CHAPTER - VIII

PROBLEM AND SUGGESTION
Agriculture, the main occupation of people in the region, is largely of intensive subsistence type where paddy is the single important crop of clearly dominates the entire economy of the region. So, traditionally the population living in these areas have coped with extreme environments by practicing a form of land use that was extensive because the population was mobile and the social set-up was based on economic inter-dependence. Today the rapid increase in population and the availability of newer technology have resulted change in the land use pattern.

The region is presently faced with several problems. The problems confronting the village farmers in general and the rice grower in particular may be consider in two broad groups. The first are the physical difficulties arising from Dhamtari’s peculiar natural environmental setting and the second are the social problems stemming from the cultural background of the people.

PHYSICAL PROBLEM:

1. Climatic Uncertainty: It is familiar that “agriculture in Indian is a gamble against the monsoon” – is the most outstanding problem in this category. The monsoonal rains, through generally plenty in Dhamtari, show considerable variation in their time of arrival, amount and duration.

2. Soil Depletion: Deficiencies of vegetal cover and grass land have agricultural implications. In many parts, the lack of forest cover has reduced the infiltration of moisture leading to increasing run-off and thus giving rise to soil erosion.

3. Ruggedness of Relief: Overall shortage of arable land is also a major problem confronting the very dense population in the region. So, relief roughness is the one most major problem for land use pattern.

4. Presence of Several Diseases and Pest: Because of the absence of a cold winter to check microbial and insect life, pest and diseases of both crops. In addition, rice are attacked by several diseases causing substantial losses every year.
SUGGESTION:

Natural problems are not control by man. But it is only since the beginning of planning era that government has made. Some efforts in over come some of the physical problems –

i) Weather forecasting should be control of ‘monsoon burst’.

ii) Normal cultivation and government soil conservation schemes essential.

iii) Reclamation of Khar and Saline lands.

iv) Construction of medium and minor irrigation works.

However, these efforts being relatively recent, their impact on agricultural development in the village is yet to be felt and assessed.

AGRICULTURAL PROBLEMS:

Agricultural land use provides base for the economy and society of this village. Use of land in general and of agricultural land in particular depends on the socio-economic status as well as characteristics of farmers.

1. Unequal Distribution of Land Holdings: Unequal distribution of land holding is important problem of this region. In surveyed area 24 percent families are not present of land. And 76 percent families were present of land. Only 4 percent families have more than 5 hectares land is present. It indicates totally uneven distribution of land holdings in this region.

2. Shrinkage of Agricultural Areas: One of the important problems which faces Dhamtari village is the increasing pressure of population on land resources. For this situation the agricultural areas are shrinkage.

3. Massive Deforestation: Forest cover continued the moisture of soil and protect soil from mass scale erosion. Large scale disappearance of forest cover resulted in increase of aridity in the agricultural fields.

4. Lack of Irrigation Facilities: Lack of sufficient irrigation facilities is another important problem for land use pattern. Only 69 percent areas in this region are considering as irrigation facilities. The areas for from irrigation canals and wells face acute shortage of water. Which poses serious obstacle for the further development of land use pattern.
5. **Unequal Distribution of Net Sown Area**: There is wide regional variation in proportion of net sown area. It is clear that the unequal proportion of net sown area affects land use pattern.

6. **Low Amount of Total Cropped Areas**: Productivity depends on the amount of total cropped area in the surveyed region. The amount of total cropped area is 1,92,872 hectares, where the total area is 4,08,190 hectares in sample villages, so it indicates there is a low amount of total cropped area.

7. **Traditional Agricultural System**: The village farmers follow a traditional agricultural system—
   i) Low input of pesticide and insecticide.
   ii) Old seeds and use more animal resources in agricultural fields.
   iii) Unscientific cultivation that means old indigenous methods they use still.
   iv) This surveyed region's maximum farmers use tractors and fan extort and spray pumps but all other machines such as harvesters, threshers, power tillers, dusters, etc. Ultra modern machines are not used. This agricultural implements and their efficiency play a dominant role in enhancing production.

8. **Low Investment**: Low investment is another vital problem in this surveyed region. Low investment leads to low production and low income to the farmer. Low inflow of capital in the agricultural sector is primarily responsible for the primitive character of the agrarian system. This region low invest, because maximum cultivator is poor. Only large and some middle farmers are able to invest a low amount of money.

9. **Low Productivity of Land**: Important causes of low productivity are per capita cultivated land has been reduced, deforestation, irrigation, soil erosion, traditional process followed, backward technology more trace on single crop, decrease the net sown area and big size of land holding, lack of crop rotation etc.

10. **Lack of Research Facilities**: The villagers lack agricultural research center.
11. Inadequate Banking and Financing Facilities: There are not present of adequate bank and financial institutions. For this reason not available facilities of banking and financial institution on the development of agriculture.

SUGGESTION:

So, remover for the agricultural land use problem and increased the productivity. It should be more trace on the following views:

i) The land should be distributed all equal to increased the productivity.

ii) Plantation and forestation process should be maintain.

iii) Canal irrigation system more extended and planned and systemized which covered maximum area of sample villages. The amendment of the ponds in necessary to reserved the water during rainy season. It must be necessary to increase the number of wells, tube well, pumps etc. As a result irrigation system should be well organized in this region.

iv) Increasing the total cropped area. Single cropped area will be covert in double and triple cropped area.

v) To development of traditional agricultural system must be followed some suggestions:

a) More use of tractors, power tillers, harvesters must be use for harrow to save money and time.

b) Processing H.Y.V. seeds should be use for cultivation.

c) Use of chemical fertilizer rather than organic fertilizer.

d) Creation of additional capacity to produce pesticides and insecticides.

e) Adaptation of high technology and its flow towards remote areas.

vi) Government should be provide the agricultural loan and subsidy to poor farmer.

vii) Crop rotation is most important method for the high productivity.

viii) Agricultural insurance and Krishan Credit Card should be used more efficiently.
ix) This village's maximum farmer cultivated only for paddy. But other crop is
cultivated lowly. For this region other crops cultivation is essential. As a
result increase of productivity rate.

**Cultural Problem :**

A unexpected physical growth is seen during the last few years
especially after Raipur being capital. This unbridle growth badly effects the land
use patterns. To get relief from the suffocating population growth people shift
their residence to the fringe area. Some of them make their residences on
agricultural land. To get high amount of pelf some farmer sell their agricultural
land to the industrial authorities. This enhances the growth industrial land and
decreases the agricultural land, fallow land and barren land. On the other hand
indirectly industrialization also well comes pollution and it spoils the fertile
capacity of the agricultural land.

From the above discussion problem regarding land use can be given
in brief here :

a) Agricultural land reduced due to industrialization and rapid population
growth.

b) Residential land is increasing unbriddly due to population growth and
   expansion of city.

c) Irrigation system is damaged due to industrial pollution. This is responsible
   for the reduction of the agricultural field.

d) The culturable waste land is gaining space.

e) Swamps are badly affected.

f) Other cultural problems are low levels of literacy and sex ratio.

g) One of the most serious problems forcing villages to be the rural in-efficiency
   resulting from farm fragmentation.

**Suggestion :**

i) Government should create law’s to stop using agricultural land for industrial
   and residential purpose.
ii) Industrial garbage should be purified through re-cyclic process before thrown out to surrounding area.

iii) Increasing of the literacy rate and development of educational level of rural area.

iv) Rural inefficiency should be changed into efficiency condition.

v) Do not neglect of woman population.

vi) People consciousness increased essential.

Prospects:

Use of land in general and of agricultural land in particular depends on the physical, socio-economic status as well as characteristics of farmers. Adoption of modern methods, techniques and inputs varies not only spatially and temporally but it also varies from community and from person to person. Social structure is the third dimension of the reality. In fact, the capacity of adoption hinges upon the size of holding of the farmer and his social status donated by caste. Even there two characteristics of farmers have resulted in unequal accessibility, of farmers to the new scientific knowledge and technology. It has manifested in differential level of the utilization of land use.

Nevertheless farming is still the principal means of livehood and proportion of main workers engaged in agricultural activities is comparatively high in this part. Low land productivity and large number of agricultural workers results in low productivity per worker. This situation follow prospects are given below:

1. The use of adequate quantities of chemical fertilizer, bio-fertilizer, and green manuring have considerably helped in increasing the production.

2. The abolition of Zamindari rights covering some 40 percent of the cultivated area was considered an improvement in agrarian relations.

3. The idea of land redistribution through fixation of land ceiling has gained wide acceptance in this region. The strategy basically is to ration land in such
a way that above a certain maximum the surplus land is taken away from the holders and is distributed among the landless.

4. Agricultural property structure has not undergone any radical change corresponding to changes in methods and modes of production and technological improvements.

5. After the distribution of surplus lands in accordance with the ceiling laws take place, an important objective of land reform policy would be met.

6. The national policy issue implementing land use policy is to strengthen rural infrastructure to support faster agricultural development.

7. As far as the wastelands are concerned, the saline and alkaline lands should be shown separately as the methods of their reclamation are different. Simple checking of these lands should be made by field verification.

So, it may be prospects that this situation goes long way in determining per worker productivity.

Agricultural Planning in Dhamtari District:

Though the term planning is generally understood to imply some sort of regimentation, regulation and guide direction of economy and other activities of a country to develop the economy. According to planning commission of India, planning involves the acceptance of a clearly defined system of objectives in terms of which to frame overall polities. It is also involves the formation of a strategy for promoting the realisation of ends defined. Planning is essentially an attempt at working out a national solution of problems, an attempt to co-ordinate means and ends.

Definition:

"Land planning is in essence the determination of the optimum use of every area of land which must be elastic and can change from time to time to adopt the changing conditions. This optimum use of land changes with time and space keeping in the view of existing economic set up”.

- L.D. Stamp.
"Planning is the use of collective intelligence and foresight to chart direction, order harmony and progress in public activity relating to the human environment and general welfare".


"Planning should be seen as a means to organise human society, so that it can adjust itself to the changing socio-technical environment and can use this environment for maximizing the welfare of its members".


Objectives:

The objectives of Agricultural planning may be outlined as follows-

1. To determine the optimum use of every bit of land.
2. To prevent the overuse and misuse of every bit of land.
4. To measure and determine the inherent characteristics of land.
5. To promote optimum agricultural growth.
6. To protect productive land from geographical hazard.
7. To carry out balanced regional development.
8. To suggest appropriate use of land.
9. To determine soil fertile and soil moisture capacity of contained.
10. To develop crop rotation system for the use of seasonal fallow land.
11. To develop agricultural innovation techniques.
12. To maintain ecological balance between physical environment and plants life.

Method of Agricultural Planning:

The All India Soil and Land Use Survey Organisation (1970) introduced a scheme of land classification modeled on the U.S.D.A. method to serve the land use planning objectives. In this scheme land is classified into two major categories.
i) Land suitable for cultivation

ii) Land not suitable for cultivation

Use suitability for each of the capability classes has been determined and the planning measures have been suggested accordingly.

**Constituents of a Plan:**

From the above discussion, it is possible to indicate the constituents of a plan.

i) Problem identification on the basis of a set of objectives.

ii) After the objectives have been accepted, the planners should proceed to decide how they can be achieved.

iii) After the priorities have been determined, the least cost method of carrying them out should be determined.

iv) After this stage comes the actual process of implementation of the plan.

v) The last stage involves the provision for a continuous evaluation of the implementation programme.

Planning commission are developed many plan for agricultural purpose. Few are succeed and few are not. Intensive agricultural (IADP) programme (RADP) are introduced by government. This planning will be held for macro level. Micro level planning are few occurred.

Agriculture system is mostly depend on the physical phenomena like soil, climate, topography etc. Depend on the soil fertility many crop are developed. Soil moisture contain capacity varies place to place and it also effect on the production of crop. Soil moisture contain are also vary between plain and plateau region. In Dhamtari district northern part is the plain area and southern part is under the plateau region.

Different type of soil are found in Dhamtari i.e. Kanhar, Bhata, Matasi, Dorsa, Kachhari etc. Kanhar soil are dark brown to black in colour. Low lands soil and clay portion high in the composition of texture. Moisture contained
capacity is high under this type of soil. Western portion of Kurud block this type of soil are developed.

Matasi soils occupy slightly lower elevations. They are light yellow or gray in colour loam to clay loam in texture, Locally known as Chhuhi. Matasi are suitable for cultivation usually mango groves and jackfruits are planed in this type of soil. Soil moisture capacity to contained is moderate. This type of soil found some portion of Kurud and Magarlod blocks.

Dorsa soils represent an intermediate stage between the Matasi and Kanhar soils. The Kanhar soils mixed with the Kachhari silt along the river and nalas. Near the part of Pairy, Kharun, Mahanadi river which flows in Dhamtari district this type of soil are found.

Bhata soil are not suitable for cultivation. Laterisation process occurred in this soil and red in colour, murrum and rock wastes soil. Moisture contained capacity is very low. Maximum portion of southern portion in this district are occupied by this type of soil.

Knowledge about the changes which have affected to any area should be clear for drafting planning to that area. And researcher can get those changes through construct between toposheet and imageries of that respective area.

First classified the land according to their fertility. Soil fertility can be based on the following characteristics. These are depth of the entire soil, moisture holding capacity of the soil, permeability of the subsoil to water, natural soil drainage, organic matter content, degree of erosion, Alkalinity and natural plant nutrient content. It is important to note that not only the individual characteristics but also their combination in a given soil affect the growth of crops. Detailed soil maps help farmers to adopt the rotation of crops in relation to the characteristics of the soil. In order to know the different soils with different degrees of fertility and land capability, a soil map on a large scale must be prepared so that it can show the significant soil variations within field and farm.
According to soil map of Dhamtari researcher all the land were divided into three major categories.

**Category-I** : Good quality land (Highly productive under good management).

- **Site** - Not too elevated
  - Gentle slope
  - Favourable aspect
- **Soil** - Deep Favourable water condition
  - Texture, mostly loams

Maximum proportion of Kurud, few proportion of Dhamtari, Magarlod Blocks are captured by these type of soil.

**Category-II** : Medium quality land (Medium productivity even when under good management)

- **Site** - Slight elevation
  - Steepness
  - Unfavourable aspect
- **Soil** - Shallowness
  - Defective water conditions
  - Texture sandy to loam

Some portion of Dhamtari and Magarlod blocks are capture by these type of soil.

**Category-III** : Poor quality land

Land of low productivity by the extreme operations of one or more factors of site and soil. This type of land mainly captured by rocky waste land. In Nagri block this type of land found in maximum proportion.

According to these categories of land researcher is developed in category-I wet crop variety with suitable requirement of planning. In category-II developed dry crop variety which are millets, oilseed and some other crops. Also here increase soil moisture capacity through irrigation. In third category some innovative work may be done. Through soil moisture capacity researcher
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developed other agronomic system like horticulture and plantation system. Researcher in this category developed plantation system (Ratanjot) in multipurpose. One it maintained ecological balance and reduced degredation of land and soil erosion, produce bio-diesel etc. Through the soil map researcher discuss in large way.

Second land capability classification, related to use and treatment of the land, the effect of various physical characteristics must be considered in making the classification. Land is to divided into land capability unit, each unit consists of one kind of land from the viewpoint of the use and treatment. This type of classification is useful in projects for irrigation, drainage, forest clearing or some other form of amelioration.

This region bounded by various river. Main Mahanadi canal are constructure. In Kurud block maximum villages are covered by this canal network system. Magarlod, and Dhamtari block canal system in moderate type. In this region Gangrel, Dudhawa, Sandur Dam are made. But the lack of proper planning this dam not fulfilled the requirement of water for agriculture. Like northern portion of Dhamtari researcher developed a canal network system in southern portion of Dhamtari. Therefore cultivable waste land converted into agricultural land and through waste land management researcher increase the total cropped land of Dhamtari district.

One problem can be seen most of the time in digging of canal is a long term method. At the time of Rabi and Zaid crops plenty of water is needed but at that time water is not released. So human awareness and dignity of work is necessary for the planning period.

Third the economic landuse classification determines and maps the local variations in the capacity of land to produce income against productive expenditure. The economic classification of land is a sort of prediction of what the comparative economic productive capacity of the land will be during the foreseeable future.
After that discussion it could say that through well planning and modern techniques barren land, waste land covered became productive land. But various human activities and growing industrialization land not only losses is fertile capacity and also proportion of salt and acid are grow. And most importance think of any land use and agricultural planning is soil fertility. So researcher give suggestion for immediate action to maintain soil fertility and reduced rate of soil pollution.

The preceding analysis suggest that the density of rural population declines with the declining proportion of net sown area. But the rural density correlates rural population with rural area and not with the net cropped area. Further the ratio of rural population and net cropped area is not uniform everywhere pressure of rural population.

On net cropped area is high and very high in areas of low rural density. Consequently, per capital net cropped area is low and very low. The contemporary land use development is incapable of improving the fate of the people. Unless it is integrated with the development of other resources with in the region.