CHAPTER VI

UTILISATION OF LOCAL BASED NATURAL RESOURCES UNDER I.R.D.P.
An attempt has been made in this chapter to analyse the role of Integrated Rural Development Programme in utilizing the local based resources. It has also been analysed as to how the local resources are being managed and what effect it has made on the rural economy. It may be mentioned that different studies has been made in connection with the utilisation of natural resources through Integrated Rural Development Programme.

In this connection it is necessary to mention that (i) water (ii) fuel (iii) forest besides agricultural resources that is (sugarcane, ground-nut, oil-seeds, soyabean, paddy, paddy-husk etc.) are the natural resources which are mostly available in the area under study. The local based natural resources can broadly be classified as under:-

(i) Agricultural resources
(ii) Water resources
(iii) Fuel and Forest based resources.
(iv) Animal based resources.
(A) Milk and milk products, dairy etc.

(B) Poultry

(C) Bee-Keeping

(D) Fisheries

(E) Animal skins and animal bones.

As more and more thought is being best owned on the socio-economic transformation and development of villages. It is now felt that the development of the village would be possible only by tackling the total natural resources, land, water, forest, energy and environment in an Integrated manner. Uttar Pradesh is heading fast towards economic development and the utilization of local based resources. The village itself has been considered as an important step towards eradicating rural poverty and unemployment.

The problem of utilization of local based recourses is related with the availability of forest, fuel, etc. It may be mentioned that large area of forest in the country are reported to have been deforested during the last 25 years, the basic reason being increase in
population industrialization and pressure for greater exploitation of water, minerals, and forest products. There has been indiscriminate felling of trees, destruction of forests and loss of fertile soil.

The surface water supplies such as ponds, canals, and tanks are invariably polluted by pathogenic organisms. The ground water which is generally clear due to natural filtration action also possesses problems due to presence of excess fluorides and iron manganese. In some villages, people regularly use water with a salinity as high as 20mg/litre similar in the position about disposal of human excreta, which is a basic requirement of a health environment.

These and such other conditions when analysed in the context of socio-economic transformation and development in rural areas, reveal that there is an urgent need of tackling the total natural resources system-land, water, forest, energy and environment in an Integrated manner and harnessing these for the maximum good of the maximum number. Integrated Rural Development Programme has been adopted not only for agricultural development but also
for utilisation and laying down proper management of the local based natural resources, i.e. water, fuel, forests, cow-dung etc.

Before analysing the role of I.R.D. Programme in utilising the natural resources, it is necessary to mention the importance of local based natural resources in the development of the village economy, land, water, forest, energy, crop, plants, domestic animals and microorganisms are the principal sources of productive activities and means of substance in rural areas, knowing the linkage of mankind with nature and natural resources, the inherent social and environment advantages, there is tremendous potential of exploring and utilizing these resources for various beneficial uses of mankind and also all other forms of life.

**MANAGEMENT OF NATURAL RESOURCES**

The management of natural resources comprises :-

(A) Planning of resources.

(B) Integrated approach.
(C) Education, and

(D) Conservation.

(A) PLANNING OF RESOURCES:

The planning involves complication of an integrated resources inventory of the 'Programme areas'. Analysis of data and identification of unutilized and under utilized resources. Planning also includes identification of competent agencies who could be assigned tasks. This is followed by preparation of a strategy for development to match the science, local resources, and expertise in transference of the plan into action.

(B) INTEGRATED APPROACH

Integrated approach implies in its widest sense, the

- Integration of resources,

- Integration of technologies and
- Integration of economic and social factors in the best interest of the development of the local resources.

(C) **EDUCATION:**

Research and Development in various areas of natural resources is only a part of the total endeavor equally important is the pre. education of the beneficiaries, their active involvement and understanding. The education covers the following broad area.

(i) Making people aware of the programme in their own language;

(ii) Generating scientific temper among the people; especially the young people; and

(iii) Training in new skills to manage the programme.

(D) **CONSERVATION:**

This has a greater significance for future generations and means avoiding unwise and wasteful
use of local-resources. It may be mentioned that water is the backbone of agriculture and is also a scarce material. Such a scarce natural resource should be used not only with high efficiency to obtain optimum agricultural productivity, but also be conserved from losses through seepage, evaporation and transpiration. In general this example applies to all such other natural resources like land, forest, ground water, Fossil fuel or minerals.

The CSIR has also his trussed the utilization of local resources in a planned manner. The council is of opinion that if scientific approach of the management in local natural resources is undertaken in a definite under developed region, duly supported by scientists, technologists and engineers and through an integrated and multidisciplinary approach, it may accelerate socio-economic transformation and development in such areas. This may also indicate a scientific temper and awareness among the people and prepare them to
participate and receive the related development schemes better.

LOCAL BASED RESOURCES IN THE AREA UNDER STUDY

The area under study has varied natural resources which provides an adequate basis for building a diversified modern economy. It has already been mentioned that the area under study is mostly agricultural. The availability of the resources depends on the quality of land as well as the available irrigation facilities. The quality of land and the sources of irrigation in Sahar and Bhagyanagar Blocks can be seen from the table below:

**TABLE 6.1**

**LAND UTILIZATION IN SAHAR & BHAGYANAGAR BLOCKS (1994-95)**

<table>
<thead>
<tr>
<th>Name of the area</th>
<th>Total area. Hec.</th>
<th>Cultivable wasteland</th>
<th>present fallow</th>
<th>Other fallow</th>
<th>Uncultivable land</th>
<th>Land utilized other than Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sahar</td>
<td>28089</td>
<td>741</td>
<td>954</td>
<td>1298</td>
<td>1069</td>
<td>1927</td>
</tr>
<tr>
<td>Bhagyanagar</td>
<td>28171</td>
<td>110</td>
<td>1932</td>
<td>698</td>
<td>840</td>
<td>1775</td>
</tr>
</tbody>
</table>
TABLE 6.2

IRRIGATED & UNIRRIVATED AREA

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Name of the area under study</th>
<th>Nett irrigated area (Hec.)</th>
<th>Net unirrigated area (Hec.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sahar</td>
<td>15542</td>
<td>3718</td>
</tr>
<tr>
<td>2</td>
<td>Bhagyanagar</td>
<td>13362</td>
<td>4953</td>
</tr>
</tbody>
</table>

TABLE 6.3

ACTUAL IRRIGATED AREA (HEC) SOURCE WISE (1994-95)

<table>
<thead>
<tr>
<th>Name of the area under study</th>
<th>Canal</th>
<th>Tube Wells</th>
<th>Wells</th>
<th>Ponds tubes drain</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sahar</td>
<td>8651</td>
<td>6118</td>
<td>734</td>
<td>39</td>
<td>08</td>
<td>15550</td>
</tr>
<tr>
<td>Bhagyanagar</td>
<td>10797</td>
<td>2680</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>13507</td>
</tr>
</tbody>
</table>

LOCAL RESOURCES OF THE VILLAGES

(i) AGRICULTURAL RESOURCES:

The main local agricultural resources are Paddy, Wheat, Sugarcane, Gram, Oilseed, Mustard, Pulses, Oat, Lentil and different type of vegetables.

(ii) WATER RESOURCES:

The water resources of these villager are canals, drains, ponds, state tubewells, wells etc.
(iii) **FRUIT AND FORESTRY RESOURCES:**

The main fruit resources of these villages are mango, Black-berry, Mahuwa, Guava, Tamarind, Amala, Custard-apple, papaya etc. and main forestry resources are bamboo, Acacia, Neem, Fucalyptus, Tamarind, Sesam, Ber etc.

(iv) **ANIMAL BASED RESOURCES:**

The main animal resources of the villages are cow, ox, buffalo, she-goat, goats, horse, mare, camel, pig etc.

(A) Milk and milk products

(B) Poultry products

(C) Fisheries

(D) Bee keeping

(E) Animal skins and Animal bones.

**MANAGEMENT AND UTILISATION OF NATURAL RESOURCES OF THE BLOCKS UNDER STUDY**

**SAHAR BLOCK**

The total population of this block was 125676 According to census of 1991. The total Geographical
area of the block is 28089 hectares, its irrigated area is 15542 hectares the soil of the entire blocks is mainly alkaline and sandy loam and is good for cultivation of important crops such as:

Paddy, Wheat, Gram, Barley, Sugarcane, Oat, Potato, Pulses, mustard, oil seeds, Lentil, Kidney bean etc.

Likely, this block has good drinking water facility, P.H.C. facilities and also has community development facilities. The resources of the irrigation in entire block are ponds, lakes, canals, tubewells, etc. The total number of the beneficiaries covered under IRD Programme in this block at end of year 1997-98 was 427. The availability of local resources and its utilization has been analysed particularly of those villages which were surveyed during the course of this investigation.
(I) **Agricultural Resources**

(A) **PADDY** :

There is enough production of paddy in these villages. The paddy products are rice, paddy husk, husk, Lai (Chabena).

Bhusi & Parra of the paddy is used for manufacture of paper. So farmers out of 125 surveyed reported that they sell their Bhusi & Parra to different paper mills loan 500/- to 2000/- per annum.

However the Block has two rice mills and seven rice chakk is in which the local villagers bring their paddy patterning in to rice. The each rice mill has given employment to 50 persons of these five villages.

The mills have been given aid under Integrated Rural Development Programme. Electricity is also available to rice mills in these villages.
(B) WHEAT:

Wheat is the important product of these villages. Most of the families who were surveyed reported that wheat product is adequate to their needs.

These villages have six flourmills (Ata-chakki). Where the villagers come for flour purposes. The flour mill has given employment to 5% of these villages. It is run by electricity.

(C) POTATO:

The potato is produces in large scale in these villages. Every village surveyed reported to be producing potato on commercial basis. Potato is an important source of income. Every surveyed family reported that besides consuming potato they sell it and earn an average income of Rs. 2000/- to 3,000/- per annum.

Each family reported to be producing potato chips for their own use.
OIL SEEDS:

Oil seed is also produced by each surveyed family, although in a very small quantity. The main oil seeds produced in these villages are mustard, til, alsi, neem etc.

The village has 10 traditional oilseed crushing machines (Kolhus). Each kolhu is run by different family and has given employment to average 5 persons.

The neem seed is also crushed in the kolhus. Some families reported to sell the neem seed to business men of Kanpur and reported to earn annual income between Rs. 1,000/- to 2,000/-.

Five surveyed families of these villages reported that they had taken loans from the banks under Integrated Rural Development Programme and have established small scale industries for the manufacture of soaps from the neem oil and alsi oil. This industry has given employment to an average of 4
persons. The families reported to be earning Rs. 200 to 300 per month from this occupations.

(II) Water Resources

Sahar block has practically no water resource. Which may be made available for generating employment in various fields. Yamuna river flows through Etawah district. There are two canal which flow through Sahar and Bhagya-nagar blocks and they are used for agricultural purposes only. The other water resources of the block are canals, ponds, tanks, drains etc.

This nominal water in Sahar block is a resources of fisheries product too. In this connection different facilities have been provided for fish production through Integrated Rural Development Programme. The annual estimated production of different types of fish through these canal in Sahar block were reported by the fisheries department Etawah as under: Rohu, Bhelsa, Tengana, Belgagara, Sahri etc.
(III) **Fruit & Forest Resources**

The main fruit local resources in surveyed villages are not adequate. 5% of the surveyed families reported that they sell their fruits products to different businessmen and earn Rs. 2,000/- 3,000/- per annum.

The main forest based resources of the area under study are very meager. It may be mentioned that the optimum standards requires that 16% in the area should be under forests. If we judge the whole district of Etawah under this criteria we find that only 5% of the area is under forestry. In case of the villages under study the percentage of forest is found to be lower. It is because of this reason that forest based resources in the area under study are very nominal and it has not given employment to many persons.

(IV) **Animal Based Resources**

The main animals of these villages are cow, ox, baffalos, she-goat, goat, horse, mare, pig. etc. and have given employment to 20% families. The surveyed families of Harpura reported that they sell 20 lit. milk and milk products to the dairy in Etawah. The surveyed
villagers reported that milk production of the villages is very low and dairy department has given aid under Integrated Rural Development Programme.

(A) POULTRY:

Poultry products have given employment to 4 families of surveyed villages. Poultry department has given subsidy from Rs. 1000 to Rs. 2000 per family under Integrated Rural Development Programme. The utilization of the grant received for poultry farming were reported as under :

(i) Purchase of deshi hens.
(ii) Purchase of white leg hens.
(iii) Purchase of poultry hens.

Only few families reported adoption of poultry as an occupation. Why is it so? Poultry farming has not given employment to many persons.

(B) FISHERIES PRODUCTS:

In surveyed villages fisheries products have given employment to many unemployed. E.g.
of lahrapur (02) Gulriya (03) Devri (01) Aseany (Nil) and Harpura (2) etc. Fisheries department gives the aid for deepening of ponds, purchase of Superior quality of fish, as well.

(C) BEE KEEPING:

Bee keeping is a useful business, by which beneficiaries get honey and additional income with out any essential labour and capital. This scheme is going on in several districts of Uttar Pradesh. Etawah district is one of them. In which in Sahar block this scheme is more developed.

Out of 5 surveyed villages in block Sahar one village name lahrapur has adopted Beekeeping scheme of Integrated Rural Development Scheme. The integrated Rural Development Scheme given the aid of Rs. 4000/- only, to every person for the purpose of Beekeeping and gives Rs. 2,000/- to very
person as subsidy in 5 surveyed villages only Laharapur has given employment to 10, persons.

(D) **ANIMAL SKIN AND ANIMAL BONES:**

They create jobs for 12 families in every surveyed villages such as Lahrapur 03, Gulriya 02., Devri-3, Aseany-1, Harpura-3 Animal Skins are used in making shoes, leather bags, purses, attaches, and other articiles, animal bones are sent to fertilizer factories for making chemical fertilizers.

**BHAGYA-NAGAR BLOCK**

Bhagyanagar block is situated to the west north of the district head quarter (Etawah). The block is well connected with Rail and Roads. The total population of this block was 128317 according to census of 1991. Every Gram Pachayat has a Rural Development Programme in this block. The total geographical area of the block is 28171 hec. and irrigated area of the block is 13362 hec. The resources of irrigation are ponds,
canals, private tubewells, state tubewells, lakes, drains and wells etc.

This block has good PHC facilities, drinking water facilities and also has community development facilities. The total number of the beneficiaries covered under I.R.D. Programme in this blocks at the end of year 1998-99 was 418.

The main agricultural resources of this block are paddy, wheat, barley, mustard, lentil, potato, pulses, oilseeds, oat, sugarcane and different types of vegetables etc. The other local fruit resource are mango, black-berry, lemon, papaya, guava, jackfruit custard apple etc.

The other local forest resources are Bamboo, Acacia, Neem, Cactus, Mahuwa, Eucalyptus, Banyan, Tamarind etc. and still other local resources are lotus, Plantin, Carrot, cucumber, Muskmelon Grass, Marigold, Rose, Tobacco, Belladona, Mint, Plant, Onion, Cauliflower, Betal, Spinach etc.

The availability of local resources and its utilization has been analysed particularly of those
villages which were surveyed. The details of the resources available in surveyed villages and its utilization is analysed as under:

(I) **Agricultural Resources**

(A) **PADDY**:

Paddy is the main product of these villages and there is enough production of paddy in these villages. The paddy products are rice, paddy husk, Lai (Chabenea) etc. Bhusi and Parra of the paddy is used for manufacturing of paper. 90 farmers out of 125 surveyed reported that they sell their Bhusi and Parra to different paper mills earn Rs. 500 to Rs. 2000 per annum.

However the villages have three rice mills and nine Rice chakkies in which the local villages bring their paddy patterning into rice. Each rice mill has given employment to 35 persons in these five villages.

The mills have been given aid under Integrated Rural Development programme.
Electricity is also available to rice mills in these villages.

(B) WHEAT:

There is enough production of wheat in these villages. Most of the families who were surveyed reported that wheat production is inadequate to their needs.

These villages have 8 flour mills (Aatachakki), Where the villagers come for flour purpose. The flour mills have given employment to 2 persons each. They are run by electricity.

(C) POTATO:

There is low production of potato in these villages. Every surveyed village reported to be producing potato for their own consumption and some families produced it on commercial basis. Potato is an important local agricultural resource of these villages.
Every 25 surveyed families reported that besides consuming potato they sell it and earn an average income of Rs. 2,000 to Rs. 3,000 per year.

Every surveyed family reported to be producing potato chips for their own use.

(D) OIL SEEDS:

Oil seeds are also produces by every surveyed family, although in a very small quantity. The main oil seeds produces in these villages are mustard, til, alsi, neem, mahuwa. The villages have 9 traditional oil seed crushing machines (Kolhus) as under: Khanpur =.02 Phaphund-05, Nagla Jai Singh - Nil, Kakor - Nil, Phaphund -Dehat -02, Every Kolhu is run by different families in different village and has given employment to 2 or 3 persons.

The neem and mahuwa seed is also crushed in the kolhus. Some families reported
that to have sold the neem and mahuwa seed to businessmen of Khanpur and reported to have earned annual income between Rs. 1000 to 1,500 only.

Five surveyed families of these villages reported that they had taken loans from the banks under Integrated Rural Development Programme and have established small scale industries for the manufacture of soaps from the neem oil and mahuwa oil and alsi oil. This industry has given employment to 5 persons. The families reported to be earning Rs. 250 to Rs. 350 per month from this occupation.

(Ii) Water Resources

Bhagya-nagar block has practically no water resource which may provide employment. Sengar River flow through Bhagya nagar and Auraiya blocks. Which is used only for agricultural purposes. The river fall in Ganga river which flows through Kanpur district. The
other water resources of the block are Bhagyanagar Rajwaha, Sahar Minor, Rampur Rajwaha etc. There are many ponds in this area. These village surveyed have ponds as under: Kakor-01, Nagla Jai Singh-02, Phaphund-03, Phaphund-Dehat-03, Khanpur-02.

The nominal water in Bhagya-nagar block is however, a resource of fisheries too. In this connection different facilities were provided for fish production through Integrated Rural Development Programme. The subsidy given to a family varies from Rs. 3,000 to 4,000 and has raised the standard of these families.

The annual estimated production of different types of fishes through the canal in Bhagya-nagar block is reported by the fisheries department Etawah as between 5 to 10 tonnes. The varieties are as under:-

Rohu, Bhelsa, Tengana, Belgagara, Sahri, Ponha, Sauri, Manguri etc.

(III) Fruit and Forest Resources

The main local fruit resources in surveyed villages are inadequate. 7 surveyed families of Phaphund-04 and Kakor-03 reported that, they sell
their fruit products to different districts and earn Rs. 500 to 1000 per year.

The main local forest products of the area are chair, table, stool, door, door-frame, bed, mat, tooth stick, almirah, match plate, basket etc. and different types of games articles. In this block we find that only 04% of the area is covered with forest. In the village under study the percentage of forest is very low. Due to this reason forest based resources in the area under study are very nominal and they do not give adequate employment.

(IV) Animal Based Resources

The main animal of the area are Buffalo, Cow, ox, She-goat, goat, Horse, pig etc. In surveyed villages the employment generated are 25% families. The surveyed families reported that they sell their milk and milk products to dairy of Etawah district. The milk production of the villages is very low and dairy department has given aid under Integrated Rural Development Programme for the purchasing of animals.
(A) POULTRY:

Poultry products are very low in these surveyed villages and have given employment to 2 families in the Bhagya-nagar block, such as kapkor-01, Khanpur-1, and the villages Phaphund, Phaphund-Dehat, and Nagla jai Singh have not poultry farming. Poultry department has given subsidy from Rs. 1000 to 2000 per family under Integrated Rural Development Programme. The utilization of the grant received for poultry farming were reported as under:

(i) Purchase of deshi hens.
(ii) Purchase of white leg hens.
(iii) Purchase of poultry hens.

(B) FISHERIES:

Fisheries products are adequate and provide employment to 12 families per village, such as phaphund -2 phaphund -Dahat 1, Khanpur 3, Naglajai singh -2 and Kakor 4. Aids between Rs, 1000 to Rs 3000
have been given by fisheries department for the development of fish trade.

(C) ANIMAL SKINS:

The main products of the animal skins are (skin basket for fetching water), bag, purse, key-purse, attach and other articles.

(D) BEE-KEEPING:

Bee-keeping is a useful business, by which beneficiaries get honey and additional income with-out any extra labour and capital. Out of 5 surveyed villages in block Bhagya-nagar two villages named Kakor and phaphund- Dehat have adopted bee-keeping scheme of Integrated Rural Development scheme. The Integrated Rural Development Programme gives the aid of Rs4000/- only to every person for the purpose of Bee-keeping and given Rs. 2000 to every person as subsidy.

In 5 surveyed villages Phaphund has given employment to 4 persons and Phaphund
Dehat has given employment to 2 persons under this scheme. Animal bones are used for chura and fertilizer. 8 persons of Kakor and 2 person of Khanpur, one person of Naglajai singh village reported to be engaged to animal skins and bones trade.

It is seen from the above analysis that the local resources of the Bhagya nagar and Sahar blocks may be said to be adequate. Although they have not given employment to adequate percentage of local people. The extent of employment generated in surveyed villages through utilization of agricultural resources.

The experience gained during the last two years (1997-1998) in Sahar and Bhagya-nagar blocks of district Etawah. In The Sphere of the utilization of local resources has no doubt realised need for utilizing there resources in a more effective way at the local level. It has led to a promising path of creating new wealth.
opportunities to their utilization and generating employment potential at the local level, The people of the area have started realizing that they can reap the benefit from so far hidden wealth near their homes, below and above, the mother earth. The local people now evince more interest in knowing what the scientists are doing and participating in such programmes. A faith has been inculcated among rural people that by their own skills, ingenuity, and use of natural resources, poverty and back-wardness could be eliminated.

The Integrated Rural Development Programme besides its so many objects also aims at utilizing the local resource to the best interest of local people. Utilization of local resources needs scientific management, Proper education and availability of proper infra-structure. The findings during the course of our survey however show that there is no scientific management for the utilization of local resources. There is no
proper planned policy by the government for the utilization of local resources. There must be an assessment of these resources at the local level.

The Local people should also be trained regarding the utilization of the resources to the best possible use. So that more employment opportunities may be generated. The availability of infra-structure has however been made adequately. At the block level in these villages what is more realized is the need of proper management of the resources at the government level and also the need for imparting proper education to the village fold for utilizing the local resources in the best possible way.