



## Natural resource management, challenges and way forward in agricultural development: A study

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### Abstract

The agricultural natural resource management is part of the farmer in India. The farmer challenges in the faced of natural resource management and the basically infrastructural development in agricultural study the basically focus on way forward in the agricultural development. The study agricultural natural resource management and challenges. The paper based on secondary source of information.

**Keywords:** natural resource management, challenges, way forward, agricultural development

### Introduction

The agricultural sector continues to be pivotal to the sustainable growth and development of the Indian economy the role of the agricultural sector in alleviating poverty and in ensuring the sustainable development of the economy is well established the agricultural development goals of food security availability and accessibility, this situation has recently led to fresh thinking on the developmental approach in the agriculture sector. In this fresh approach priority is to be accorded to making the agriculture and allied sector not only ecologically sustainable in its use of natural resources of soil, water, and forest but also socio, economically, sustainable to farmers in terms of prosperity. Welfare and social security. The government also agriculture lies in shifting focus beyond farming and towards development of food systems.

### Review of literature

1. Gopalappa D.V. (2005) this study the "Rural Nonfarm Employment in Karnataka" this paper study the RNFE generate in is depends on two factors. First the rapid agricultural growth would have direct impact on it basically with the development processing sector. He also stated that when rural poor is unable to gain productive employment in agricultural.
2. Bardhan. (1970) <sup>[2]</sup> "Green revolution and agricultural laborers " this article paper study the impact of the green revaluation on the agricultural laborers the author end of the sixties more than 70.00 per cent of rural population was living below poverty line.

### Research Gap

There are number of research paper related vision of agricultural way forward in agricultural development but there is particulars study related to agricultural resource management and challenges and selection focuses on the attempt.

### Objective

- To study the agricultural natural resource management and challenges.
- To study the way forward in the agricultural development.

### Methodology

The present study it's defended on secondary source of formation gathered from the agricultural way forward, resource management in agricultural development, journals, newspapers, and government report, relevant website.

### Analysis and interpretation

To study the agricultural natural resource management and challenges.

- The challenges of natural management is the evident from the fact the agricultural sector of India has to cater to 17.5 percent of the world population. The resolving the twin issues of the food security, and environmental quality that the country faces natural resource management.
- The similarly water resource are also under pressure due to ever increasing Demand.
  1. The large part of agriculture continues to be rain fed and husbanding of water resources has acquired primary.
  2. The natural resource base and emerging concerns of climate will further escalate peruse on land and water.
  3. The challenges in the face of natural resource management and the way forward
  4. As a normal process of urbanization and development while the area under nonagricultural land is decreasing at a slow rate due to various measures taken by the government bring degraded cultivable waste land under cultivation.
  5. Resources for agricultural production on system in various resources and inputs required for enchaining agricultural production are land and soil, water, energy

and form power credit and insurance, etc.

6. Out of these resources land and water are the basic infrastructural resources essential for crop production.

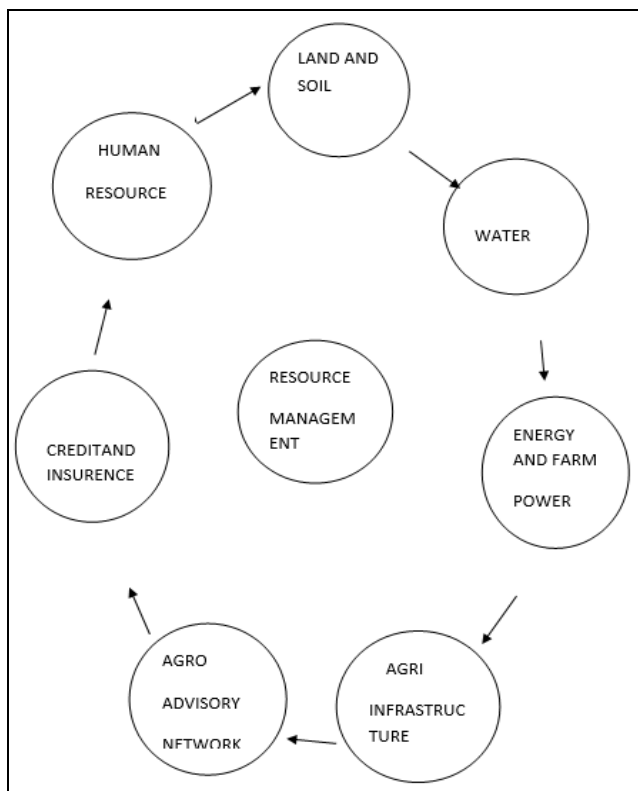


Fig 1: Resource management

### Challenges

#### Land Degradation

Land serves as the storage for water and nutrients required for different crops, and demands for food, energy and human requirements are a some from the limited land resources. In the absence of comprehensive and periodic scientific surveys, estimates on various forms of land degradation were made on the basis of localized surveys and studies.

#### Land Fragmentation

Land fragmentation refers to a small or incomplete part or piece of land broken off or separated from the whole land to which it originally belongs. Increasing human and animal population has reduced the availability of land over the decades. Many other problems associated with land fragmentation are distance between parcels and the farmstead; increase in boundary lines; reduction in size and irregular shape of parcels; and lack of access.. These problems are compounded when parcels are spatially dispersed, and by travel time and the costs of moving labour, machines, etc., from one parcel to another.

#### Diversion of Agricultural Land

Agricultural and cultivable land has marginally declined from 185.16 million ha in 1980-81 to 181.95million ha in 2012-13 (Land Use Statistics 2012-13, DES). During the same period, the land under nonagricultural uses has increased from 19.60 million ha to 26.45 million ha. Although the Government of

India has been implementing various programs across the country. Parts of the degraded lands developed under these programs have been put to cultivation,

#### Land Holdings

Landholding size determines investment in agriculture, productivity, farm mechanization and the sustainability of farm incomes itself. Landholdings in the marginal category similarly, the share of operated area under small farm holdings (1 ha to 2 ha) increases

#### To study the way forward in the agricultural development

The way forward that has emerged in the key areas of concern in the Agricultural development experience so far are as follow

#### Towards Efficient Land Use

- Incentivizing sustainable farm operations, among other things, by encouraging appropriate input use, use of renewable energy, and emphasizing soil health, etc.
- Suitable State legislation for regulation against conversion of agricultural land into non-agricultural purposes and integration of land use planning with all developmental programs, especially with MNREGA,
- For holistic rural development, natural resource management, and eco-restoration.
- Implementation of land-laws relating to land reforms, with particular reference to tenancy laws, leasing, facilitation of contract farming, distribution of ceiling-surplus land and wasteland, providing adequate access to
- Common property and wasteland resources and consolidation of holdings.
- Improving land use surveys for better methodology to capture area under the village houses, and implementing soil-to-satellite approach and computerization of land records.
- Encouraging Public-Private-Partnership model for land use and soil health improvement activities.

#### Better Soil Health

Balanced use of organic and inorganic fertilizers may be permitted in view of its direct impact on soil fertility.

The ambit of NBS scheme may be made broader to consider nutrient use efficiency of Fertilizers so that the focus is on efficient uptake of nutrients by plants. Water soluble fertilizers need to be promoted by bringing them under subsidy regime.

#### Higher Water Use Efficiency

To understand the requirements of a particular area, land should be studied in detail to determine the constraints hampering the improvement of water management and better agricultural production. Water use efficient technologies of drip irrigation, micro irrigation, sprinklers, etc., may be encouraged to reduce the pressure on water consumption by agricultural sector, and reduce excessive withdrawal of groundwater.

#### Towards Better Managing Climate Change

Agriculture will need to be progressively adapted climate change and agricultural research system needs to be more

oriented towards monitoring and evaluation of climate change and recommend changes in agricultural practices accordingly. Preparation of database on the impact of climate change in agriculture and evaluation of its impact in selected locations.

#### **Towards Crop Insurance Coverage**

1. States/UTs should deploy additional manpower and provide adequate training to the personnel engaged in the Crop Cutting Experiments (CCE) to ensure accurate and timely availability of yield data for effective implementation of the insurance schemes.
2. Use of modern technology like Remote Sensing Technology (RST)/Satellite imageries to supplement the yield assessment through CCEs in the implementation of crop insurance schemes should be enhanced.
3. To make weather based insurance system efficient and to cover the entire country, the present number of Automatic Weather Stations should be increased.

#### **Realizing Horticultural Potential**

1. Ensuring production and supply of quality planting material, with special emphasis on establishment of hi-tech nurseries having provision for mother or scion blocks of improved varieties, good quality rootstock banks and hi-tech green house, through accredited nurseries.
2. Establishing crop based Centers of Excellence in each state to serve as a hub for supply of planting material and dissemination of Technology to farmers.
3. Covering more area under vegetable hybrid seed export-

#### **Better Agriculture Marketing**

The development of competitive marketing channels is necessary to induce competition in the existing marketing systems and to facilitate sale of farm produce at remunerative prices. This would require states to make changes in their legislative policy framework, effective government support services as well as harnessing of the potential of the private sector. These market reforms will go a long way in improving price discovery and reduce the risks farmers face due to price volatility. These efforts at market reforms,

#### **Higher Extent of Food Processing**

Greater infrastructure development by involvement of State government and private sector for setting up food parks and cold chains. Filling up institutional gaps for enabling contract farming, direct marketing, stocking and movement policies.

#### **Healthy Livestock**

1. Ensuring adequate and immediate veterinary disease diagnosis, surveillance
2. The monitoring, hospital infrastructure and trained manpower development.
3. Evolving a strong programme for supply of sufficient veterinary vaccines with long duration immunity is necessary.
4. Strengthening small-ruminant based, i.e., goats and sheep, livelihood through national and international multi-stakeholder participation

#### **Suggestion**

1. The system currently used to finance the agricultural sector in the characterized by rich farmers and subsidized by the poor farmers.
2. Growth of the agricultural sector.
3. The government has been implementing schemes and programmes for promoting sustainable agriculture practices.
4. The Agricultural credit system has improved through cooperative credit societies at various levels.
5. The institutional credit system with special focus on small and marginal farmers.
6. The development of agricultural marketing infrastructure.
7. The suggest agricultural marketing and agricultural marketing sector in the implement of reforms at the national level.

#### **Conclusion**

The agricultural sector is natural resource management is part of the farmer is India. In ancient agriculture system was perusable because of in modern Indian agricultural system total different. From the last ten years statically show the performance agricultural farmer has technically improved the land uses so finally the government should support the farmers and government must support price to farmer development.

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