

# Issues on Land Management and Land Fragmentation

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## 1. Introduction

Land is the fundamental resource for the existence of human as well as animals on the earth. This resource is very limited and the population is ever growing. Therefore, each and every moment land to man ratio is decreasing. If a proper balance between land and population is not maintained social and political stability in the nation would not be possible. Again, Nepalese economy is based on the agriculture production, so that about 80% of the population is engaged in agriculture. Due to lack of basic infrastructure, haphazardly farming practices leads to low agriculture production. Further, due to increasing population, it is being a global concern that there is need to minimize the effect of environmental pollution. This is applicable in our context also otherwise grave consequences to be faced by our coming generation is imminent.

Therefore, a careful consideration in these issues should be seriously addressed. One of the key tool to address these issues is a land management. It is a complex tool and it is associated with number of disciplines for instance, agriculture, forest, tourism, industry, population, surveys, etceteras. Therefore, without proper coordination and mutual cooperation among the concerned organization proper land management could not be achieved.

Nepal being the agriculture based economy country, the major concerns is to increase in agriculture production and productivity in order to establish sustainable development and to support poverty reduction programme of the nation. One of the obstacles to maintain this is a regular process of land fragmentation. So this paper will try to discuss the land management and the land fragmentation issues.

## 2. Components of Land Management

Land Management covers a wider range of spectrum, a brief introduction of its main components in the context of Nepal is relevant to mention and are given below :-

### 2.1 Land use Zoning :

Nepal is extended with various physiographic regions, which are categorized into Terai, Chure, Siwalik, Middle Mountain, High Mountain and snow covered Himalayan regions. Those areas should be categorized in the context of land use as the following :

- Agriculture area (including grass land grazing land)
- Industrial area (big, medium and small)
- Commercial area
- Residential area (Including Governmental and Non-governmental Office Area)
- Forest area

The other aspects regarding land use belong to rural and urban categories. The elements of rural land use and that of urban area should have a clear distinctions based on the availability of amenities for instance the facilities of drinking water, sanitation, health, electricity, communication, sewerage, telephone, entertainment, etceteras

## **2.2 Land Development**

Land development has direct impact on agriculture products. In the presents practice, agriculture output has suffered significantly due to fragmentation of land parcels. Therefore, the policy needs updating and modifications for the betterment of agriculture products. The land development elements are considered as consolidation, fragmentation and distribution. These aspects of land development play a vital role for the improvements of land management.

Land development could also be utilized for transforming bigger villages to small towns and cities, by upgrading and improving its infrastructures such as roads, drinking water, sewerage, etceteras and social environment such as education, public awareness, health facilities etceteras.

## **2.3 Revenue Generation /Taxation**

The revenue generation based on land includes land tax, land transaction and property tax, which supports the land management system. Therefore, these should be systematized and the concept of property tax should be introduced in order to increase the revenue by proper land valuation and asset valuations.

## **2.4 Environmental Conservation and Pollution Control**

The efficient and effective land management is greatly affected by environmental condition, which include the environmental pollution as well. Therefore, the plans for land management should include the program for environmental conservation and pollution control. Public awareness in education, health and population is one of the controlling factors for environmental conservation and pollution control.

Migration within the districts and from the village to urban areas is one of the element affecting environmental imbalances which is very difficult to manage, however, it could be controlled to some extent by keeping records of individual moving from one place to other and by proper country planning. Infrastructure development covering basic amenities rural sectors may help to check migration.

The pollution caused by solid waste and industrialization is another element in land management which could be kept minimum through proper solid waste management and through proper planning of large and medium scale industries respectively .

## **3. Trend in Land Management system**

As land management is very much related with land administration so in the implementation process many challenges on the issues of land administration are facing on daily basis. Some of the major issues are as following :-

- Lack of skilled human resources
- Shortage of adequate resources and infrastructure
- Requirement of amendment in existing laws
- Lack of coordination between the related organization
- Difficulties in access of land by landless and economically poor groups of people
- Hesitation in application of modern techniques
- Existence of dual ownership in practice
- Fragmentation of agriculture land
- Lack of effective implementation of land use planning
- Rehabilitation of landless people still exists .

The traditional systems are no longer adequate to support the sustainable development. As such these systems were designed to fulfill the limited needs whereas due to technological advancements and realization of diverse needs the present trend have been driven to improve land administration system and so pressure has been gradually built-up to improve the system to the organization related with this system. So the existing land administration systems need to be analyzed to identify the requirements to fulfill the demands and appropriate system can be designed accordingly.

For the implementation of land management programme and land consolidation programme, the cadastral maps and the related information are the basis for such applications. At present, these cadastral plans and information is available in a form of paper maps and manual records. However, these data should be well maintained. But due to the development of computer based land information system, the demand has emerges to prepare in digital formats and it is still a problem area in our present context mainly due to the volume of task and the availability of time and resources required for preparation of such data. However, efforts should be made towards utilization of existing data to create a digital cadastral database.

#### **4. Land Reform Programme**

All the land management and land fragmentation related activities are part of the land reform programme. A brief history of land reform programme is worthwhile to mention here.

The land reform programme was launched in 2021 BS . It has certainly brought awareness in the people. The programme such as relieving peasants from burden of loans, freed from local exploitation, fixed land ceiling on land holding and providing agriculture credit through compulsory saving scheme have given social security and justice. Although there have been some achievements but due to lack of political commitments and administrative efficiency the programme has witnessed losing momentum. So, His Majesty's Government realized to consider seriously to review the land reform programme. Accordingly, in 1996 AD, a ten points time bound package programme was designed. They are as follows :

- Abolition of dual control on land
- Settlement of the remaining cases on land holding ceiling
- Protection of public and government land
- Settlement programme for Sukumbasi people
- Implementation of agriculture development programme for uplifting Kamaiyas
- Providing agriculture credit facility
- Application of land use planning
- Development of integrated land information system
- Implementation of land consolidation programme
- Protection of Guthi land

Again, due to political instability and the slackness in administrative efficiency, most of the programmes would not materialized. So, once again HMG decided to reengineer the land reform programme and on Srawan 32, 2058 BS, HMG announced to launch a revolutionary land reform programme. In order to implement the programme, land reform legislation has been passed in the parliament and later on this has obtained royal ascent. The major highlights of this new legislation are a revised land holding ceiling, provision for the land use planning and land consolidation. The objectives of these measures are to acquire land for landless as well to improve the productivity and the production of land in order to support the following :

- Poverty reduction
- Environmental protection
- Good governance
- Social security and justice

## **5. Reasons of Land Fragmentation**

The following are some of the reasons for land fragmentation :

- Non-creation of alternate employment
- Increase social and culture activities
- Not adequate irrigation facility
- Property distribution within the family

## **6. Necessity of the Programme**

The gradual increase in land fragmentation and scattered small parcels belong to a land owner causes the following negative impact :

- Difficult in getting returns against the investment
- Considerable investment required to manage necessary irrigation facility
- Difficult in use of manures, pesticides and even to monitor the activities
- Expensive to use modern equipment
- Difficult to increase in agriculture employment

So, to overcome these issues the following activities should be envisaged :

- To organize and to make progressive the traditional agriculture profession
- To adjust scattered small pieces of parcels or near by parcels to one piece of land
- To manage canal, road, manures, seeds, etc .
- To fence and to maintain the boundary to use improvised tools.
- To discourage land fragmentation and to determine the minimum size of agriculture land.
- To develop agriculture system through land consolidation approach.

In the mean time land fragmentation should be discourage. Some of the measures or to control land fragmentation are following :

- Legal provision should be made not to make a parcel smaller than a specified size and the distinction should be made for urbanization and agriculture purpose
- Legal provision also should be made such that ownership could be changed while land fragmentation but the land should not be fragmented during distribution of hereditary property
- First priority should be given to neighbour during land transactions of minimum size parcels. In such process, a single parcel number should be given after amalgamation of two or more parcels and registration fee should be exempted
- Gradually reduce the people depend on agriculture profession in other words divert the people of this profession to other sectors of economic development.

## **7. Methods of Land Consolidation**

As the topography of the country has a diverse nature so a single system is not feasible throughout. Consequently, a method should be designed as per the nature of the terrain. Hence, land consolidation and land fragmentation control programme can be launched in selected areas of the country as a pilot project. Based on the results, an extensive campaign to convince the people is inevitable and should give them opportunity to implement the programme by their own initiation. The leading organization should play a role of facilitator to provide financial, technical and legal advices to these people, groups or organizations.

Some of the methods of land consolidation are as follows :

- Mutual transformation of the land
- Cooperative or group farming system
- Leasing the land
- Distribute land by the Government after land pooling
- Intensive farming by a single person

## **8. Expected Result**

The following results are expected after the implementation of land consolidation programme :

- GDP will be higher due to increase in agriculture production .
- Decline in dependant on others in food sector
- Help in development of group work
- Construction of infrastructure framework
- Increase in employment opportunities due to creation of agriculture industries
- Alleviate poverty
- Preservation of environment
- Create a background for sustainable development in agriculture sector.

## **9. Conclusion**

From the discussions it is clear that land management and land fragmentation are directly linked with land administration, which could be handled carefully if a reliable cadastral data and information are available. Furthermore, the land consolidation programme cannot be handled by a single organization as it has a direct relation with number of organizations so the leading organization should also play a role of proper coordination. In order to increase the agricultural production and productivity, an appropriate land consolidation approach should be adopted depending upon the nature of the terrain.

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