

**PARTICIPATORY NATURAL RESOURCE
MANAGEMENT
IN
IWDP HILLS PROJECT
OF
HIMACHAL PRADESH**

BY

Dr. S.S. NEGI

DIRECTOR
FOREST RESEARCH INSTITUTE
DEHRADUN

WHY PARTICIPATION?

- PLANNING AND IMPLEMENTATION
- SENSE OF OWNERSHIP
- SUSTAINABILITY
- OPERATION AND MAINTANENCE

INTEGRATED WATERSHED DEVELOPMENT PROJECT HIMACHAL PRADESH

In Himachal Pradesh, this project was implemented in a 75295 hect area forming part of 27 Sub-watersheds in the catchments of Markanda, Ghagar, Sirsa, Swan and Chakki rivers forming parts of Sirmur, Solan, Una, Kangra and Chamba districts.

1. SOIL AND MOISTURE CONSERVATION

- (a) Vegetative barriers on arable lands for arresting the flow of water and silt. Similar interventions included terrace repair/ vegetative reinforcement and vegetative field boundaries. These interventions were also designed to increase the infiltration of moisture into the soil.
- (b) Vegetative shrub barriers, usually along the banks of rivers and streams for checking erosion.
- (c) Gully stabilization and stream bank protection through dry stone masonry, brushwood check dams, crate wire structures and live hedge spurs.
- (d) Soil and moisture conservation and water harvesting through construction or renovation of farm ponds, earthen run off dam and water harvesting structures of different sizes. These were constructed for controlling floods, rehabilitation of downstream lands and also provided water for domestic use, livestock and limited irrigation, wherever possible.
- (e) Treatment of active landslides with the help of vegetative and mechanical measures.
- (f) Control of erosion along roads by vegetative and mechanical measures.

2. ARABLE LANDS

- (a) Rainfed crop demonstration.
- (b) Rainfed horticulture (conversion of marginal lands to horticulture).
- (c) On farm fodder cultivation.

3. NON-ARABLE LANDS

- (a) Pasture development.
- (b) Afforestation, planting trees on barren lands.
- (c) Silviculture in which trees and grasses were raised.
- (d) Woodlots.
- (e) Rehabilitation of vegetation or densification of existing forests.
- (f) Replenish afforestation or densification of old plantations.
- (g) Vegetative shrub barriers.

4. LIVESTOCK DEVELOPMENT OR ANIMAL HUSBANDRY

- (a) Natural breeding centers.
- (b) Livestock reduction.
- (c) Supplementary feeding, late pregnancy rations, calf starter and female calf rearing.
- (d) Construction or rehabilitation of stalls.
- (e) Chaff cutters.

INTEGRATED WATERSHED DEVELOPMENT PROJECT-II - SINCE 1999

32 SWS

93850 hectares

PERFORMANCE INDICATORS

- (a) Increased availability of sub-surface/ ground water.
- (b) Reduction in the levels of soil erosion.
- (c) Increased community participation and formulation of engaged village user's groups.
- (d) Increased crop yields, milk production and horticultural crops.
- (e) Improvement of existing road links to markets.
- (f) Increased household incomes, particularly of marginal and small farmers and women.

1. Sub-watershed treatment

- (a) Vegetative barriers/ field boundaries.
- (b) Terrace repair and vegetative reinforcement.
- (c) Improved cropping systems.
- (d) Horticulture.
- (e) On-farm fodder production.
- (f) Vegetative shrub barriers.
- (g) Pasture development.
- (h) Silvi-pasture.
- (i) Forest regeneration including planting.

2. Fodder and livestock development

- (a) Genetic improvement.
- (b) Animal health improvement.
- (c) Fodder production.
- (d) Silvi pastoral treatments.
- (e) Other feed technologies like hay and silage making and treatment of crop residues.
- (f) Stall-feeding, forage processing and institutional support.

2. Rural infrastructure development

- (a) Footpaths and foot bridges.
- (b) Improvement of potable water supply.
- (c) Drainage line treatment.
- (d) Water harvesting structures.

LESSONS FROM PHASE-I

- **Involvement of local community, particularly women vital for continuity**
- **Means of income important for VDC survival**
- **Active participation by women/marginal**
- **Effective local leadership**
- **VDC capacity building**

PARTICIPATORY ASSESSMENT AND PLANNING

- Mapping of the resources
- Problem analysis
- Assessment of need
- A vision for the community
- Development of suitable VDP
- Involvement of community in implementation and monitoring

VILLAGE DEVELOPMENT PLAN

- **Condensed, site specific, need based**
- **People oriented based on PRA**
- **Evolved by members**
- **Changes to plan may be proposed through resolutions**

VILLAGE DEVELOPMENT COMMITTEE

- **Male and female representatives from all households**
- **Executive Committee – 50% women**
- **Women motivators, meetings, book-keeping**
- **Seed money**

WOMEN IN DEVELOPMENT

- **Treated as priority stakeholder – separate matrix/problem scoring**
- **Profusion of self-help groups**
- **In some places, works being executed by women groups**
- **Better utilization of money**
- **Income generating activities**

WATER USER'S GROUPS

Members of the local community who actually use the water resources may constitute water user's groups or WUG's at the local level. They manage and maintain the structure, dam, pond, well or any other structure. There are many examples of water user's groups functioning the project area.

GENDER ISSUES

- Women constitute a significant percentage of stakeholders
- Women actively involved in farm and household functions
- In many cases women head households
- PNRM addresses chronic problems of women like water, fuel wood and fodder
- Greater access to resources

GENDER ISSUES....

- **Livelihood issues**
- **Self Help groups**
- **Women influence decision making**



Water level of this well has risen after project interventions in the uplands



A modern forest nursery for raising quality seedlings



A group of project officials and members of Village Development Committee in Una District



A Village Development Committee meeting in progress in Kangra District



**Self group in Una District engaged in Income
Generating Activities**































Thank you