 l)

- Roof has to be cleaned before rain
- During rain periods water harvesting
- Use during scarce periods
- Saves water fetching time

Water quality:

- + Good if roof regularly cleaned
- Possibility of water contamination



... more options

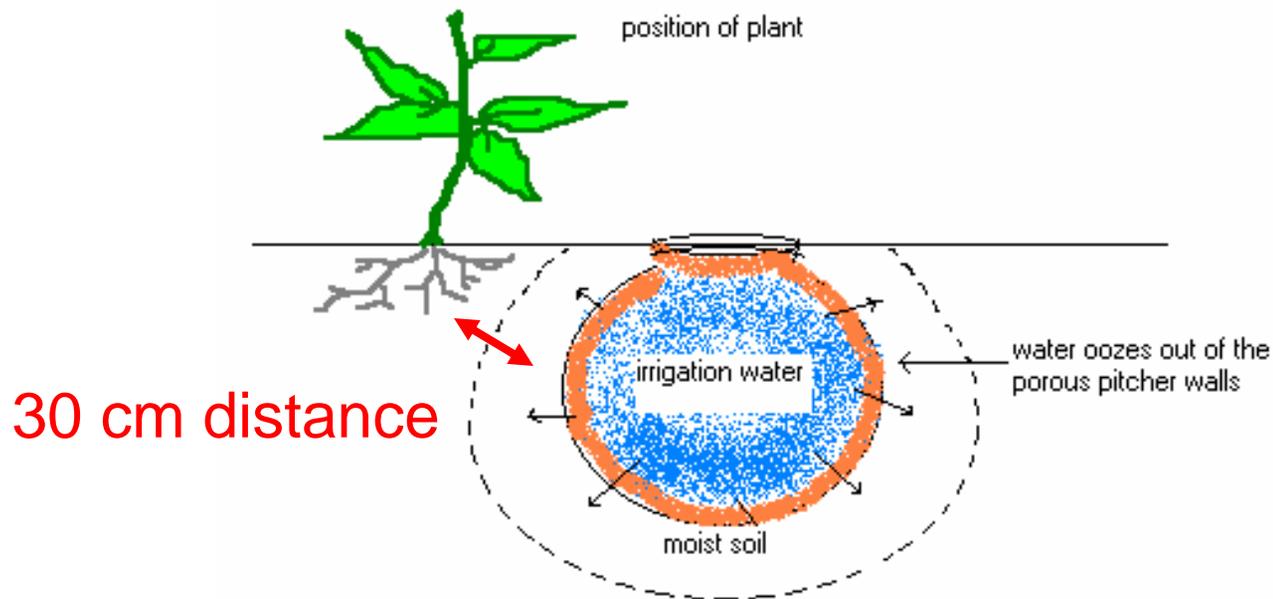
IMPROVING WATER USE EFFICENCY



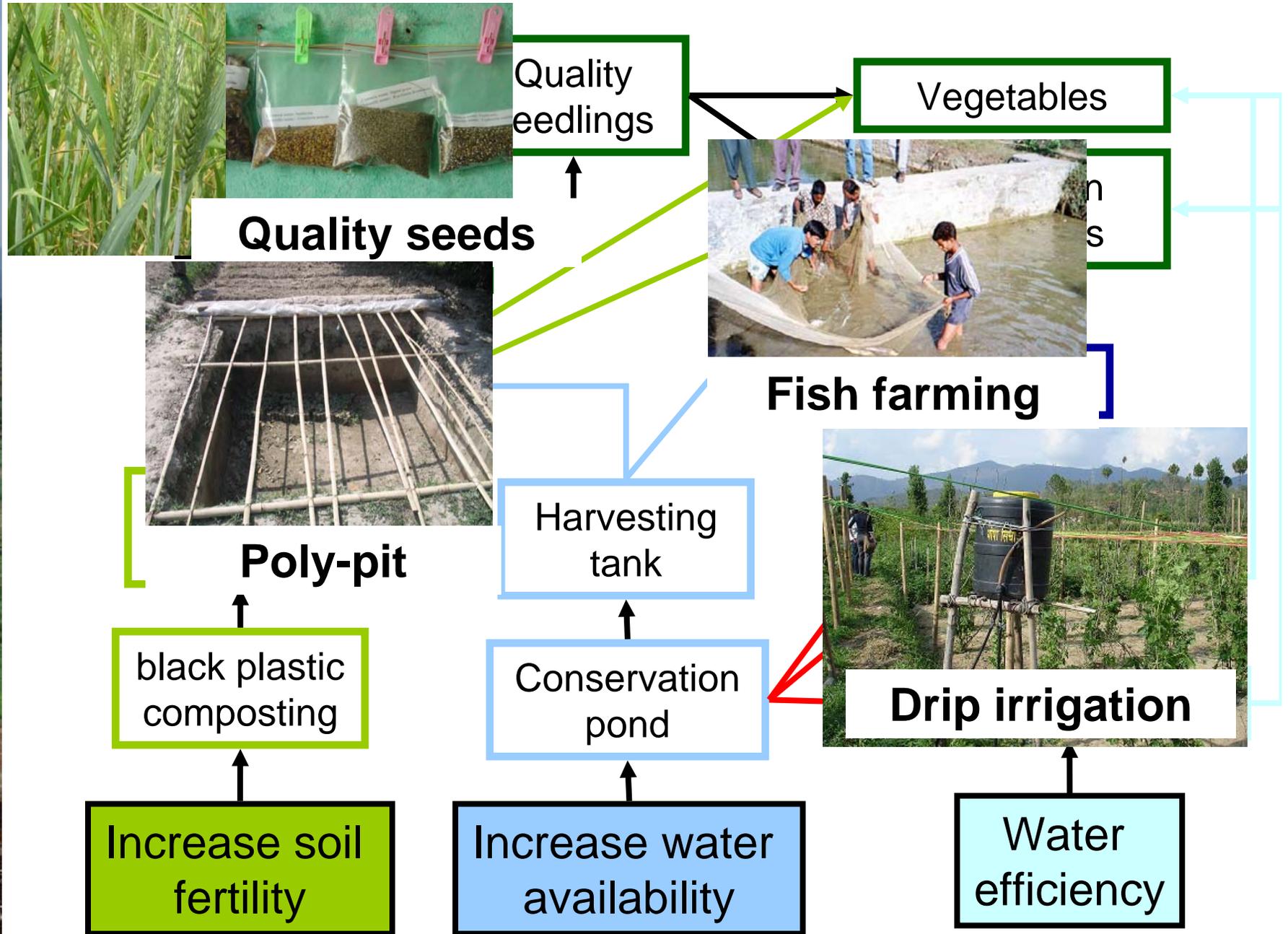
... pitcher irrigation



- watering plants in dry areas
- clay pots are buried
- pots filled with water
- covered with lid



...summary



Approach...

Participatory and community based approaches



- PAR (Participatory Action Research)
- PTD (Participatory Technology Development)
- PR&D (Participatory Research and Development)



Identify problems in the watershed



- Involving farmers as research partners
- Gaining credibility (trust-building through entry point)
- Addressing needs of community
- Community participation



- Promotion of community user groups
- Building on indigenous knowledge
- Traditional practices

A vertical photograph on the left side of the slide showing a landscape with green fields, trees, and mountains in the background under a blue sky.

PARDYP team test, develop and promote simple options

Key approach

Social and community empowerment

- Awareness raising
- Involve local institutions
- Involve all users
- Encourage women involvement
- User committee formulation
- Linking groups

Capacity building, knowledge sharing



- Dissemination of findings
- On-site training & education
- Farmer to farmer exchange visits



- Farmer field schools (FFS)
- Farmer day

Networking

- Newsletters
- CDs, films
- Websites, extranets
- Papers

Networks



(World Overview of Conservation Approaches and Technologies)

www.wocat.net

- database

HIMCAT (Himalayan Conservation Approaches and Technologies)

<http://extranet.icimod.org.np/himcat/>

- an extranet platform for the Himalayan region

Conclusion I



- Centrality of people
- Opinions of land users govern
- Strong focus on capacity building



Conclusion II

- Experimental learning approach
- Sharing knowledge
- Training course in ICIMOD

**Training course on
Low Cost Soil and Water Conservation Techniques and
Watershed Management Activities**

Kathmandu, Nepal

2-24 April 2007

- Field-level technicians and extension workers

Thank you

