

INTEGRATED APPROACH TO LAND USE PLANNING

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Sri Lanka's economy is heavily dependent on agriculture which provides about one-third of the gross national product, more than a half of all employment and about four fifth of total export earnings. Fundamentally for agricultural production, land is the medium in which the crops are grown. Of the 6.5 million hectares of land area of the country, apart from the area already used for agricultural production inclusive of plantation crops, there still remains another 2.7 million hectares available for cultivation. However, as the present population of 16.2 million in the country increases at an average annual growth rate of 1.7 percent, the per capita land resource is dwindling rapidly and is projected to be halved before the dawn of the next century. There will also be further correspondingly increased demands for land for uses such as housing, industry, recreation and transport, particularly as these sectors of the economy are developing at a faster rate than that of agriculture.

Total land resources of Sri Lanka are limited but constant. It is a national resource which could be used indefinitely if correctly used and scientifically managed. Therefore in an agrarian society the need for executing a systematic planning strategy for optimal and rational use of this limited land area appears

highly opportune. There are several other good reasons to justify a comprehensive land use planning programme. Firstly, it helps identification of the type of change of land use and the location that would increase agricultural production and employment opportunities in the rural sector. The different land forms present within the country including centrally located hilly and mountainous terrain, especially in the critical water sheds with a high rainfall intensity, are susceptible to soil erosion if conservation oriented cultivation practices are not adopted. Erosion of nutrient-rich topsoils, reduction of rooting depths and thus available water holding capacities of the soil are leading to reduction of crop yields and of stream flows in dry periods. Consequent silting of reservoirs and frequent flash floods (due to reduction in carrying capacity of streams) are some of the deleterious effects of misuse of land that lead to a squandering of resources and puts at risk the livelihood of the whole community.

Land use planning could be described as the process of judging the worth or suitability of land for various kinds of land use. This includes assessment of physical, social and economic conditions for the purpose of selecting and

adopting kinds of land use and courses of action best designed to achieve specified objectives. It entails a multidisciplinary approach, embracing geomorphology, soil science and soil survey, geology, climatology, ecology including vegetation and wildlife studies, forestry, agriculture, economics and sociology.

In Sri Lanka, initially there has been a rudimentary attempt made to embark on a land use planning strategy as far back as 1935 with the enactment of the Land Development Ordinance. The mapping out procedure set out in this Ordinance was a major step forward in the systematic and rational allocation of land. The procedures were however, more of an administrative and legalistic nature and became defunct some years later. Again, in more recent years as a result of the revision of these activities, there have been a number of agencies responsible for carrying out basic studies and surveys in relation to land use planning. Amongst these the Land Use Division of the Irrigation Department was responsible for the preparation of Land Suitability Maps for a few districts, at the request of IRD Programme implemented by the Ministry of Planning and Palm Implementation.

Although there is a multiplicity of ministers and agencies involved in land use activities, the Ministry of Lands and Land Development at present coordinates Land Use Planning in the country. Conceptually there are three levels at which Land Use Planning is useful; national, district and local levels. Planning at national level involves formulation of policies applicable to the entire country including those for conservation and protection of the environment. The Inter Ministerial Co-ordinating Committee on Land Use and Development comprising the Secretaries of the Ministries concerned with land use and other departmental heads of these ministries form the forum at the national level.

District level planning, it is felt, is the most practical level where land use plans could be prepared once the priorities have been identified within the district. A district is considered conveniently sized to be able to be managed as a unit for practical planning and subsequent implementation. It is at the district level that the policy decisions made at the

national level could be implemented. At this level, the District Land Use Planning Committee (DLUPC) is responsible for proposals and drafting land use plans for the district under the guidance of the Government Agent. All the local heads of government departments and institutions concerned with land use activities are included in the committee. A technically trained Land Use Planning Officer will be attached to the Land Branch of the district Kachcheri to service this committee. Any proposals in relation to land uses from departments will have to be brought to this committee.

When such proposals are brought before the DLUPC, the Land Use Planning Officer is expected to undertake a land suitability evaluation to ascertain the suitability of the proposed land for the projected land use. Further, if that particular land is not suitable, he might be able to indicate a suitable area elsewhere in the district. Amongst others, the kind of tasks with which the Land Use Planning Officer is expected to be involved include planning of new settlements, agricultural and forestry projects, planning for improvements in land use and land management of already farmed areas, and assessing the consequences of these changes in terms of their effects on the environment.

Preparation of an Indicative Land Use Plan for the district is yet another important aspect of this strategy. It entails the delineation of different land units on the basis of landforms, slope classes, climatic parameters and present land uses. This plan provides the base on which land use changes are to be effected.

Although with the devolution of power and establishment of a new administrative structure on the basis of Provincial Councils, it is likely that there will only be minor changes in the district level structure and composition. It could be said that the most striking feature of this strategy is the integrated approach to land use planning, which hitherto has been based on compartmentalised decision making by various agencies.

Any planning process, as a major component, involves problem identification and suggestions to ameliorate those problems. This requires collection and analysis of various types of data related

to a particular subject area. The same is true in relation to land use planning. Data required include those of a wide range of disciplines, as was discussed above. As a matter of fact, many government departments and institutions do have some of these data generated and stored as their normal functions. Rapid development in the field of computers have enabled large data bases to be created on land from parameters from all these disciplines, leading to more rapid and more efficient processing of data. Thus a computerised data base will be established to include the data required for land use planning which hitherto were available separately in different organizations. The computerised data base basically consists of various systems known as Geographic, Land and Soil Information Systems. It is a store of information both in its primary form and processed in various ways, from which answers to questions in relation to land use can be retrieved and presented rapidly as statistical tables and charts and in cartographic forms such as maps and three-dimensional block diagrams.

The establishment of the Land Use Policy Planning Division in the Ministry of Lands and Land Development was the first move towards the implementation of the strategy outlined. A grant from FAO and assisted in the initial stages, and a subsequent soft loan from the Asian Development Bank is responsible for the continuing institutional development. Under this, financial assistance is extended to the Survey and Irrigation Departments for expeditious production of aerial photos and other relevant maps, and generation of topographic and soil information respectively.

The District Land Use Planning Committees spelt out have now been formed in all the districts except the much troubled North and East, and the Land Use Planning Officers responsible for coordinating the activities have also been recruited. They are being trained in land use planning techniques before sent out to the respective districts. In keeping with the multidisciplinary approach envisaged, officers specialised in related disciplines have also been appointed. Therefore, the stage is now set for all concerned with land use to be more conscious and extend their co-operation in this national effort.