4 AGRICULTURAL POLICY AND LAND USE PLANNING

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Introduction

Agricultural development is a complex process of interaction between the physical input-output relations of the agricultural system and the social and economic milieu of the national economy in a dynamic equilibrium. Land use planning is a strategic planning exercise to assess the future potential of the agricultural sector and achieve accelerated growth through judicious management of land and water resources.

There are two misconceptions about the Land Use Planning (LUP). One is that the LUP is relevant for the developing countries only. Secondly, some opinion makers in the developing countries like India which are now experiencing liberalization of industrial sector, have the misconception that opening up agricultural sector to the free market forces at one go, even without any agreed agricultural policy, will bring about a significant boost in the growth rates of agriculture.

This paper, however argues that the sluggish growth rates during the post-green revolution scene are not the result of a technology gap alone but a more serious structural deficiency in the agricultural sector. The challenges of supporting an expanding economy has imposed complex demands on a traditional agricultural system which has essentially underdevelopment - both institutionally and socially. Agriculture itself has become increasingly complex and needs a new set of rules and institutions to bring about this structural readjustment. Now more than ever, the entire gamut of social, economic, institutional and legal dimensions of agriculture have become very relevant in addition to a reappraisal of the traditional technology. Only then, the market forces can be moulded to subserve:

- the interests of 60 per cent of the population still dependent on agriculture and
- align Indian agriculture to the impending globalization envisaged in the World Trade Agreement (WTA). In fact, this limited restructuring has now become necessary for the developed countries also to prepare them to fulfill their obligations for globalization under the WTA without jeopardizing the farm incomes and the flow of technology and capital into the system.

This paper attempts an analysis of agricultural development and the role of Land Use Planning (LUP) in three sections:

i. The historical perspective to agricultural development and role of technology and management in accelerating growth rates.
ii. Land Use Planning (LUP) as resource management tool; for formulating strategic agricultural policy initiatives for development.
iii. Land Use Management as a dynamic concept involving-

- Land-water relationship to assess production potentials in river basins/regions
- Land-people relationship to assess employment and income potentials in river basins/regions; and
- Land-capital relationship in a micro-watershed plan for a local community level investment plan for developing countries.
**What Land Use Planning?**

According to the Agricultural Economists, the third stage of technology transfer for agricultural development is defined as "capacity transfer". Assuming that the green revolution had leveled of the 1970s, India had been waiting for the accelerated agricultural development across all the subsectors of the economy covering the food, feed, fibre, fodder and forest products, the technology initiatives such as the Lab-to-land programmes and the National Agricultural Research Project (NARP) from 1979 onwards have not been able to produce the desired results. The facts are:

i. The growth rates in agriculture has remained stagnant over the past twenty years around 2.5 per cent compared to the rest of the economy averaging between 5-7 per cent.

ii. The continuously favourable monsoon over the last ten years also have boosted the growth rates beyond the "Hindu rate of growth", and

iii. Though the share of agriculture and allied sectors in the GNP fell to 26 per cent the population dependency upon agriculture still hovers around 60 per cent.

The above facts clearly indicate that the agricultural development has now become a complex process and that a system approach is called for to chart out the future growth path. We need fresh reevaluations of the strengths and weaknesses of the agricultural resources base, land and water, for each river basin and identify the impediments to the flow of technology and infrastructure investments at the macro level.

Land use planning (LUP) is a complex subject. This is a management process aimed at integrating the social, economic and legal aspects of agricultural economy in which the agricultural production system is operating. The LUP assesses the production potentials of various agro-ecologies at sustainable levels and matches them with the market forces. Quantitative assessment or simulation is attempted to superimpose these production potentials over the environmental constraints to delineate strategic plan for the regions or river basins. The external environment that facilitates this dynamic production system is codified into a forward looking Agricultural Policy. The cost of converting the potentials into achievable targets of production are worked out at the micro-watershed or community level.

The strength of LUP is in prioritizing all land use (in a zero-base budgeting context) according to its capability coupled with the renewable water resources availability. Our definition of agriculture and allied sectors include production of the 5Fs - food, feed, fodder, fibre and forest products. Besides the cropland, it includes assessment of suitable production capacities of forests and other land-based activities such as animal husbandry and inland and coast fisheries sectors.

LUP is not a subsectoral plan but is an integrated approach covering preparation of strategic plans at the national and regional levels as well as district community level investment / programme planning. This, essentially is a bottom -up planning process where the investment decisions are left to the stakeholders, the national priorities are codified in the strategic plans and the overall agricultural policy governing the linkages with the rest of the economy are worked out.

The process of planning is required to match with the dynamic process of growth in equilibrium. It is, therefore, necessarily an iterative and continuous process. This feature is important for annual monitoring and correction in management context. The dynamic equilibrium is in terms of managing the internal resources optimally and in harmony with the changes in the external factors such as social, legal, and economic changes in the national economy.
Objectives of Land Use Planning

The Objectives of Land Use Planning can be summarized as follows:

- to quantify the agro-ecology factors that define the categories of land use and optimal cropping patterns
- to integrate the economic/market relationships of the input-output matrix that governs the acreage and production relations under the particular crop regime identified for the category of land use identified
- as a tool for benchmarking farmers' managerial index and his capacity to absorb capital and technology and charting out ways and means of enhancing it
- to identify the institutional infrastructure needs for promoting "brand equity" and usher in the commercial/industrial status to agriculture; and
- to help in reorienting the departmental perspective from present top-to-bottom departmental (compartimentalized) approach to a bottom-up management process with the participation of all stakeholders in agricultural development.

Suggested Plan of Action

Two conditions must be met if land use planning is to be useful:

- the need for changes in land use, action to prevent unwanted change, must be accepted by the people involved and backed by a proactive community
- there must be political will, ability and vision to manage the development of agriculture cutting across the departmental vested interests.

If the foregoing conditions are met, the benchmarking exercise in land use planning could be taken up by the individual states immediately. Once ready, these could be integrated to come up with perspective plans for the management of land and water resources in the major river basins. A national perspective plan for management of land and water resources can be put together by the National Landuse & Wasteland Development Council as a part of its agricultural policy formulation exercise.

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