SUMMARY

The process of transformation in its real sense involve change in totality. However, the term 'Change' as such cannot replace 'transformation' as the process of change is not tagged with any goal. In a country like India where traditions, religion, poverty, social customs etc. are deep rooted wholesale change, i.e., 'transformation' may hardly materialise. The rural habitat simply signifies the rural environment or the rural landscape. The transformation of the rural habitat in India is the final product of a number of pull and push factors, i.e, the process involving modernisation on the one hand and degeneration on the other. The transformation of the rural environment is the fundamental need for the growth and development of the entire national economy. The concept of the rural habitat transformation is not far from the concept of integrated rural development. The rural habitat transformation is the result of changes in different aspects of rural community in reference to space and time. Thus rural habitat transformation may be regarded as a process to solve the problems for the effective involvement of the local human and physical resources to improve the socio-economic and ecological conditions of the rural area.
The present work attempts to provide a comprehensive frame-work for a co-ordinated and balanced development of the entire region taking into account its resource potentials. Belthra Road Tahsil, the area under study, is one of the backward tahsils of Eastern Uttar Pradesh. It has a predominantly agricultural economy heavy population pressure and less-developed secondary sector. It extends between 25° 22'30" to 26° 11" N latitude and 83° 35' E to 83°55'10" E longitude in the middle Ganga plain covering an area of 365.47 square Km. and has a 317045 persons (2001). Administratively, the tahsil comprises of two blocks with 25 nyaypancyahats, altogether consisting of 261 inhabited villages. The whole study is divided into seven chapters.

Chapter first deals with the physical resource base. The study area is drained by the river Ghaghra, and tals and drains, the Chanda nala drain, the koylimohan tal drain, the sumrail drain and Gauri tal drain. The climate of the area is influenced by sub-tropical monsoons. The average rainfall received by the study area is 15.02 cm., 20.53 cm, 20.30 cm. and 19.46 cm. in June, July, August and September respectively and altogether it comprises of 85 percent of total rainfall received by the study area. The soils of the area may be grouped into three categories:

1. Entisols - These are younger alluvial weekly developed soil with no horizon and are found along river Ghaghra.

2. Alfisols - These soils are moist soils with B horizon of clay
accumulation and water available to plants for at least three consecutive months.

3. **Aridisols** - This is a saline and alkaline soils having low organic matter.

In the second chapter, human resources, trend of population growth, its general density, occupational structure, Educational attainment etc. have been discussed. There has been remarkable population growth during the last seventy years i.e. from 1931 to 2001. The decade 1991-2001 registered the 23 percent growth rate and if the population of the area continues to grow even at this rate the population of the tahsil would be more than 389965 till 2011 A.D. This tremendous growth of population will create difficult situation with respect to socio-economic development planning, provision of employment and various amenities to the people. Overall density of population is 867 persons/Km.². The density of population has increased approximately thrice times within last 80 years from 1920-2001 A.D. In 1991, only 35 percent population were literate in which 24 percent were males and 11 percent were females. But this figure increases in 2001 A.D. to 47 percent total literacy in which 30 percent were males and 17 percent were females. So the main task and real challenge to socio-economic planners is to convert this mass illiteracy into mass literacy for the development of human resources.

Biotic and water resources has also been discussed in this
chapter. There is wide potential to develop fishing and livestock resources are present in the study area. Lack of technical knowledge in upkeeping and maintainance of poultry and dairying and also non-availability of sufficient milk collection centres as well as transportation and marketing facilities are the main causes of not developing these subsidiary occupations. Only 28.5 percent of the total is working population, of which 50.3 percent comprises of cultivators and 24.9 percent of agricultural labourers. Thus, about 75.2 percent of the working force is engaged in agriculture. Household industries which provide employment to 7.4 percent working population, is of special significance in the economy of the area. The rest of the working population is engaged in commerce (5.2 percent), transport (0.8 percent) and other services (10.7 percent). Landuse analysis has also been made. There has been a major change in the net area sown. In 1991, the net area sown was about 65 percent which rose to 71.7 percent in 2001. It has been found that highly dense populated nyaypanchayats as Rampur chandeli, charaun, Ibrahampatti of Siar block and Awarai Kalan, Tadibadagaon, Jamuaon Khampur of Nagra block shows the high percentage of net area sown.

Chapter three deals with planning units and planning for the socio-economic services. It includes spatial organisation of service centres, identification of service centres, hierarchy of service centres, educational services, health services, marketing services and
administrative services. For this study, six functional groups, comprising of nineteen functions have been selected. The total number of settlements having primary and middle schools are 161, High School and Intermediate colleges are 11 and degree colleges are one. There are 9 Primary health centre and 43 family welfare centres. All the selected nineteen functions are clustered only in Belthra Road town, and fifteen functions in Siar and Belthra Bazar and 13 functions in Rampur Chandela and Farasatar. Accessiblity of transport net-work very much influences very much the process of clustering of functions which is clear from the fact that settlements having more than 8 functions are generally located along the roads. To identify service centres three basis assumptions have been made:

1. It must have atleast three functions from different groups.
2. Atleast 0.25 percent population must be engaged in Commerce.
3. It should serve a certain area whose inhabitants are dependent atleast for some of their socio-economics requirement, and 
4. It should be a permanent human settlement with more than 300 population.

Thus 29 service centres have been identified. Taking multiple criteria, i.e. average of the percent value of functionality and commercial index, composite index of the each centre has been calculated. Due to the concentration of diversified functions and high commercial population Belthra Road has got very high Coi value (77.54)
In chapter four, planning for development of transport and communication has been discussed. In this chapter impacts of road development has been discussed in detail. The total length of metalled road is 282 Kilometre. Only 4 nyaypanchayats have high road accessibility i.e. above 90 percentage. They are Tendua or Siar, Belthra Bazar, Rampur Chandela and Bihraharpur. Here there is only one rail route i.e. Varanasi-Mau-Bhatni rail route whose length in our study area has 25.5 Km. In the study area there are 48 post offices and 631 telephone connections which is quite less and their services are poor which require quick improvements.

Chapter five deals with the planning for the development of agriculture. Over vast areas of the region, agriculture has continued to be traditional in character resulting in low yields, limited income and lack of capacity to invest. Sze distribution of agricultural holdings has been determined by taking four sample villages. It has been found that small and marginal farmers are about 38.4 percent, while about 44 percent are landless labourers. Agricultural land occupancy of main crops like wheat, rice, and sugarcane shows a strongly positive correlation with irrigated area and net area sown. The major source of irrigation in the study area are the 'Pacca canals' of the Dohrighat project. The other sources are pumpsets and private tubewells. The highest pressure on land is found in Belthra Road. This high pressure is due to the physical suitability, fertile lands and transport facilities.
Because main rail route i.e. Varanasi-Mau-Bhatni rail route and main road route i.e. Ballia-Belthra road-Gorakhpur road route passes through Belthra Road.

Poor financial condition, small land holdings and high cost are the main obstacles in the use of improved agricultural implements and inputs upto 1997, there were 341 tractors, 3912 iron ploughs and 6598 wooden ploughs in the study area. It is interesting that in the study area, some of the small and marginal farmers are using tractors for ploughing their fields on a hire system. This hire-system is due to the high cost of pair of bullocks and much maintenance cost with increasing demands for cereals, increasing means of communications, high yielding varieties of seeds, the use of chemical fertilizers is also increasing in the area. In 1997, it was 5991 metric tons while it increases to 6451 metric tonne in 2000 A.D. On the basis of production of 10 main crops, and area occupied by these crops, the agricultural efficiency has been determined. Highest efficiency is found in Siar block and low efficiency in nagra block. The low efficiency areas lies in the Usar patches where there are major livestock resources like bullocks, cows, buffaloes, sheeps and goats etc. are found. For this dry lad area, planning has been given for dryland farming.

Chapter six deals with the planning for the development of industrial infrastructure. The study area is industrially very backward
because not a single big industry is present. The reason is unavailability of regular supply of electricity. So, only small-scale industry are present, like brick, oil-crushing, Flour Mills, watch repairing centres, pulse mills, Rice mills etc. Here sugarcane industry can be opened if problem of electricity is solved. Here hydro-electricity generation plant can be established near river Ghaghra which can generate electricity from July to January, because there is sufficient water in river Ghaghra during these months. There will be eindustrial revolution in the study area because this area will have 24 hour regular supply of electricity.

In chapter seven Integrated Planning Proposals has been suggested. Integrated rural development is vitally related with the concept of balanced rural development and is a comprehensive and complex phenomenon. It lays more emphasis on the usefulness and optimal utilzation of the local resources. It does not mean isolated or sectoral development such as 'Community development,' ' rural amenitation,' agricultural extension, or any such type of programmes but it means rather comprehensive development of total rural life and the removal of spatio-functional inequalities and imbalances as well as decentralization of organisational system. With this approach, a attempt has been made to make relevant suggestions for the balanced rural development, keepign in view the area potentialities.

The major problems in the study area are related to physical resource-base are floods and droughts, soil erosion, Usar lands, water-
logging etc. Construction of dams and embankments, afforestation etc. would be helpful in protecting flood prone area and human life and property. Soil erosion can be controlled by constructing buds, contour ploughing and proper afforestation. Through soil erosion control the area can provide additional foodgrains per year. The use of high yielding varieties of paddy and wheat are well-known for their high response to the fertilizers. It is, therefore essential that the position with regard to the availability and proper distribution of fertilizers should be reviewed by the authorities. The main recommended varieties for the study area for paddy: IR-8, IR-4, Mansuri, for wheat: K-68, RR-21, etc., for bajra: Shankar, for sugarcane: B.O.-17, B.O.-32 and for Potatoes: Chandramukhi, C-40 etc.

It is anticipated that proposed development plan if implemented in the proper manner will provide adequate benefit to the villagers as a result of Integrated Rural Development.
## Comparative Study of Densities of Belthra Road Tahsil

<table>
<thead>
<tr>
<th>NYAYPANCHAYATS</th>
<th>RURAL DENSITY</th>
<th>PHYSIOLOGICAL DENSITY</th>
<th>AGRICULTURAL DENSITY</th>
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<tr>
<td>Lohtapachdaura</td>
<td>750.02</td>
<td>896.67</td>
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<td>Mohammadpur</td>
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<td>Bankara Said Bukhara</td>
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<td>Chandadih</td>
<td>698.55</td>
<td>808.26</td>
<td>753.09</td>
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<td>Farsatar</td>
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<tr>
<td>Sisankala</td>
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<td>Rampur Chandella</td>
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<td>Kidiharapur</td>
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<td>754.12</td>
<td>990.87</td>
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<td>Belthra Bazar</td>
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<td>1777.93</td>
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<td>Tendua</td>
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<td>Sonadih</td>
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<td>Bihraharpur</td>
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<td>Bhimpura No. 2</td>
<td>795.25</td>
<td>811.95</td>
<td>884.63</td>
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