



NABARD's WATERSHED MANAGEMENT – NEED FOR A HOLISTIC PERSPECTIVE

Economics

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ABSTRACT

The declining per capita land and fresh water availability coupled with soil erosion and land degradation in India are posing serious threat to food, social, environmental and economic security. Impact of soil and water conservation measures accompanied by sustainable agricultural practices is seen in terms of increased water retention, soil moisture, vegetative cover and agricultural productivity. The inherent creative potential of nature when given respect and space regenerates and flourishes. Due to increased urbanisation and dependence on piped water supply schemes and hand pumps, focus is either on ground water sources or large rivers. Hence attention is riveted on the care of such water supply oriented facilities. Many lakes are thus in a dying state, even though they contribute in a significant manner to local eco systems. NABARD has been involved in implementation of various water shed development programmes. Natural resource management and its role in land based livelihoods has to be given high level of importance and active commitment in International policy especially in a globalized world.

KEYWORDS:

Nanoparticles, waste water

INTRODUCTION

Farmers distress has increased in India over the past one and half a decades. Lack of knowledge of sustainable agricultural options and inefficient management of natural resources such as water and land leads to inefficient agricultural practices. Land and water go together and their development cannot be considered independent of each other, especially, for sustainability of rain fed areas. Rain fed areas constitute about two thirds of nations 142 mha cultivated area, are the resource poor areas with low levels of productivity and suffer most from degradation and the vagaries of nature. It is estimated that these rain fed areas contribute only 45 per cent to total food production where as irrigated areas which account for 37 per cent of the cultivated area contribute 55 per cent to total food grains production. Farmers in rain fed regions have often discarded their traditional subsistence oriented mixed farming systems, emulating practices from irrigated areas to cultivate input –intensive commercial high value crops exposing themselves to indebtedness and great risk and often damaging resource base itself. NABARD has been involved in implementation of various water shed development programmes.

programmes. Primarily 2 Ministries namely, MoRD, MoA fund the mainstream water shed Programme in India. It is being considered as principal vehicle for transfer of rain fed agricultural technology and to bring in ever green revolution. The national agriculture policy seeks to promote the integrated and holistic development of rain fed / degraded areas through conservation of rain water and augmentation of biomass production through agro forestry with active involvement of the watershed community. The National watershed development Programme (NWDP) begun in 1995 was the first significant and considerable initiative to develop rain fed areas. However, watershed development has had a pronounced conservation bias to its origins in river valley conservation schemes where the goal was to reduce siltation of dams and people productivity and livelihood did not enter the calculus.

Among the various programmes, the important issue with respect to present paper are Investment of National Bank for Agriculture and Rural Development (NABARD) on water shed Management.

Objectives

1. To analyse NABARD supported Watershed Development Programme.

Investment of NABARD on watershed Development

The watershed programmes have been implemented in the country since 5th 5 year plan. In the earlier period, not only were the cost norms low the approach too was not based on holistic principles of watershed management. Watershed development is the main programme for the development of rain fed areas. Given their ecological characteristics, developing rain fed areas does broadly require a water shed approach. Water shed development projects lack clear development goals and standards for investment outcomes. NABARD has been involved in implementation of various water shed development programmes over a limited area in selected states.

Physical and Financial Performance of Water shed Management Project

Public investment in major and medium irrigation scheme is estimated as Rs 5.5 lakh crore at current prices, water shed development has cumulatively received less than Rs 40,000 crores. During the 11th 5 year plan, the activities under water shed Development programme were focussed to completion of large number of ongoing projects under Desert Development Programme (DDP) Drought Prone Areas Programme (DPAP) and Integrated Waste lands Development Programme and launching a new modified programme of Integrated Water shed Management Programme by amalgamating the earlier programme.

Regions	Pre monsoon	Monsoon	Post monsoon	Annual
Country as a whole	40%	-14%	-23%	-9%
North- West India	90%	-17%	-26%	-2%
Central India	84%	-16%	-63%	-15%
South Peninsula	45%	-16%	16%	-2%
East & North East India	-2%	-7%	-59%	-11%

PART-I THE SCANTY RAINFALL

South west monsoon (Jun-Sep): Rainfall for the country as a whole and the four broad geographical regions is given in the table below
Departure of region-wise seasonal and Annual rainfall-year2015

Source: Rainfall Statistics of India 2015, India meteorological Dept, Report No ESSO/IMD/HSRF/Report/04(2016)/22

Rainfall is primary source of water and is of great importance for agricultural Industry. It may be observed that during monsoon season and also annually, all the four regions and the country as a whole received less than their normal rainfall. The country was at maximum deficiency in rainfall of 23% during post monsoon season. Regionally, highest positive departure of 90% was experienced in North West India during pre monsoon season whereas highest negative departure of 63% was observed in Central India during post monsoon season.

Part-II

Watershed Approach: Over the years various central Ministries and Departments have been implementing water shed development

Under the participatory Water shed Development Programme, funded out of Water shed Development Fund, 547 projects (both ongoing and completed) were undertaken in 18 states covering an area of 5.24 lakh ha, with a cumulative commitment of Rs. 398.90 crore. Forty nine new projects for the capacity building phase were sanctioned under the programme during 2015-16. The financial assistance under this programme provided in the form of grants or on a grant –cum –loan basis. As on 31 March 2016, the total corpus stood at Rs. 1,108.74 crore.

Programmes being implemented in watershed include

- i. Participatory water shed Development programme under the water shed Development Fund (WDF)
 - ii. Water shed projects under the Prime Minister's relief package for Distressed District
 - iii. Grants cum loans for state based water shed projects and
 - iv. Indo-German water shed Development Programme (IGWDP)
- a. Under the participatory Water shed Development Programme, funded out of water shed development Fund, 547 projects (both ongoing and completed) were undertaken in 18 states covering an area of 5.24 lakh ha, with a cumulative commitment of Rs. 398.90 crore. Forty nine new projects for the capacity building phase, were sanctioned under the programme during 2015-16. The financial assistance under this programme is provided in the form of grants or grant – cum loan basis. As on 31 March 2016, the total corpus stood Rs. 1,108.74 crore.
 - b. Of the Rs. 933.20 crore sanctioned for 764 water shed projects under the package a cumulative amount of Rs. 802.32 crore was released on 31 March 2016. In all 711 projects have been completed while 53 water shed projects closed prematurely due to various field level difficulties.
 - c. In all, 41 water shed development projects were sanctioned in Karnataka and 141 in Tamilnadu in the grant-cum –loan mode. As on 31 March 2016, cumulative loan disbursement to the 2 states stood at Rs.54.70 crore.
 - d. Indo German water shed Development Programme, now in its 3rd phase is being implemented in India since 1992, and is a bilateral programme of Government of India and Germany. The programme focuses on the regeneration of natural resources that is being implemented by village water shed committees (VWCs) in association with NGOs in the states of Maharashtra, Andhra Pradesh, Telangana, Gujarat and Rajasthan. The details of the projects.

Regeneration of natural resources under IGWDP (2005-2016)

State	Fund in crore	Project implemented	Area covered (ha)	Amounts disbursed in crores
Maharashtra	151	114	1,19088	121.84
Andhra Pradesh	66	36	41,633	59.94
Gujarat	69.90	28	38,000	37.14
Rajasthan	83.60	31	35,000	42.99

CONCLUSION

Self sufficiency in food grains production has been the main driver of strategies to develop natural resources. The gains of food production have largely been confined to irrigated plains and deltas; rain fed regions have lagged far behind and have in fact suffered widespread resource degradation due to inappropriate resource use and low investments. About 50 per cent of our agriculture is rain fed where as delayed, deficient or erratic rains lead to severe reduction in crop output and even total crop failure and only one crop is typically cultivated in a year. India as a whole lacked coherent policy to develop natural resources as a means to enhance livelihood, remove poverty, ensure household food security spur decentralised growth. Considerable areas within water sheds still need attention and such projects need to be revisited for holistic development.

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Food Security and poverty in rain fed regions: Farmers in rain fed regions have often discarded their traditional subsistence oriented

mixed farming systems emulating practices from irrigated areas to cultivate input –intensive commercial high value crops exposing themselves to indebtedness and great risk and often damaging resource base. Of the 127 Agro climatic zones defined under the National Agricultural research project 73 are rain fed. Rain fed areas account for 60 per cent of the net sown area and 55 per cent of the gross cropped area. Almost half of our food crop area and over 50 per cent of our horticulture is rain fed. Rain fed areas produce 40 per cent cereals, 60 per cent cotton, 75 per cent oil seeds 85 per cent pulses, and support 40 per cent humans and 60 per cent live stock population.

Poverty is highest in regions, states and districts where a larger share of agriculture is rain fed. For example more than 50 per cent of rural population in Orissa, Chattisgarh, Madhya Pradesh and Jharkhand is classified as BPL and the 100 poorest districts in the country are almost entirely rain fed.

To analyse food security and poverty in rain fed regions.

The productivity gains achieved during green revolution in irrigated areas have bypassed rain fed areas. However these irrigated areas are also now unable to sustain the gains due to land degradation and falling factor productivity.

Planning Commission supported Integrated Water shed Development Programme (IWDP) in Bihar and Kutch Drought Proofing Project (KDPP) in Gujarat. The aggregate programme sanctioned covers an area of 1.72 mHa and the total funds handled are to the tune of Rs 1,600 crore.

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