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INTEGRATED AREA DEVELOPMENT WITH REFERENCE TO THE DISTRICT PLANNING

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The Community Development movement which was started 20 years ago in the country with the principal aim of achieving integrated area development in the rural sector could not cover the spatial nature of the functional integration which is also necessary for the rural development in the country. Rural development cannot be achieved in isolation. It is to be linked with the urban development as well. To achieve this, necessary linkage between the villages and towns has to be provided and the location of the several socio-economic facilities studied in detail.

The recent buoyancy in agriculture in India as a result of green revolution has brought to light the inadequacy of several agricultural services in the rural sector. It has, therefore, become necessary to study the growth factors which not only accelerate the process of development but also enable the community to retain its viability for the optimum economic development. As the facilities cannot be located in all the human settlements, *i.e.*, villages, because of the required "population-threshold" to sustain the facilities, it is essential to identify some of the potential centres where the facilities can be located. Such centres, functioning as a *hub*, from which the development radiates to the outside territories are the "Growth Centres" in the micro-level theory of planning. The 'Central Place Theory' developed by the sociologists and the geographers plays an important role in the growth centre-concept.

The Unit of Planning

The "Area Approach" requires at the very outset a clear and concrete definition of area as apart from a region. A particular region which is a vast area comprising a number of districts is not suitable to be taken as an unit for planning in view of the heterogeneous characters and also the administrative difficulties. The unit adopted must be a clearly demarcated one for this type of planning. In the Pilot Research Projects in Growth Centres which are now taken up by the Government to formulate Integrated Area Development Scheme, the unit adopted is a block. But we feel that the unit for planning must be a district and not a block or even a taluk. Perhaps, the Government may take up the district as the unit in Round II Planning. In view of the limited area and resource potential available in the block an integrated area development programme cannot be chalked out beneficially to the maximum possible extent. If a district is taken as

an unit the vast number of resources together with the infra-structure facilities available in the district for both the agricultural and industrial development can be taken into account for the formulation of this plan as against the limited scope in the block. It will be more meaningful to study the impact of various socio-economic facilities and also the market flow of the agricultural produce in a district as a whole than in a block since it will be more vivid and clear-cut in the former. Further, the potential growth centres can also be identified more easily and correctly and the number of potential growth centres can be limited to the optimum number, if the district is considered as the planning unit than by considering the bloc as the unit at the first instance and then extending the plan to all the blocks in the district, which gives scope for the creation of inter-inconsistencies between the blocks. In view of the formulation of a resource-based integrated area plan for the district, the financial commitment for the preparation of the project inventory will not be much. Hence, the unit of planning must be a district and not a block for the formation of integrated plan for the optimum economic development of the area.

If the emphasis is to be on the balanced development of different regions, then the backwardness of the regions can be studied with reference to the economic indicators like land utilization pattern, irrigation potential, the available raw material and the infra-structural facilities like water and power, transportation, marketing and storage facilities and also the necessary linkages with the higher level of centres. These economic indicators will certainly indicate the level of the economic development of a particular region regarding the production potential, consumption level and the marketing capacity of the area. Depending upon the level of the economic development of the backward regions, the integrated area development plan suitable to the region can be formulated taking into account the availability of the resource potential and necessary infra-structural facilities that are to be created in the area taking into consideration the gaps that are identified dur ng the inventory period. Of course, depending upon the nature of the backwardness of the region, special schemes can be formulated in special tracts like tribal areas or chronically drought affected areas, etc.

Technique

At pesent the plans are prepared generally on the macro-level theory of planning. Depending upon the financial limitations, plans are formulated for the State and district segments are prepared. These district plans are mainly meant to meet the general requirements of the region as a whole but not the specific local necessities and the utilization of the available resource potential. The district plans are generally need-based and not resource-based. The new strategy of the Integrated Area Development Plan takes into consideration the requirements as well as the resource potential that can be utilised to the maximum possible extent.

The integrated area development in the context of the growth centre strategy requires an appropriate technique for locating the growth centres. In this connection, the modified Central Place Theory can be considered as the proper technique to identify the potential growth centres in the study area.

Taking advantage of the inter-dependence of the socio-economic facilities that are existing in the study area, various methods using the extensive location specific data on fixed activities and movement have been developed to identify and classify the potential growth centres to meet the local needs and plug the gaps getween the present service and the development standards. The movement of the people and produce to and from the centres, the economic activity, the capacity and potentiality of the places to serve as the growth centres in relation to the level of development and their position in the transportation network, the number and the types of inter-dependent services available in the settlements are also considered during the analysis of the data.

(1) At the first stage, the shortest path between all the points in the transportation network in the study area is determined adopting "Dijkstro's alogarithm" programming technique.

(2) The minimum number of points and their location is determined so that no settlement is farther than a specified maximum travel distance from at least one of the points adopting Heuristic Mathematical Programming technique.

(3) The location pattern in space for a fixed number of facilities is determined so that the aggregate weighted potential travel distance is minimized.

(4) On the basis of the "Proximity Criteria" the location of the settlements and service centres is determined by demarcating the service territories of each of the facilities so that each settlement of the hinterland is assigned to its nearest facility centre along with the shortest path.

(5) These service centres selected for their optimal spatial pattern are modified based on the "Centrality Scoring Technique." The optimal spatial solution is compared with the ranking given as per the centrality scores and if necessary proximal centres from the list are substituted to reflect the growth character of the settlement of the region and it is done by balancing the spatial efficiency with the other factors like the travel preferences and the existing infra-structure development, etc. The degree of spatial inefficiency introduced by any paticular set of modifications can be measured by computing the weighted aggregate potential, travel distance in the study area as well as the individual service areas and comparing these with the corresponding values obtained in the original optimal spatial solution. This process of balancing the spatial location with the actual facts of the institutional development, present utilization, etc., is to introduce some of the spatial and

economic realities which cannot be treated in the same mathematical way as spatial accessibility.

Thus spatial analysis of the traversable distance from one settlement to the remaining settlements is done by computerisation methods and finally the centres with the different levels of the maximum traversable distance from the other settlements are identified. The hierarchy of these centres is computed depending upon the maximum traversable distance. The higher order centres possessing higher level of facilities can be termed as "Growth Centres" while the lower order centres possessing the lower level essential facilities termed as "Service Centres." Thus the service centres possess the minimum essential facilities required by the hinterland population while the growth centres possess the facilities of a higher order. And hence the "growth centres" can be identified in the urban areas, while the "service centres" are in the rural areas.

Thus the growth centres are identified by the technique of vetting the central place theory adopted earlier in the other projects. This new technique for the location of growth centres is now being adopted in the Pilot Research Projects that are now functioning in the 20 selected blocks in the country. This method can be extended to the district when it is taken as a unit for planning for the integrated area development programme.

The Guttman's scale method that is adopted in some of the Pilot Projects cannot be independently adopted to identify the growth centres. It can best be utilised as a cross-check when once the growth centres are identified by the Central Place Theory. Since the Guttman's scale takes into consideration only the existing socio-economic facilities that are available in a particular centre and also presumes the availability of all the lower order functions in a centre of higher order, but not the spatial interaction of the facilities between the settlements. We, therefore, feel that this method cannot be used primarily to identify the growth centres. It can best be used supplementarily as a cross-check for the verification of the growth centres, identified by the Central Place Theory, utilizing the ranking given to the settlements by the Guttman's scale.

Evaluation

At present in the 20 Pilot Research Projects that are now functioning in the country, the integrated area development plan is prepared after formulating the general settlement plan to identify the growth centres and the various sectoral plans under Agriculture, Public Health, Education, Industries and Transportation. The integrated area development plan is evolved by the super-imposition of the general settlement plan and the sectoral plans and after due reconciliation of the intra-controversies of the plans. This is the best technique that can be adopted for the formulation of the integrated area plan in the study area.

But the main problem arises in its successful implementation. As per the present pattern, the plan formulated by the Pilot Research Projects has

to be included in the district plans and implemented by the State agencies. We feel that these plans may not be successfully implemented if included in the normal district plan, since the schemes proposed under the integrated area plan may not find their due priority in the normal plans prepared by the different developmental departments.

As the scheme is now a pilot scheme, its proper and successful implementation is a *must*, if this methodology is to be extended to the other areas in the country. And this will be possible only when necessary funds are provided to the project staff for the creation of the infra-structure facilities as well as the implementation of the integrated area plan formulated during the inventory period. Since the plans are formulated through the detailed study of the resource potential available and the gaps that are to be plugged in, the project personnel can efficiently implement the plan drafted by them. Hence, the Pilot Research Project which is now basically only a research-oriented programme must be suitably modified into an action-oriented programme so that the formulated plan when properly implemented can become a model fit to be extended to the other areas at a later date.

Also the other programmes like the pilot intensive rural employment programme, etc., can easily be fitted into the integrated area development plan. The funds provided under these programmes can be utilized for the implementation of the integrated area development plan since this plan is also meant to create the necessary rural employment potential during its implementation. The main idea of the Community Development and Extension Programmes, the Intensive Area Development Programme, etc., which were now implemented is the intensive development of the area by pumping in the necessary funds and inputs to the maximum possible extent for the development of agriculture and industries to some extent. To intensify the agricultural practices on an extensive scale employing all the improved package practices is the main aim of these programmes but they have not taken into consideration the spatial interaction of the various socio-economic facilities, the infra-structural facilities and the raw material available in the area. But the strategy of integrated area development programme takes into account all the above factors, identifies the gaps to be plugged in and then programmes for the overall development of the area under the different development sectors creating the employment potential simultaneously.

Hence, the integrated area development programme implemented as a 'crash programme' with all the required funds will certainly meet the demands of the rural population improving the rural economy besides linking the rural areas with the urban sectors which is essential for the balanced growth of economic development* in the country.

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* Reference : S. M. Shah, "Development through Growth Centres," *Kurukshetra*, Vol. 20 No. 3, November 1, 1971, pp. 7-9.