

## ***Price Waterhouse***

July 16, 1994

The Pradeshiya Industrial & Investment  
Corporation of U.P. Limited  
PICUP Bhawan  
Gomti Nagar  
Lucknow  
UTTAR PRADESH

Attn. Mr. A K Agarwal, Project Executive

Dear Sirs

### **Re : Techno-economic Viability / Potential Survey of GIDA**

1. Please refer to your letter dated May 5, 1994 according your approval on the Draft Report dated May 13, 1993 on the captioned subject. Based on our clarifications to the points raised in your letters dated July 23, 1993, July 27, 1993, July 30, 1993, August 17, 1993, September 28, 1993, December 1, 1993, January 6, 1994, January 20, 1994, and discussions held with you at Lucknow on December 19, 1992, August 5 and 6, 1993, January 27 and 28, 1994 and your latest communication dated May 5, 1994 as mentioned above; we are now submitting the Final Report as under
  - 12 copies of the Report (Enclosed)
  - 6 copies to CEO – GIDA (forwarded separately)
  - 2 Floppies containing the Report in Wordstar 4.0 (Enclosed with hard cover)
2. We have, in our endeavour at this stage, amplified the Report through specifically including therein
  - a detailed outline of an advanced Computer Linkage i.e. GPSS & EMAIL through GEMS400 and its costs for GIDA (Section - 6.70 in the detailed Report)
  - specific demand projection of the agricultural implements for the region and sources of technical knowhow.(Section 9 and Schedule 10, Page 43 - 49)
  - Bulk Drug Profiles - Nifedipine / Calcium Antagonist / Piroxicam /

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Chloropheniramine Maleate / Ibuprofen (Schedule 11, Page 50 - 59)

- The sources of Technical knowhow of Citric Acid & Rubber Chemicals (Schedules 12 & 13 ref. paragraph 3 respectively)
- The details of raw material cost-sales turnover (Schedule 1 to 16)

We have also provided in general the basic assumptions in each profile covering

- raw material cost computation
- sales turnover & sales mix
- sources of Technical knowhow
- economic indicators

3. We now consider this as the final letter / report before closing the assignment.
4. We avail this opportunity to thank you for your participation and active involvement in this important assignment and extend the same to all Officials of GIDA and the district administration of Gorakhpur division who also have been closely associated during the field surveys in different phases of the assignment.
5. We hope our endeavour would help GIDA to realise the sought for objectives of development and growth of Eastern UP. If there are any points for clarification please do not hesitate to let us know.

Yours faithfully,

Encl. As above

Copy to : The Chief Executive Officer  
Gorakhpur Industrial Development Authority  
Civil Lines, Gorakhpur 273001  
UTTAR PRADESH

THE PRADESHIYA INDUSTRIAL & INVESTMENT CORPORATION OF U.P. LTD.  
TECHNO-ECONOMIC VIABILITY STUDY  
&  
POTENTIAL SURVEY OF GIDA

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## **Techno-economic Viability / Potential Survey on GIDA**

### **EXECUTIVE SUMMARY**

1. Eastern Uttar Pradesh, and particularly Gorakhpur region has remained predominantly an agrarian economy and a narrow industrial base concentrating heavily on traditional agro-industries. It has a vast agricultural and human resource base and a matching potential demand (refer Section # 2), which can be improved and enhanced to support a plan for industrialisation of the region.
2. This, together with the large consumer base (refer Section # 4), both for Consumer Products as well as for Industrial Products (once Industrialisation plan is activated and realised), indicate that potential exist and Gorakhpur can emerge as a prominent town in the industrial map of India, with a consequent benefit to all concerned, in terms of increase in national income, employment, social skill and social overhead capital creating a base for further development.
3. The present industrial scenario of Gorakhpur region (i.e. Gorakhpur Division) consists of
  - Sugar Mills, Distilleries. Textile Mills, Paper Mills etc. with a total Investment of Rs. 290 Crores resulting in employment. of around 28,000 people in the Medium and Large Scale Sector.
  - Food Processing Plants (including Rice Mills), Engineering Workshops (Railways), Service, and Ancillaries (to the Medium and Large Scale Industries) etc. in the Small Scale Sector, with a total investment of Rs. 100 Crores and employing about 77,000 people and
  - the Informal Sector

It is evident that the Sugar Mills (in Large and Medium Scale Sector) and Small Scale Industries are most labour intensive and together employs 94% of the total industrial labour and accounts for 65% of the total investments (refer paragraphs 3.2 t.o 3.5, pages 19 and 20).
4. The industrialisation process therefore has to be geared to meet. the social requirements as well as commensurate to the availability of the raw materials (i.e. agricultural products) and potential market, without interfering with the existing social set up and agrarian balance. The plan for industrialisation, therefore, can be normatively phased as follows :
  - Initial Phase, wherein industries can be on the promoted based on the regional (local) availability of raw materials (refer to Annexure # 3) and market (refer to Annexure # 11 and 12) and the stress therefore would be on

- • Agro based industries
  - • Agro - ancillaries
  - • Ancillaries for Institutional Demand (i.e. Railways)

together with setting up of other industries as per the requirement of the entrepreneurs.

- Secondary Phase, wherein the industries initially set up can diversify (after becoming fully operational and established on firm foot hold to support other industries), modernise and expand through Vertical and Horizontal Integration.
- Matured Phase, when GIDA can attract foreign / large public capital (which might be absent in the first two phases), whereby new products development, new technology initiation would be facilitated.

The phasing of the industrialisation plan would prima facie help to create Inter Industry and Intra Industry Linkage and sustain Macro-economic Balance through Industry-Agriculture Linkage.

5. The governing parametres for industrialisation (as understood through interaction with GIDA Officials) would be
  - Employment Generation
  - Environment and Agro-resource base of the region
  - Needs and Demands of the consumers (both regional as well as external).
6. The geographic scope of the study has been developed on the basis of the Potential Command Area (PCA) of the proposed industrial area in GIDA which has little relevance to the specific geographic boundaries. It cuts across different districts, even different states which are likely to fall within the PCA visualised on the principles of economics of comparative advantage.
7. However, the study has been restructured as agreed and reported on the basis of initial survey of Gorakhpur Division, keeping in mind the PCA of GIDA, wherein, seven districts were considered. This geographic scope of the study has been determined by the officials of GIDA and reiterated in our letter dated March 10, 1993. The raw materials availability have been considered for Gorakhpur Division, as it will provide a common administrative and operational base for the parties concerned. The rural market has been considered for Gorakhpur Division only, while the geographic spread of the urban market has been extended even to Bihar.
8. The industries have been identified on the basis of the premises discussed above (details are in Detailed Report). Selected profiles of identified industries have been grouped as

under

Group A, which can be implemented without requiring major institutional support

Group B, the projects requiring substantial institutional support.

The submitted Project Profiles has accordingly been grouped under as follows :

**Group A**

1. Modern Rice Mill
2. Mustard Oil Extraction
3. Leather Finishing Chemicals
4. Organic Chemicals
5. Pre-stressed Wire & Wire Rope
6. Jute Viscose Fine Yarn
7. Poultry & Cattle Feed
8. Plastic Mono Filament
9. Paper & Paper Pulp Mill
10. Agricultural Implements
11. Bulk Drugs
12. Citric Acid & Oxalic Acid
13. Rubber Chemicals
14. Yarn & Textile Processing
15. Fruit Processing
16. Pre Cast Concrete Structural

**Group B**

1. Activated Carbon from Rice Husk (downstream integration of proposed modern Rice Mills)
  2. Herbal Resources Based Products
  3. Electronics Industry
9. It is to be noted that, though Gorakhpur enjoys certain inherent strengths, the

infrastructural problems have to be dealt with properly, by the Authorities to facilitate further improvement in terms of technological and economic parameters.

**DETAILED REPORT**  
**POTENTIAL SURVEY OF**  
**GORAKHPUR INDUSTRIAL DEVELOPMENT AREA**

1. Introduction
  - 1.1 Eastern Uttar Pradesh and particularly Gorakhpur Division has remained a predominantly consumer based, agriculture oriented and industrial goods importing economy for political, economical, socio-cultural and historical reasons.
  - 1.2 Though it has vast agricultural potential, the agricultural productivity has remained low despite the conscious and deliberate efforts made by the Government to improve it. The contributory element is the operational landholding pattern which is fragmented. More than 93% of landholding has an average plot of less than 2 hectares and accounts for more than 65% of total agricultural land.
  - 1.3 On the industrial front the entrepreneurship has been short in supply and has been restricted generally to the small scale agro industries, Due to the limitation in industrial employment and contraction of opportunities in the secondary and tertiary sector there has been overdependence on the land and as a corollary an occurrence of further fragmentation of agricultural land and resultant lower agricultural productivity.
  - 1.4 The traditional industries in Gorakhpur Division are mainly of two types :

Sugar Mills, Paper and Cardboard Industry, Food Processing, Oil Extraction Plants etc. for adding value to the agricultural produce of the region and

Local Handicrafts like Brassware, Handloom Carpets, etc. which grow out of the restricted local demand using available local skills of the artisans.

All these require less technical skills primarily based on the available agricultural and/or local resources. The market is therefore characterised by free entry and exit and occurrence of large number of small scale production centres concentrated in specific geographical regions.
  - 1.5 The private initiative coupled with government intervention in the industrial sector has led to some industrial development in Gorakhpur Division but has largely failed to harness the industrial potential to its fullest extent. The efforts was largely concentrated around a Balanced Industrial Development Programme which depended mostly on Promotion of Industrial Estates and providing Backward Area Benefits to an intending entrepreneur. It is observed that though some limited achievement is recorded due to lack of :-

- large of scale public enterprises these
- proper communication and
- infrastructural facilities have jeopardised the initial initiatives.

1.6 Under these circumstances during the past decade the strategy of industrialisation stressed on :

- luring major industrial houses to set up industries in the specified industrial areas with corresponding backward area benefits and
- developing local entrepreneurship through training and provision of low interest bearing loans.

1.7 The development strategy matrix followed in the recent past are given in Table 1 below :

**Table 1.1** : Development Strategy matrix followed in Industrial Promotional agencies for Accelerating Development in Eastern U.P. in the recent past

	<b>Strategies</b>	<b>Objectives</b>
PULL	Incentives & Attraction	- To reduce investment or risk capital, through concessions/incentives  - Overcoming Operational disadvantages through concession / subsidies
PUSH	Promotion & facilitation	- To corporate sector to locate in backward area
INSTITUTIONAL	PSU Investment	- Creating industrial development infrastructure
DEVELOPMENT	Entrepreneurial Growth	- Creating rural entrepreneurs

1.8 It is understood that these strategies too did not deliver the desired results as would be evident from the present not so bright industrial progress in Eastern U.P. The reason can be traced to the following contributing factors. viz.,

- The concessions were firm specific rather than industry specific
- Absence of Externalised Economies due to lack of an adequate industrial infrastructure
- Failure to attract superior technical and managerial skills due to lack of commensurate increase in the Social Overhead Capital. Investments providing civic and recreational facilities are absent. Local entrepreneurship skills suitable for a



modern industry is also not visible

- High Operational Cost (like High Inventory Holding Cost, Cost of Break Down, Administrative Cost etc.) that has held back the setting up of a sunrise industry in a backward area
- High Risk due to uncertain factors in Sourcing Inputs.

- 1.9 Therefore the entrepreneurs opted for products which are least market sensitive and technology that is proven and established and have a ready captive market (and does not require to compete) and less capital intensive. The public sector investment have brought in higher level of technology and have promoted some local economic development (like ITI in Mankapur and Naini) which have generated local employment.
- 1.10 On the other hand the local handicrafts and related business have local as well as outside markets, and are better placed but also suffer from related problem of Marketing (Packaging, Packing and Distribution), Quality and Financing.
- 1.11 In the Small Scale Sector of Eastern UP. there is a large scale participation of the trading community who want to take advantages and the benefits provided by the Governments. Some integrated vertically (e.g. a rice merchant setting up of a rice mill) and others as a logical extension (e.g., Real estate investment),
- 1.12 In this scenario, the Government of U.P. has set up Gorakhpur Industrial Development Authority (GIDA) to promote industries in Gorakhpur Industrial Development Area and to set up a unique economic environment where advantage can be taken of the
- deregulation
  - withdrawal of licensing policy
  - Incentives for facilitating free market economy with reliance on Private Investment in industries.
- 1.13 Accordingly a detailed infrastructure planning of GIDA have been done by National School of Planning & Architecture in the year 1988-89. In order to be supportive of such endeavors around 5000 Acres of land near Gorakhpur has been acquired for infrastructural development and for industrial purpose.
- 1.14 It is understood therefrom that in planning account should be taken the potential industries would require resources which are mostly available locally in Gorakhpur Division comprising of seven neighbouring districts (i.e. Gorakhpur, Maharajganj, Siddharthnagar, Basti, Deoria, Azamgarh and Mau) and the market domain of the products would be Eastern U.P., Nepal and other major urban and rural centres in the nearby districts and states.
- 1.15 Price Waterhouse, Calcutta has been appointed vide letter PRJ/SBU-3/TEFR/G/92-93/

12913 dated January 22, 1993 of the Pradeshiya Industrial Investment Corporation of U.P. Limited (PICUP) in association with Gorakhpur Industrial Development Authority (GIDA), to act as consultants to carry out an economic study and prepare a report on the potential industries in GIDA area. This report will eventually form a part of the basic operational plans of GIDA which would be instrumental for transition from an agrarian economy to an industrial economy with its resultant socio-economic benefits. We set herein the detailed report captioned under the following Sections :

	Section Ref.
• Resource Study	2
• Present Industry Scenario	3
• Market Description of Gorakhpur Division	4
• Potential for Industries Development	5
• Infrastryucture and Telecommunication Facilities	6
• Suggested Incentives	7
• Development Initiative - Suggested Industrial Projects	8

## 2. RESOURCE STUDY

2.1 This section will outline the resource bases of Gorakhpur and its neighbouring districts which have been assessed by PW field Survey team with the active involvement and participation of GIDA Officials. The list of important Offices / Officials / Persors contacted by Price Waterhouse Field Survey Team has been furnished in Annexure 1. The area covered under the Survey is indicated in Annexure 2. The Survey was conducted during the months of Feb. '93 and March '93 and the field Survey data have been analysed and the results have been set out in the sections under the following broad headings :

- a) Agricultural Resource Base
- b) Mineral Resource Base
- c) Human and other Resource Base

2.2 Gorakhpur division belong to Sub Himalayan Tarai Region and due to high soil fertility a number of crops is produced. The average land holding size is between 2 hectares (which comprises 93% of total landholding). It is basically an agrarian economy which is characterised by variety and normative yield farming. The sugarcane is the only major cash crop. In Table 2 below shows the percentage distribution of major crops (Paddy, Wheat, Sugarcane and Potato). The details of the agricultural production for the Division is set out in Annexure 3.

**Table 2.1 : Percentage Distribution of Major Crops in terms of tonnage in Gorakhpur Division 1992**

<b>Districts</b>	<b>Paddy</b>	<b>Wheat</b>	<b>Sugarcane</b>	<b>Potato</b>	<b>Total</b>
Total Prod. (’000 Tons)	1862.27	2493.74	10654.50	384.96	15393.47
Percentage Distribution Districtwise					
	%	%	%	%	%
Gorakhpur	16.69	34.91	37.29	5.83	94.72
Maharajganj	18.43	15.02	62.28	2.01	97.74
Deoria	5.64	8.20	84.18	0.98	99.00
Basti	11.52	19.45	61.25	3.45	97.67
S.Nagar	28.64	31.65	27.92	3.92	92.39
Azamgarh	14.93	18.47	55.32	3.67	92.39
Mau	13.80	18.49	62.26	2.78	97.33

Source : Divisional Agricultural Office, Gorakhpur

- 2.3 It appears from the above table that Total Production of major crops is 16 million tonnes out of which 67% is sugarcane production. The other major important crops are Paddy (which comprises 12% of total agricultural production in tonnage) and Wheat (which comprises 16% of total agricultural production in tonnage).
- 2.4 It will also be observed from the above table that Paddy, Wheat, Sugarcane and Potato combined accounts for around 96% of total agricultural production (in tonnage) in Gorakhpur division. Therefore it can be concluded that agro resource base of the region are the above four major crops and any agrobased industry to be set up in the region can look forward for these resource bases as their main inputs.
- 2.5 Apart from Paddy, Wheat, Sugarcane and Potato which has been identified as major crops, around 75,000 Tonnes of Pulses, 36,000 Tonnes of Oil Seeds, 7,000 Tonnes of Spices are also produced in this division. The production figures of other Produces as per information available from market survey are

Districts	Vegetable (MT)	Major Fruits (MT)
Gorakhpur	10371	9408
Deoria	9990	9193
Basti	10165	7015
Azamgarh	10588	2208
	41114	27824

In addition to above around 6,000 Tonnes of Guava and 13,000 Tonnes of Banana are produced in Gorakhpur Division. Among the other major fruits are Mango, Leechi etc. and Tomato is produced on a large scale where the total production is 33,840 Tonnes.

- 2.6 It is noted that coarse cereals e.g. Bajra, Sawan, Kodon, Kakun, etc. are also been produced in this division mainly for farmers consumption. The total production of the above cereals is around 30,000 Tonnes.
- 2.7 It is observed from the above analysis that the present agro resource base of the region can be grouped as under :

Cereal Crops	Cash Crop	Horticultural	Others
Rice	Sugarcane	Guava	Potato
Wheat	Oil Seeds	Banana	Tomato
Bajra	Cotton	Mango	Spices
Kodon etc.		Leechi	

### **Agro Based Potential**

- 2.8 The land in Gorakhpur division is highly fertile and due to generous rainfall (Average rainfall 1200 mm), it is suitable for cultivation of a variety of agricultural crops. The Soil is generally Old Alluvial type and categorised as :
- Clay Soil
  - Black Soil
  - Sandy Soil

The underground waters are available between 3 to 5 meters, The temperature ranges between 4 degree celsius in Winter and 40 degree celsius in Summer. The water Balance Report of 1981-82 indicate that the net recharge to ground water reserve is around 20,000 Million Cubic Meter (MCM) against the contemplated Net Draft of around 7,000 MCM, thus leaving a balance of around 13,000 MCM for future development, The major rivers in this region are Rapti, Ghagra and Tamse. The total land under

irrigation 1.3 million hectares. The soil Geology, Rainfall and underground water level position in Gorakhpur Division have been indicated in Annexure 4.

- 2.9 The Land utilisation pattern of Gorakhpur Division is shown in Annexure 5 showing Total Usable Land (TUL) in Gorakhpur Division is 25,01,965 hectares. The Actual Sown Area (ASA) is only 19,04,812 hectares which is only 76% of TUL. The Irrigation facility is available for 12,82,377 hectares (NET IRRIGATION) which is 67% of ASA. It would be observed that there is a great potential for further strengthening the Agro resource base through better Irrigation and more scientific agro practices.

### Comparison of Crop Statistics with reference to Industries

- 2.10 Industrial Activity based on the local agricultural produces has a unique example in Punjab, where Punjab Agro, Voltas and Pepsi Foods have together initiated largescale production of Fruit & Vegetable processing in collaboration with the local farmers. Similarly in Anand, Gujrat, the Milk processing industry basad on local Dairy produce became a poineering activity.
- 2.11 Similar example can be industry obtained from Malaysian edible oil industry, Austrailian milk processing industry, fruit processing industry in Philipines etc. It is important to mention at this point, that all these have been successful because of a concerted effort to promote industries with active participation of the locals.
- 2.12 The comparison of agricultural production iin Gorakhpur division with the national and state figures for the year 1992 is given in table below. As evident from the table, though Gorakhpur is limited to its area and the usage of agricultural land, it has contributed significantly to the national and state production.

#### Production of Agricultural Crops in 1992

(in Million Tons)

Major Agricultural Crops	India	Uttar Pradesh	Gorakhpur Division
Rice	71.00	9.48	1.86
Wheat	55.00	17.68	2.49
Pulses	14.00	2.41	0.08
Sugarcane	238.00	97.42	10.65
Oilseeds	17.00	0.66	0.07
Vegetables	53.00	5.00	1.20

Source : Economic Survey 1992. DSO - Gorakhpur

- 2.13 The comparison of crop production should be made to the extent that the potentialities

of the area (i.e. Gorakhpur Division) is identified. While at the outset, the production figures/estimates might appear to be insignificant when compared to the national figures, the potentialities arise from the underutilised / unused agricultural opportunity that Gorakhpur has, which, if properly harnessed and supported through an effective industrialisation programme, can be externalised for the benefit of the Economy.

### **Forest Resources Base**

- 2.14 The Total Forest Land in Gorakhpur Division is 66,663 hectares which is around 3% of Total Usable Land (TUL). The Forest Land is mainly found in the Terai Region (Maharajganj) and to some extent in the Plains (Refer to Annexure - 5).

The nature of vegetation in the existing forest land cover are :

- Soft Wood
- Hard Wood

Teak, Sal, Banyan, Mohua, Babul, Mango, Neem etc. are the main forest covers products. Apart from this, fire wood is also available from various fast growing wild plants.

- 2.15 It would be observed from above land utilization statistics that approx. 0.6 million hectares of Virgin Land can be brought under new cultivation and also 0.6 million hectares of land now being used as Mono Crop Farm due to lack of irrigation facilities can be converted into Multi Crop Farm. In the context of GIDA sponsored industrialization programme this 1.2 million hectares back up land within this command are available to provide support to various agro based industries proposed to be set by providing upstream linkage with the sources of input materials. The following important industry linkages can be visualized at this stage :

<b>Crop Particulars</b>	<b>Industry Linkage</b>
Sunflower Farms	- Solvent Extraction Plants
Lemon Grass / Neem	- Distillation of Essential Oils
Bamboo	- Paper Mill
Castor Oil	- Solvent Extraction
Soyabean	- Solvent Extraction

Therefore this production would be an extension rather than being existing production and Cropping pattern of the division.

### **Potential Forest Resources**

- 2.16 Out of the total forest land of 66663 hectares it is estimated that some of the area are

degraded forest land. These degraded forest can be upgraded to a rich forest land belt through a suitable scientific afforestation programme. In addition, with above approx. 38000 hectares are barren land which can be profitably utilized under a plantation programme. The combined efforts can yield the following types of value added forestry products :

- Eucalyptus Plantation (input sources for Rayon & Paper Industry)
- Silver Oak Plantation (for export of wood to Middle-East)
- Fast Growing Hard-Wood type plantation (suitable for paper / pulp making industry)
- Bamboo growing in a commercial Scale (for paper pulp and for house building)
- Neem Plantation for herbal Products / Insecticides / Fertilisers

2.17 Farm Forestry have been recognised as one of the important approach for rural resources development plan under Social Forestry Programme. In the context of GIDA this significant track of barren land available within its command area provide an unique opportunity (if required with necessary soil conservation measure) for development under a well laid out Farm Forestry programme. The programme can be divided into specific work packages made of :

- Farm Forestry
- Urban Forestry for environmental protection
- Recreation Forestry programme for development of Tourism / Adventure Tourism

2.18 The Farm forestry programme would benefit the marginal farmers and can be designed such a way that it is integrated to the industrialisation processes to be implemented in GIDA. The Farm forestry practices would include growing of fast growing trees and which are linked to the requirement of the input of the industrial units to be set up in GIDA. An appropriate authority / organisation (Cooperative or Otherwise) as a regulatory coordinating agency protecting the interest of the linked industries should be formed in advance. The marginal farmers can plant such growing trees in their own Farm land or in the barren land awaiting plantation. The type of species that can be profitably used in such Farm Forestry Programme and their linkage with the industrial units proposed to be set up are set out below in table below :

**Table 2.2 : Species of Plant and their linkage to Industry in the proposed farm forestry programme (To be selected according to Soil Situation)**

Types of Species	Industry Linkage
Bamboo	Paper, House building, Cottage Industry for making Baskets & other useful articles
Eucalyptus & Neem	Paper, Rayon Grade Pulp Oil, Extraction & Distillation Unit
Cassia Auriculata	tanning Industry
Wattles	- Do -
Caesalpinia Coriaria	- Do -
Barringtonia Acutangule	- Do -
Tamarindas Indica	Fruit Processing Industry
Mango	- Do -
Banana	- Do -
Eugeria Jambulira	Fruit Processing Industry
Anacardicemoceidentale	- Do -
Magnifera Indica	- Do -
Zyziphus Jujuba /Continum*	- Do -
Parviflorum, Phonese Silvertris	- Do -
Terminalin Chebula	Pharmaceutical Industry
Phylanthces Emblica	- Do -
J. Bellarica	- Do -
Acacin Catechu	Dues Industry
Thesperia Popubea	- Do -
Butea Monosperma	- Do -
Ptero Corpus Santalinas	- Do -

(\* Also can be used as Host species for Lac Insects)

### **Livestock Recources**

2.19 Eastern U.P. is relatively rich in livestock resources. The field survey of Gorakhpur division indicates that there is a large population of cattle and other animals. It is estimated that there are



- (a) 33 lacs cows
- (b) 12 lacs buffaloes
- (c) 1 lacs sheep
- (d) 14 lacs goats

in this region (Gorakhpur division). Poultry farming is being done on small scale though the total number of birds is 18 lacs. The detail estimates of livestock population given in Annexure - 6.

2.20 It is estimated that the total milk production of this division is around 8,00,000 tons and therefore per capita availability of milk is 45 kgs. per annum. The total egg production in this division is 721 lacs, i.e. the per capita availability is around 4 eggs per annum. production of Milk, Eggs and Wool is given in Annexure - 7.

2.21 It would appear that there is great potential to develop the existing livestock resource base in future, through the development of cooperative effort in the following direction :

- Scientific Genetic Development of Livestock specifically buffaloes/Cows having high milk yielding capacity (a similar SCHEME, earlier launched under State assistance, received significant responses from the beneficiaries)
- Health care and preventive measures for the cattle diseases to reduce the mortality rates
- Better Cattle fodder (Industry Identified) for healthy growth of cattle population
- Improvement in the distribution network of end products and preservation of the milk products including value added production facility in a Dairy Firm.

An annual growth rate of 10% minimum can be achieved through the above programmes.

2.22 Based on the above resource base/potential the following types of industrial activities can be planned in GIDA

- Roller dried Skimmed Milk powder unit
- Flavoured Milk in pouches
- Ghee, Butter, Cheese, Panir making unit
- Leather and Sport Industries / Leather Garments / Leather Apron
- Bone Mill & Chicken Feed Factory
- Industrial Leather including Belting

- Animal Glue unit

### **Mineral Resources**

- 2.23 It appears from existing available records that Eastern U.P. is not particularly rich in mineral resources. The survey indicates further that Mineral Resources of Eastern U.P. have not been adequately surveyed and Mapped. The information so far available with Survey of India indicates that the major minerals of Eastern U.P. (alongwith a part of Southern Region) are Cement Grade Limestone, Bauxite, Dolomite which are found in Mirzapur-Banda Region. In Gorakhpur Division in particular, Kankar, Morum is found in abundance which is useful as Building Material. Salt Peter is found in Deoria-Mau-Azamgarh Region. There is possibility of occurrence of unproven reserved of Oil Bearing Deposits in Terai Region but this is yet to be probed. The details of major minerals resources which is available in different parts of Eastern U.P. along with estimated Geological Reserves as obtained from the Geological Survey of India, Calcutta is detailed in Annexure - 8.
- 2.24 The above statistics clearly indicate that Eastern U.P. is not very rich in Proved Mineral resources. However, occurrencewise, proved reserves of Limestone. Dolomite and Coal is available in the neighbouring districts, specifically Mirzapur-Banda Geological Region. In the light of the above and on the presumption that mineral based industry in GIDA would need significant proved reserves, a limited number of mineral reserves base industries can be established, some of them are
- Glass
  - Refractory
  - Cement etc.
  - Agro-chemicals

### **Human Resources**

- 2.25 The Survey results published for Eastern U.P. indicate that this area have desirable Bank in Skilled/Semi-Skilled and Unskilled labour. The total population of Gorakhpur Division is 1.8 crores in 1991-92 and the Average Density per Sq. km. is 731 persons and Sex Ratio is 950 (i.e. 950 females per 1000 males). Out of the total population only 34% is literate (Basti is the most literate district with the literacy level of 48%). There are 60 primary schools and around 5 high schools per 1,00,000 of population. The total number of villages is around 22,000. Gorakhpur being the Divisional Head Quarters is the only major urban centre. In this division, there is a University, an Engineering College, a Medical College, 47 degree colleges, 20 institutions for technical education.

- 2.26 The urban population accounted for around 7.8% of total population. This has fairly maintained unchanged due to lack of inflow i.e. normal migration from rural to urban area due to rather sluggish pace of urbanisation in the recent past. This is estimated to increase marginally to 8% because of the migration to the urban area for livelihood. Therefore, it is estimated that in 1991-92 the total Urban Population is around 14.5 lacs and Rural population is around 167.5 lacs.
- 2.27 The employment statistics are only available for 1981 and it is believed that in absence of any major industrialisation, the basic distribution of Employment has remained unchanged barring some marginal adjustment. The estimated Occupational Distribution of Population 1991-92 is outlined in Table -2.3 below :

**Table 2.3 : Occupational Distribution of Population 1992**

Occupation/Employment Class	Distribution %	Population %
Farmers	62.72	118.05
Farm Labourers	20.22	36.00
Animal Husbandry, Forestry etc.	0.29	0.53
Menial Labourers	0.04	0.07
Handicraft & Others	3.78	6.88
Industrial Workers	0.57	1.05
Construction	0.33	0.60
Trade & Commerce	3.12	5.67
Transport & Communication	1.46	2.65
Others	5.32	9.68
Total	100.00	182.00

(The figures for 1992 are estimated on the basis of 1981 data)

- 2.28 It appears from the above statistics that the area has suitable human resources and there would appear to be shortage of skilled/unskilled personnel for the industries planned to be set up in GIDA. It is also observed that some of the local Engineering Graduates may be, suitably absorbed once the industries come up in GIDA. It is also to be noted that the local technocrats can be trained to take up future entrepreneurial ventures in greater number.
- 2.29 The local population engaged under Trade & Commerce Construction Industries, Transport & Communication activities aggregates to approx. 1 million. This is the 'Core Group' to effect changes in the Urbanisation process to be triggered through GIDA industrialisation programme. It is the Core Group which would provide the following :

- New Entrepreneurs undertaking projects in the industrial area  
Management and Accounting personnel
- Engineering & Maintenance of services
- Skilled / Sem-skilled labour/operators
- Service Centres in different areas

### **3. PRESENT INDUSTRIAL SCENARIO**

3.1 In this section, the present industrial scenario of Gorakhpur division have been outlined to indicate the present status of industry and their growth potential for future development. The industrial scenario have been presented and analysed with reference to the relevant data collected during the field survey conducted during Feb-Mar. 1993. The results of the survey reveal the salient features stated hereunder seriatim :

- The industrial input base is relatively narrow and concentrated mostly in Food Processing and Industries based on local agricultural produces
- The existing traditional Industries (Sugar and Cotton Spinning) are in grave financial difficulties and little effort has been taken to revitalise
- Dispersed industrial activity mostly in the Small Scale Sector
- Investment in the central and Cooperative sector is minimal
- Local entrepreneurs are relatively risk averse and therefore no significant investment is forth coming from the local entrepreneurs
- Investors are generally unwilling to invest in an area with no State Financial Concessions (e.g. the Chunar Industrial Estate in Mirzapur district, with no accompanying financial incentive, remains largely unoccupied)
- The process of industrialisation as was envisaged by the Planning Authority, suffered due to absence of commensurate allocations (i.e. infrastructure) in the earmarked

areas where Growth Centres were established. This is evident from the lack of sufficient entrepreneurial responses in the Growth Centres planned in the recent past.

- 3.2 The present industrial scenerio, in terms of Gross Block, Number of Units, Investments, Employment and Capital Labour Ratio (CLR) in the Large and Medium Scale Industries in Gorakhpur Division, have been set out in table 3.1 below :

**Table 3.1 : Types of Large & Medium Scale Industries in Gorakhpur Division in 1992**

Category	Nos.	Investment (Rs. Crores)	Employment	CLR (Rs.)
Fertiliser	1	75.00	2400	3,12,500
Textiles	4	24.83	2147	1,15,650
Jute	1	0.87	98	88,776
Agro Products & Food Processing)	4	4.29	360	1,19,167
Distilleries	2	2.44	363	67,217
Chemicals & Refineries	2	1.70	42	4,04,761
Paper	4	10.04	398	2,52,261
Steel Castings	3	2.31	250	92,400
Industrial Gases	2	2.10	20	10,50,000
Edible Oils	1	11.73	213	5,50,704
Sugar Mill	25	154.50	21385	72,247
<b>Total</b>	<b>49</b>	<b>289.81</b>	<b>27676</b>	<b>1,04,715</b>

The present status of Indian industry in Gorakhpur Division for Large & Medium Scale have been indicated in Annexure 9 and for Small Scale industries it has been indicated in Annexure 10.

- 3.3 In the Small Scale Sector the Total Investment is Rs. 99.68 crores and the Employment is 77,338 end therefore the resultant CLR is Rs. 12,889 only. The industries in this Sector are mostly in the Food Processing and other based Industries.

- 3.4 It is interesting to note that Sugar Mill is the most important industry in this division which accounts for 53% of Total Investment and 77% of Total Labour Employment in the Large and Medium Scale Sector. Table - 3.2 below gives the summary of Investment and Employment Levels of both the Large & Medium Scale and Small Scale Industry.

**Table 3.2 : Industrial Scenario in Gorakhpur Division, 1992**

Category	Nos.	Investment (Rs. Crores)	Employment	CLR (Rs.)
Large Scale & Medium Scale Industries	49	289.81	27,676	1,04,715
Small Scale Industries	13,652	99.68	77,339	12,888
<b>Total</b>	<b>13,701</b>	<b>389.49</b>	<b>1,05,014</b>	<b>37,089</b>

- 3.5 It is evident from the above that the Small Scale Industries and the Sugar Mills in the Large & Medium Scale Industries are the most labour intensive which employ together 94% of Total Industrial Labour but accounts for only 65% of Total Investment.
- 3.6 The field survey indicates that Eastern UP, in particular Gorakhpur Division is industrially backward from the rest of Uttar Pradesh and even in comparison with Uttar Pradesh as a whole. This is evident from the published data available on Per Capita Net Output from the Commodity Producing Sectors (PCNOCPS) as detailed in Tables - 3.3 and 3.4 below.

**Table 3.3 : Per Capita Net Output from Commodity Producing Sectors (PGNOCPS), at Current Prices, of Gorakhpur Division : 1985-89**

Districts	1985-86	1986-87	1987-88	1988-89
Gorakhpur	813	932	1032	1132
Azamgarh	871	899	1029	1178
Deoria	822	1001	989	2278
Basti	664	710	820	1032
<b>Uttar Pradesh</b>	<b>1149</b>	<b>1222</b>	<b>1313</b>	<b>1533</b>

**Table 3.4 : Percentage Growth in Per Capita Net Output from Commodity Producing Sectors (PCNOCPS), Current Prices, of Gorakhpur Division**

Districts	1986-87	1987-88	1988-89	1985-89
Gorakhpur	14.63	10.72	9.68	11.67
Azamgarh	3.21	14.46	14.48	10.59
Deoria	21.77	-1.34	19.11	12.74
Basti	6.92	15.49	25.85	15.83
Uttar Pradesh	6.35	7.44	16.76	10.09

Source : DIC and DoI, Gorakhpur

3.7 It is interesting to note that

- LAGS - The PCNOCPS value of Gorakhpur Division is, on an average, less than the State Average by around 28%.
- LEADS - The annual growth rate of PCNOCPS grew at a rate of 12.55% per annum (at current prices) for Gorakhpur Division during 1985-86 to 1988-89, while the corresponding State Average is only 10.09% per annum during the same period.

3.8 This indicates that, though Gorakhpur Division is industrially backward, if the current momentum of growth can be sustained over a longer period of time, Gorakhpur has the potential to become as industrialised as other upcoming regions of Uttar Pradesh.

#### **4. MARKET DESCRIPTION OF GORAKHPUR DIVISION**

##### **Rural Consumer Market**

4.1 The geographical spread of the Primary Rural Consumer Market Segment that can catered from Gorakhpur is as follows :

- Gorakhpur Division (Comprising 7 districts)
- Faizabad, Jaunpur of UP
- Parts of North Bihar (Muzaffarpur, Chapra, Siwan etc.)
- Parts of Nepal (Bhairaonwan) bordering Maharajganj District of Gorakhpur Division

4.2 The commodities that are required in the segment are

- Primary Products (food and clothing)

- Consumer Products
  - Consumer health care products (Soya, pharmaceutical formulations, tonics, nutritious drinks etc.)
  - Consumer non-durables (lowpriced tooth powder, pouch packed shampoos, lowpriced soaps, cakes and powder, lowpriced cosmetic, perfumes, etc.)
  - Consumer durables (viz. household utensils (e.g. pans, bucket) energy efficient cooking oven, low priced suitcases, torch lamps, electric lamps, energy efficient Kerosene Oil Lamps, electric fans, Black & White TV sets, 2 band Transistors, Lowpriced Tape Recorders, Bicycles & its accesories, etc.).
- Agricultural, Implements & Related Products
  - Low Cost Fertilizers, Pesticides
  - Low Cost Storage Bins
  - Tractor Accessories
  - Pumpset & Accessories
  - Steel, Rubber, PVC Pipes etc.
- other Conspicuous Consumer Products (viz. Alcohol, panmasala, Bidis etc.)

4.3 It is understood that most of the items in the consumer product category are presently not manufactured in the region and thereby creating a market opportunity for a new entrant intending to take up manufacturing of any of the products mentioned above. However, with an ESTIMATED effective consumer base of more than 10 million people and over 1 million household projected for this region, a new enterprise with limited marketing strength and financial resource should be able to establish itself.

#### 4.4 Urban Consumer Market

The geographical spread of the Urban Consumer Market Segment that can be catered from Gorakhpur is as follows :

- Gorakhpur
- Faizabad
- Varanasi
- Jaunpur
- Muzaffarpur (Bihar)
- Chapra (Bihar) and



- Patna (Bihar)

These being the major urban consumption centres. The categories of urban markets in this region ranges between A3 to C2. There are

- Two A3 category
- One B3 category
- Two B3 category and
- Two C2 category of towns

(Note : The categorisation have been made as per the recent Thompson Market Index)

The Consumer Market Description indicating demographic composition have been furnished in Annexure 11. The Urban Market Description and its categorisation has been indicated in Annexure 12.

4.5 The commodities that can be marketed under new brands are various keeping in mind the consumption pattern of the populace and the composition of target demographic sub-segment. But the following products have potential -

- Food Products (packed/ready to cook food)
- Textile
  - Garments (hosiery, cheap ready-made garments etc.)
  - Woolen Garments (these are mostly manufactured in Luchiana)
  - Household daily use fabrics (Bed covers, Bed sheets, Towels, Furnishings etc.)
- Consumer Products
  - Stainless Steel Household utensils)
  - Fabricated and Moulded Whiteline Kitchen Products (viz. Pressure Cookers, Gas Ovens, Electric Ovens etc.)
  - Emergency Lights, Invertors, Batteries etc.
  - Ancillaries for LCV, Car, Two & Three Wheelers accesories (though there are numerous manufacturers in this segment, an entrepreneur can still manufacture Chasis, car accessories etc.)
  - Moulded Furniture, MCP fitting, floor linings etc.
  - Alternative Building Materials (viz. Pre-fabricated hollow bricks. etc.)

Other products can be thought of only after exploring the local availability and the market demand supply situation.

- 4.6 It is to be noted that in the urban consumer product market segment, there are well known manufacturers with strong and established brands and therefore marketing should ideally concentrate on identifying market niches, making arrangements with established manufacturers for supplying intermediate products. However opportunities subsists in terms of low end user price. The estimated EFFECTIVE consumer base is more than 2 million and around 2 lac households.
- 4.7 The headquarters of NE Railways is situated in Gorakhpur Division and is a Major Institutional Market, based on which a number of industries can be set up to meet the Railways requirement of

- Spares
- Items needed for Ongoing Modernisation

A list of such items is given in Table 4.1. These maily comprise

- Electrical/Electronic Items (Assembled)
- Steel Structural (formed) Items
- Concrete Sleepers etc.

which can be produced on a scale sufficient to generate economies of scale.

## **5. POTENTIAL FOR INDUSTRIES DEVELOPMENT**

- 5.1 In this section of the report the results of the economic survey of the region will be outlined in more specific terms in the term of the recommendations indicating :
- Stategies for development in phases
  - Qutline (Profile) of the units which have potential for GIDA based on Agricultural resources
  - Profile of the units which have potential for GIDA based on Regional Demand
  - Other industries, which can be recommended to the local entrepreneurs on obtaining Technology and Provision of Technological Support
- 5.2 It would appear from Section 3 that Gorakhpur Division (Eastern UP) is capable of and/or on a potential growth track whereby it is apparently enjoying on a given criterion a higher industrial growth rate (as analysed through the data regarding Per Capita Net Output from the Commodity Producing Sectors (PCNOCPS)) than the State Average. This growth can be sustained in the Long Run provided there is :-

- support from the Govt. in terms of appropriate investment in Social Overhead Capital
- an industrial plan facilitating broadbasing of industries
- realising of external economies through suitable industrial mix (i.e. Large, Medium, SSI and Ancillaries) and providing necessary equilibrium
  - Of Mix within the industrial Units and
  - Between Industry and Agriculture
- encouragements for suitable private participation in the Large Scale and the Medium Scale sectors

5.3 Along with this it is suggested that there be a definite Programme for Industrialisation which should ideally be carried out in PHASES (i.e. INITIAL, SECONDARY and MATURED) so that it is COMMENSURATE with the State of Preparedness of the Region to absorb BACKWARD AND FORWARD LINKAGE EFFECT through Industrialisation. The strategy for development may be set in two phases as set out hereafter.

5.4 AT THE INITIAL PHASE it is moot to note that considering the existing level of industrialisation and the local Entrepreneurial risk bearing capacity, it is suitable to promote industries that can depend on

- Local (Regional) Availability of Raw Materials (INPUTS)
- Local (Regional) Consumer and Institutional (i.e. Railways) Market offtake of the End Products (OUTPUTS)

Thereby the Industries proposed to be set up would be

- geared to Regional Needs and Conditions
- Compatible to the Regional Agrarian Character, and thereby
- Able to create further Value Addition to the local agricultural produce and
- Obviate the uncertainty prevailing in Price Realisation of the seasonal agricultural produces BY ASSURING the farmers of steady offtake at a predetermined prices, thus becoming Farmer Friendly

Industrialisation would ipso facto be gradually expanded, oriented to the prevailing environment and condition and ultimately absorbed locally poised for further Capacity Enhancement, Modernisation, Diversification into New Technology Area and innovative Products.

5.5 At the SECONDARY PHASE, once the FIRST FLUSH Industries, those were promoted

initially becomes fully Operational their under the buoyancy of such a situation creates, the objective would be to diversify and establish the other industries on a firm foothold through

- Adoption of Modern State-of-the-Art Technology in Existing Products
- Vertical Integration
- Concentric Diversification
- Ancillarisation

and Suitable Augmentation of the Plant Capacity to enjoy the Economies of Scale through overcoming the Learning Curve Effect. Thus, with the Industries becoming Cost Efficient, the products and services produced will be more competitive and will therefore require lessening of the INCENTIVES enjoyed earlier.

5.6 After the TWO Phases stated above, GIDA, it is presumed (and expected) will strongly position itself in the Industrial Map of India to attract both

- Foreign Investment and
- Large Private Capital

which might be absent in the INITIAL and to a reduced extent in the SECONDARY PHASES. Consequent into the above teething phases the following Phase may be termed as MATURED PHASE of Industrialisation. In the Matured Phase, the Intra Industry and Inter Industry LINKAGES would be strongly established which would thereby facilitate introduction of innovative and newer products produced through State-of-the-Art Technology and are Competitive in the International Market.

5.7 The Potential Industries that have been identified are based on the following parameters, viz.,

- Raw Material Availability in Gorakhpur Division or in the nearby regions (GIDA Commend Area)
- Consumer Market Demand
- Institutional Market (i.e. Railways) Demand

5.8 It is understood through interactions with GIDA Officials that GOVERNING PARAMETERS for those industries to be promoted are :

- Environment Friendly
- Potentially able to generate reasonable level of additional employment in the short run and further accelerate Employment Generation in the long run through multiplier effect

- Able to add value to the existing or possible agricultural produces of the region and thus would be Farmer Friendly and sources of income augmentation
- Based on locally available Raw Materials and capable of building on Technical Skills
- Able to deliver Quality Product utilising Commensurate Technology
- Based on the Needs and Demand (Both Local and External)
- Suitable for Human Resource Development in terms of enhancement of Entrepreneurial Social Skill in the long run

These are over above the Commercial Parameters that are already in focally borne and primarily to considered. These points have been brought to beer while recommending the industries in GIDA as detailed in the paragraphs that follow.

- 5.9 Gorakhpur has a large Agricultural Base and an a significant Consumer Base (Rural and Urban) both of which can justify setting up industries in GIDA.

## **6. INFRASTRUCTURE & TELECOMMUNICATION LINK**

### **6.1 Existing Infrastructural Facility**

- 6.1.1 Gorakhpur, a major urban centre, is located in North Eastern Part of Uttar Pradesh. It is the Head Quarter of the Gorakhpur Division comprising of seven districts (Maharajganj, Gorakhpur, Siddharthnagar, Basti, Deoria, Azamgarh and Mau) and is situated near the left bank of river Rapti, in the Bhojpur socio-cultural region. It is also the major junction on the Lucknow-Gorakhpur and Patna-Gorakhpur Section of the North Eastern Railway with lines connecting it to Narkatiaganj and is the headquarters of North Eastern Railway and the State Roadways.
- 6.1.2 Gorakhpur is linked by the Grand Trunk Roads - National Highways No. 28 & 29 with the Varanasi, Kanpur, Calcutta, etc. There is an airstrip situated 8 kms. away from Gorakhpur Town but at present there is no flight service available.
- 6.1.3 The Offices of Uttar Pradesh Finance Corporation (UPFC), Uttar Pradesh Industrial Development Corporation (UPIDC), NABARD, Deputy Commissioner - Excise, Assistant Commissioner - Sales Tax, General Manager - Electricity, District Collector, etc. are located in Gorakhpur. Besides having a University for higher education, there is a Medical College, an Engineering College, an ITI and a Polytechnic Institute.
- 6.1.4 The proposed Gorakhpur Industrial Development Area is situated about 7 kms. away between Gorakhpur and Sahjanwa township and is easily accessible from Gorakhpur by Road. There is a Railway Station at Sahjanwa which is connected to Gorakhpur Railway Station.

## 6.2 Proposed Infrastructural Facilities

6.2.1 There is provision in the Master Plan of GIDA for development of basic necessary facilities like electricity, water, telecommunication, sewerage, drainage, etc. The details of which is given hereunder :

- (a) One 400 kV Power Sub-Station is under construction in Motiram Adda
- (b) One another 400 kw Power Sub-Station is under construction in Mau. The work is under progress.
- (c) In Barua, 220/132/33 kW power Sub-Station is operational. There is a proposal for upgradation.
- (d) There is proposal for construction of two 132/33/11 kv Power Sub-Stations.
- (e) A Power Generation Plant in the Private Sector is proposed to be set up
- (f) The Gorakhpur District Administration has been informed of the proposal to make GIDA area free of 'Rostering' and to declare it 'Power cut Free Zone'
- (g) Supply of electricity by power cables is under consideration but limited to the extent that high tension overhead electrical transmission system is already existing in the GIDA area
- (h) Recently the authority to Assent to supply of energy has been delegated to the Local Level.

## 6.3 Telecommunication

6.3.1 There is a proposal to construct an Electronic Telephone Exchange of 2000 lines in Sahjanwa and we are made to understand that DoE has already initiated the process.

6.3.2 Meanwhile, there is a proposal to maintain 500 telephone connections by making 25 lines available through the Department of Telecommunication.

## 6.4 Bank

6.4.1 Branch of State Bank of India is operational in Industrial Area of Bokata. In Sahjanwa, besides State Bank of India, the branches of Regional Rural Bank and of Co-operative Bank are also operational.

## 6.5 Pricing Structure of Plots

6.5.1 The Industrial Plots in Gorakhpur Industrial Development Area, as we are made to understand, have been classified and priced considering the cost of acquisition and development for industrial purposes. The Plot sizes and the Prices have been depicted below :

### Plot Sizes & Rates of Land in GIDA

Plot Size	Rate per Sq. Mtr.	Fee for Advance Registration
Upto 2000 sq. m.	Rs. 198/-	
450 sq.m.		Rs. 9000/-
600 sq.m		Rs. 12000/-
800 sq.m		Rs. 16000/-
1000 sq.m		Rs. 20000/-
2000 sq.m		Rs. 40000/-
2000 to 4000 sq.m.	Rs. 175/-	Rs. 70000/-
4001 to 8000 sq.m.	Rs. 150/-	Rs. 120000/-
8001 to 12000 sq.m.	Rs. 125/-	Rs. 150000/-
12001 sq.m. & above	Rs. 100/-	Rs. 10 lac

Calculated Median Rate : Rs. 150 per sq.metre.

- 6.5.2 It should be noted that while there are variations in land prices between different Industrial Area, to the Investor the breakeven arises through the benefit received and the price paid (for the land). For example, if the Industrial Area in Kadi in Mehsana district of Gujrat (promoted by GIDC), the land prices are high, but this is offset by assured supply of Natural Gas abundantly available. In effect the entrepreneur is willing to incur higher land cost with the commensurate benefit of the easy and cheap availability of fuel.
- 6.5.3 It should now be interesting to compare the land of GIDA to that of relatively new Industrial Areas, situated in generally industrially developing developed places separately, on a random basis presented below :

Land Prices of Other Industrial Areas (Developing and Developed)

Industrial Area	Industrial Land Price (Rs. per sq. metre)	Variance with GIDA (%)
(GIDA Land Rate - Rs. 150 sq.m.)		
Industrially Developing		
Ahmednagar	25.00	(-) 83%
Baramati Growth Centre	30.00	(-) 80%
Ratnagiri	30.00	(-) 80%
Malkapur	10.00	(-) 93%
Nagpur	50.00	(-) 66%
Wani Growth Centre	10.00	(-) 93%
Raninagar (Siliguri)	60.00	(-) 60%
Industrially Developed		
Kalyan-Bhivandi	400.00	+ 200%
Patalganga	300.00	+ 100%
Uluberia	100.00	(-) 33%
Roha	150.00	NIL

Prices as on 1st April 1993

6.5.6 It is understood from the above table, that, land Rates in GIDA are

- COMPARABLE to the land prices to that of the Industrially Developed Area favourably situated with a generally efficient industrial base and culture

AND

- HIGHER by more than 90% to that of Developing Industrial Areas

Moreover, the land prices are structured

- in favour of LARGE ESTABLISHMENTS, which may deter the development of entrepreneurship in the Medium/Small Scale Sector

6.5.7 Therefore, while, as understood, the cost of development may vary from place to place, the price for land should match the benefits derived. And for a nascent industrial area like GIDA emphasis should be given to accentuate the benefits (in terms of better Social, Commercialo, Industrial Infrastructure) considering the different type and class of entrepreneurs GIDA is prospecting.



## 6.6 Facilities Under Consideration

6.6.1 It is under consideration to have the offices of U.P. Finance Corporation, U.P. Industrial Development Corporation Ltd., PICUP, Small Industries Service Organisation, U.P. Export Corporation, HUDCO, UPSIC, Controller of Pollution, Sales Tax, UPICO and of U.P. Handloom opened for the benefit of industrialists. Most importantly, Administration is considering about declaring GIDA a Backward Area for industrial purposes.

## 6.7 Workable Action Plan for Social Infrastructure

6.7.1 The Infrastructural Requirements for industrialisation of GIDA has been discussed in detail in Section 6 of the Draft Report. It is important to note at this point that despite major institutional and other advantages, GIDA suffers from a few Weaknesses :

- The proposed site, at present, is not linked with regular and frequent Public Transportation System. Moreover though there are two major National Highways passing through the vicinity.
- Gorakhpur is, at present, not linked by Air, which can cause major impediment for busy business travellers, necessitating action in this regard by the concerned officials
- Though overnight Railway Service to Lucknow and Kanpur is available, the transportation to Calcutta is constrained by Single Line Railway. This is understood to be upgraded during the Ensuing Modernisation of the Railways.
- One of the major problem in Eastern UP is inadequate availability of housing facilities and this is more accentuated in the case of Gorakhpur. Necessary action of the concerned department (e.g. PWD. Housing Board etc.) is needed to set up Housing Complexes accommodate the Potential Need of Housing in the near future
- Banking facilities, in GIDA area are inadequate to meet the potential demand and therefore the local branches can be upgraded to major branches as need arises
- Underground water is abundantly available in GIDA area, and a centralised Pump House and drinking water treatment plant is needed to be set up for residential and other purpose

6.7.2 To obviate these difficulties, and to make GIDA more marketable / attractive to the investors / promoters, Social Infrastructural Development should be undertaken simultaneously with development for Industrial Infrastructure in line with the proposed phased industrialisation programme, as given in the following paragraphs.

### **Initial Phase**

6.7.3 At the INITIAL PHASE effort should be made to provide the following areas :

- Constructing a by-pass speedway connecting the two National Highways and increasing the Road Coverage (including the parking areas) to atleast 10% in the Industrial Area
- Promoting a City Transport Bus Service to provide transportation between GIDA and Gorakhpur town, Railway Station, with a fleet of around 5 regular buses in a staggered manner
- Reviving the Gorakhpur Airport with linkage with Delhi and Calcutta through Public or Private Airlines, with atleast 3 hopping flights in Calcutta-Delhi-Calcutta route. As a commensurate measure, arrangement should be made to operate flight services to Kathmandu, Nepal
- Constructing around 1 million sq.ft. area of housing space through housing companies and PWD (can be staggered to allow for suitable economies and occupancy situation) to provide accommodation to the immigrant population (managers, engineers, skilled technicians etc. and their families), once industrialisation is ushered in
- Construction of a public school having standard educational facilities (e.g. in line with Model School), with active participation of the local School Board
- Efforts should be made to set up training institute for the farmers to impart better farming/cultivation techniques with the help of the regional agricultural university
- Promoting construction of a Medical Centre with OPD (Out Patients) facilities having expansion plan for IPD (Indoor Patients) facilities for around 50 patients
- Development of a Shopping Centre (bazar) in GIDA similar to that of a satellite township
- Opening a branch office of a major Commercial Bank together with extending postal facilities by opening a Sub-Post Office in GIDA
- Developing a modern telecommunication system having atleast 1000 lines with STD/ISD link with provision for expansion

### **Secondary Phase**

6.7.4 During the SECONDARY PHASE, initiative should concentrate around extending the civic and other facilities already established in the INITIAL PHASE. This would in effect reflect expansion of

- Road area to another 10% in GIDA area and constructing an additional bypass speedway

- Upgrading the Sahjanwa Railway Station with additional facilities for mechanised loading and unloading from railway wagons
- Constructing Low Cost efficient housing for the Labourers who would require to be accommodated
- Telecommunication facility to around 2000 lines which would facilitate Electronic Mailing System and Satellite Fax through Modem

### **Matured Phase**

6.7.5 Prior to onset of the Matured Phase, basic infrastructure development exercise covering all the aspect of civic and recreational facility should ideally to be complete. Emphasis, however, should be given in increasing Road area to atleast 25%, Reconstruction of efficient Sewerage and Waste disposal and recycling etc. While, it is envisaged that successful industrialisation would bring about a natural growth leading to further development of Social Infrastructure in required directions operating through the usual Demand Supply mechanism. However this should be regulated to the extent that it does not contravene the objectives of the overall development programme of GIDA.

6.8 Power Availability and Requirement

6.8.1 Power supply at GIDA will be sourced from the National Grid which is also supplying power to other places as well i.e. from

- Singrauli Super Thermal Power Project

and

- Rihand Power Project

Incidentally both of them are under National Grid, and therefore GIDA needs further adequate linkage to power plants to facilitate proposed uninterrupted power supply. (This is evident from the generally adverse power supply situation in Uttar Pradesh itself). In this connection, it would be moot to obtain firm linkages with the supply sources. There are certain specific examples of the Power Suppliers entering into contractual arrangement with the Consuming Industrial/Commercial Units. (e.g. CESC has contractual obligation to supply power uninterrupted to Metro Railways on a priority basis). There are also examples in certain other process industries (e.g. Cement, Petrochemicals etc.) entering into a contract with the supplier for uninterrupted power supply.

6.8.2 However, in all the cases, it is the Consumer who enters into a contract with the Supplier. In case of GIDA, this can be followed with Gorakhpur Industrial Development Authority acting as a Facilitator, and possibly also as a signatory to the Memorandum of Understanding (MoU) between the Consuming Unit at GIDA and the National Power

Grid.

### 3.9 Coat Projection for Container Terminal at Sahjanwa Railhead

6.9.1 Inquiries with the Railway Board reveal that Nodal Freight Terminal can be set up at GIDA, in case the industrialisation brings in sufficient freight movement. In the present scenario, the cost for constructing a Container Terminal at the Railhead has been projected for an estimated capacity of 1600 tons per day (considered for 1 no. rake per day). The mechanisation envisaged will be in terms of Cranes, Electronic Automatic Weighing System and Computerised Ticketing Arrangement. The Direct Cost of Construction (excluding the land cost) thereof (as obtained through our Technical Consultant) would be as follows

Particulars	Cost
Container/Vehicle Parking Space	- Rs. 100.00 lacs
Office space etc.	- Rs. 10.00 lacs
Cranes of 80 tons capacity (2 nos.)	- Rs. 100.00 lacs
Weighing System including Computerised Ticketing Arrangement	- Rs. 10.00 lacs
Total Cost	- Rs. 300.00 lacs

6.9.2 It has been assumed that the necessary construction of Loading Unloading Bay and additional railway lines be built by the Railways. The construction can be staggered to suit the needs of the industries.

6.9.3 However, inquiries or proposal for construction of the Railway Siding can be sent to Mr. C K Kanchan, Railway Planning, Railway Board, Rail Bhawan, New Delhi.

### 6.10 COMPUTER & TELECOMMUNICATION LINKAGE AT GIDA

#### Introduction

6.10.1 The proposed Industrial establishments at Gorakhpur Industrial Development Area can be linked to the major cities in India and abroad through Computer & Telecommunication links, provided in India by Videsh Sanchar Nigam Limited (VSNL). Apart from VSNL, there are other upcoming private companies who are also in the process of providing similar services to the customers in India.

6.10.2 The communication linkages in India are normally through

- Telephone, Telex
- Fax (or Telecopier)

In addition to this, telecommunication through computers have been made possible in

the form of

- Fax card, whereby, message to be transmitted can be directly downloaded from a Computer to the telephone Fax
- VSNL's Gateway Packet Switched Services (GPSS), through Networking
- Gateway Electronic Mailing Services (E-Mail) System provided by VSNL under the name of GEMS-400.

6.10.3 Among the available facilities, Telephone, Fax, Fax card & Computer, can easily be installed at the proposed Industrial establishments through local telephone/telex exchange at GIDA. These facilities are commonly used in India and have wide user acceptance. However, GPSS, E-Mail Services are relatively new and additionally require intervention of VSNL (or other appropriate agencies as may be required) for facility installation.

#### GPSS

6.10.4 Packet Switching Network is defined as a group of interconnected packet switches which route packets (data/information) from sender to a receiver. In public packet switches networks, packets travel over shared network facilities eliminating the cost of a dedicated lines between the sender and receiver. The sender and the receiver just require an access to the closest Network access point. Public packet Networks save money, because the billings are based on the number of packets sent and not for distance.

6.10.5 GPSS can transmit data after and more cost effectively in relation to the other existing popular facilities. It is designated as India's gateway to other international Public Switched Packet Data Networks (PSPDN) in over 70 countries. GPSS comprises of Packet Switching Exchanges (PSE) at Bombay, Packet Switching Exchange Node (PSEN) at New Delhi and Remote PAD-cum-Switches installed at Ahmedabad, Pune, Bangalore, Hyderabad, Madras, Calcutta, Trivandrum and also at Technology Parks at Gandhinagar, Pune, Bangalore, Noida, Bhubaneshwar etc.

6.10.6 GPSS supports CCITT standard interfaces/protocols X.3, X.28, X.29, X.25, X.75 and X.121. Under this system, the subscriber's Data Terminal Equipment (DTE) is assigned an X.121 address, composed of a Data Network Identification Code (DNIC) and a Network Terminal Number (NTN). It normally provides for relatively low volume uses such as database searches, dial up alternatives using modems for possible speed of 1200/2400 BPS apart from dedicated connection with the Network. GPSS can be accessed also via other networks such as I-Net (of DoT, Govt. of India), RABMN (of DoT, Govt. of India), INDONET (of CMC Ltd.), NIC-Net (of National Informatics Centre of Planning Commission) and other private Networks.

### Tariff under GPSS

6.10.7 The Tariff under GPSS is provided in the table below (as being made available by VSNL, Bombay)

PARAMETER	Categories			
	Synchronous (X.25)		Asynchronous (X.28)	
	Upto 9.6KBPS	64KBPS	Lessed	Dial-up
Minimum Period	1 year	1 year	1 year	2 months
Advance Rental	Rs. 8400+	Rs. 32000+	Rs. 24000+	Nil+
Rental Deposit	Rs. 3600	Rs. 10000	Rs. 1200	Rs. 300
Port Charges (Bi-Monthly)	Rs. 2000	Rs. 12000	Rs. 600	N.A.
Call Duration (per min.) - International	Rs. 4	Rs. 4	Rs. 4	Rs. 4

Transmission of 9000 characters message at 1200 BPS will take approximately 1 minute and the charge therefore will be Rs. 34. GPSS is 15 to 16 times cheaper than this.

### Electronic Mail (E-Mail) through GEMS.400

6.10.4 VSNL, has introduced GEMS.400 - Global Messaging Services based on CCITT-X.400 message standards. GEMS.400 connects message islands of Electronic Mail making them accessible to individual Personal Computer (PC) user. It also provides India's existing proprietary electronic mailing systems, whether implemented on Local Area Networks (LAN) or mini/main frame environments, with access to the rapidly growing country as well as worldwide X.400 electronic mailing community. With the help of GEMS.400, the user can send or receive E-Mail, Fax and Telex message through the PC easily without error and transmission loss.

### Tariff under E-Mail through GEMS.400

6.10.5 The Tariff under GEMS.400 is provided in the table below (as being made available by VSNL, Bombay) :

PARTICULARS	RATES
Normal Subscriber Service Charge	Rs. 1000 (One time)
- Service Agreement Fee	Rs. 3000 per year
- Password Fee	
Connection Time Charge	
- Via PSTN/PSPDN	Rs. 1 per minute
- Via Telex	Rs. 1 for Telex
Transmission Charges per Destination	
- for Delivery on Overseas E-Mail	Rs. 3 per min. for 500 characters block and Rs. 1 each for subsequent 200 characters block
ITB Service Charge	
- Message Transmission (E-Mail)	(Nos. of Message lines+4) x Re. 0.50

6.10.6 Presently the above services through the VSNL Network is not been made available at Gorakhpur. Installation of these facilities at Gorakhpur Industrial Development Area, as has been experienced at Noida, is possible through appropriate liaison with VSNL or other private Corporations providing similar services. It should additionally be noted that the rates mentioned above are indicative and is applicable in the cities/towns mentioned above.

## 7. SUGGESTED INCENTIVES

7.1 In India, it has been experienced that Financial Incentives form a Major Attraction to the entrepreneurs to set up industries in backward/not so backward areas. However this is commensurate to the overall Planning Objective of Balanced Growth.

7.2 As discussed in Paragraph 6.12 and 6.13 of Section 6, financial incentives can be Marketing and Promotional Tool and can be effective to bring about the needed momentum of industrialisation in Gorakhpur Division, especially GIDA, which is expected to take shape of a model industrial area in future.

7.3 It is not needed that the Financial Incentives be given to all industries through a long period of time, but care should be taken to reward the best, i.e.,

- The most contributing Industry (Socially Beneficial) should enjoy the Financial advantages of the Incentives most

- It is proposed that, keeping with present National Industrial Policy, Subsidising the Sick Companies at the Cost of Efficient Industries should ideally be AVOIDED.

In paragraphs below, the detail recommendation of the Incentives is given.

#### 7.4 Workable Action Plan for Incentives

7.4.1 In India, it has been experienced that Financial Incentives form a Major Attraction to the entrepreneurs to set up industries in backward/semi backward areas. However this is commensurate to the overall Plan Objective of Balanced Growth.

7.4.2 As discussed in Paragraph 6.12 end 6.13 of Section 6, of the Draft Report, financial incentives can be a major Marketing and Promotional Tool which can bring about the needed momentum of industrialisation in Gorakhpur Division, especially in GIDA, which is expected to take shape of a model industrial area in future.

7.4.3 It is not needed that the Financial Incentives be given to all industries through a indefinite period of time, but care should be taken to reward the best. Therefore the basic criterion would be :

- The most contributing Industry (Socially Beneficial) should enjoy the Financial advantages of the Incentives most
- It is proposed that, keeping adherence to the present National Industrial Policy, Subsidising the Sick Companies at the Cost of Efficient Industries should ideally be AVOIDED.

7.4.4 The Draft Report contains a separate section on INCENTIVES wherein possibility of making GIDA more marketable through infusing financial and other incentives has been dealt with. Incentives suggested are the outcome of our survey with other leading Industrial Promotional Authorities (e.g. SICOM, GIDC, WBIDC etc.). The technicalities of the incentives have been covered in detail in Section 7 of the Draft Report.

7.4.5 The package of Incentives has been categorised under

- Capital Investment Subsidy
- Sales Tax Benefits
- Employment Oriented Industries
- Pioneer Units
- Prestigious Units

The classifications are similar to that of other Industrial Promotional Authorities but suitably modified to accommodate special features (e.g. employment of local people) suitable to GIDA.



#### 7.4 Incentive Scheme

The package of Incentives are categorised under

- Capital Investment Subsidy
- Sales Tax Benefits
- Employment Oriented Industries
- Pioneer Units
- Prestigious Units

In order to avail the benefits under various Incentive Schemes the Industrial Units would be required to employ a minimum of 80% of all the posts and minimum of 30% of Managerial or Supervisory Posts from the Local persons and/or Professional Graduates from the local technical Institutes. Place of domicile may be considered as a perimeter in this regard.

#### 7.5 Capital Investment Subsidy Scheme (CISS)

This scheme would be available for Operative Industrial Units within a pre-specified time limit (say 5 to 7 years) and can be made available to the Existing Units for Modernisation and Expansion. The suggested Quantum of Assistance is given in Table 7.1 below :

**Table 7.1 : Suggested Quantum of Assistance Under CISS**

Sector	Incentive
SSI	35% of Fixed Capital Investment or Rs. 30 lacs whichever is less
Medium/Large Scale	30% of Fixed Capital Investment or Rs. 25 lacs whichever is less

The SC, ST, SEBC Community and Women entrepreneurs setting up SSI Units can be eligible for a further 5% subsidy. However, caution should be exercised that the entrepreneurs under this category should hold atleast 51% of Equity Capital.

#### 7.6 The subsidy, offered to a unit should be subject to fulfilling the following conditions :

- the Unit will have to install and effectively operate and maintain water and air pollution control measures, as per the standards prescribed by the competent authority
- the Unit will have to remain in production continuously at least for 5 years after it starts commercial production

- the above rates of subsidy are aggregate rates and can be made exclusive of central subsidy, if available in future
- the Units will have to satisfy the employment criteria as stated before (but can be relaxed for Special Cases)

#### Sales Tax Exemption Scheme (STEC)

- 7.7 Under STEC, an eligible Unit will be entitled to purchase Free of UP Sales Tax, the Raw Materials Packing Materials and Processing Materials required for the purpose of manufacturing goods. In addition the Unit will also be exempted from payment of Sales Tax on the sale of goods manufactured by it.
- 7.8 Alternatively, the unit is allowed to opt for Sales Tax Deferment Scheme (STDS). Under the Scheme, the recovery of Sales Tax collected by the Unit on Sale of Goods manufactured by it, will be deferred and the amount, so deferred will be recovered by the Sales Tax Authority after the expiry of specified/relevant period. The quantum of assistance under the Scheme is stated below in Table - 7.2.

**Table. 7.2 : Suggested Quantum of Assistance Under STEC**

Sector	Incentive
SSI	100% of Fixed Capital Investment
Medium/Large Scale	80% of Fixed Capital Investment
Time Limit	7 to 9 years

- 7.9 The Unit opting for Sales Tax Deferment Scheme (STDS) will be required to furnish a security to the Sales Tax Authorities against the deferred amount of Sales Tax by way of pari passu charge, second charge or personal guarantee in the form of security bond.
- 7.10 Employment Oriented Industries Scheme (EOIS)

Recognising the potential of offering large employment by the new SSI Units, under this policy, the State Government can offer additional incentives to encourage setting up of such industries with a view of generating a sizable employment potential in GIDA. Under this Scheme the new SSI Units can avail of additional Sales Tax Incentives either in the form of Sales Tax Exemption or Sales Tax Deferment. The quantum of these benefits are stated in Table 7.3 below.

**Table 7.3 : Suggested Quantum of Assistance Under EOIS**

Rate of Investment per Employment	Rate of additional Sales Tax Benefits
Upto Rs.25.000 in Fixed Capital Investment per Employment Generated	20% of Fixed Capital Investment
Rs.25,000-50,000 in Fixed Capital Investment per Employment Generated	15% of Fixed Capital Investment
Rs.50,000-1,00,000 in Capital Investment per Employment Generated	10% of Fixed Capital Investment

7.11 These benefits would be addition to the benefits available in respective category of Industrial Units under Sales Tax Incentive Scheme but with a pre-specified time limit.

7.12 Pioneer Industry Incentive Scheme (PIIS)

In order to encourage setting up of medium / large units in GIDA, and to accelerate further industrial development in the region, special incentives for pioneer units can be offered.

- The Pioneer Status can be defined as follows :
  - The Unit shall have an minimum Investment of Rs. 5.00 crores in Fixed Assets
  - The Unit shall employ 100 or more workers on a permanent basis as per employment policy of the state

7.13 This benefit can be accorded within a limited time frame and numbers (say 10 to 15 Units on a first come first served basis). It is important to note that Pioneer Unit Benefits are not normally available for expansion, modernisation, innovation, rehabilitation or rationalisation in other States. But some of these can be made available to Pioneer Units in GIDA. The details of Incentives under this Scheme is Stated in Table - 7.4 below :

**Table 7.4 : Suggested Quantum of Assistance Under PIIS**

Benefits	Incentive Limits
Subsidy	30% of Fixed Capital Investment or Rs. 25 lacs whichever is less
Sales Tax	100% of Fixed Capital Investment for a period of 10 years from the date of commencing commercial production

7.14 Under this Scheme, the Units can avail benefits under either Sales Tax Exemption or Sales Tax Deferment or Composite Scheme and the Units will not be eligible for

Investment Subsidy and Sales Tax Incentives under any other Scheme. The eligible Industrial Units will be registered for permanent Pioneer Status only after the commencement of Commercial Production and Completion of the Project.

7.15 Prestigious Unit Incentive Scheme (PUIS)

- This Scheme is designed for Industrial Units having Investments for over Rs. 100 Crores and having a potential to promote Ancillary Industries, leading to further Industrialisation in GIDA extendible to almost all Industrial Units satisfying the parameters as under :
  - the Units shall have an Investment in Fixed Assets of atleast Rs. 100 crores in a particular project
  - it will employ at least 100 workers on a permanent basis and follow the employment policy of the State Govt. for recruitment of employees
  - it will have to Reinvest the amount equal to 50% of Sales Tax Incentives available under this Scheme in the new Porject in GIDA within 5 years after the Unit reaches the admissible amount of Sales Tax
- Under this Scheme, the Industrial Units will be eligible to avail Composite Incentives of Sales Tax Exemption and Sales Tax Deferment.
- The quantum of assistance under this scheme will be 100% of Fixed Capital Investment for a period of 10 years from the date of commencement of Commercial Production

7.16 The Prestigious Units availing of Sales Tax Deferment Benefit will be required to pay the Deferred Amount in six equal annual installments beginning from the next financial year to a pre-specified period. The Units claiming Incentives under this Scheme will not be eligible for Sales Tax Incentives under any other Scheme.

7.17 The Prestigious Status is not normally available in other States for Expansion, Innovation etc. but can be made available for these areas also. However. Prestigious Units may, during the Operative period of the Scheme, carry out changes in the technology to be

- Competitive
- to Increase Productivity
- to Reduce Pollution and make Investments in such Modernisation and such Investment would be eligible.

7.18 Special Incentives

- Apart from the stated above, other Special Incentives can be given on a case to case basis to

- Investments by NRIs
- Biotechnology Units
- Units for Research & Development
- Units effectively Indigenising Latest Foreign Technology
- In addition to above Special Areas of Merit to facilitate technological upgradation and improvement also to be considered on a case to case basis.

## **8. DEVELOPMENT INITIATIVE - SUGGESTED INDUSTRIAL PROJECTS**

8.1 The Industrial Projects outlined above and feasible within the overall parametres as laid down under the proposed industrial plan, can be taken up suitably by the Entrepreneurs subject to further Feasibility Analysis. It should be noted that while all the care have been taken in this regard to make the Project Profiles as informative as possible, the Profitability Status should be viewed in the light of any change in the Govt. Policy. especially

- Excise Duty Rates
- Interest Rate Structure
- Rates of Sales Tax
- Rates of Corporate Income Tax

At the outset, these, we believe, will influence the Commercial Viability of the Project(s) and any Major Shift in the National and State Industrial Policy can alter the entire Projected situation.

8.2 Gorakhpur has inherent strength, as has been discussed earlier, in its

- a) Agricultural and Livestock Resource
- b) Advantageous Location, providing
  - Proximity to the Rural as well as the Urban Market
  - Linkage to the major industrial market, in Eastern as well as Northern states through proper Roads and Railways for raw material supply and marketing of industrial goods
  - Human Resource and existing and proposed facilities for manpower development

8.3 Therefore, from the microeconomic point of view, any industrial project which is able to take advantage of the local strength would be prime facie successful, as has been

experienced in the case of Punjab for food processing, Gujrat for milk processing. Thereafter, the greenfield situation can be utilised successfully for the products, both industrial and consumer, which is not produced in that area and in the product areas wherein Gorakhpur and its adjacent area is a net importer. At the initial stage, those industries might be set up at a limited scale and later on upgraded to higher scales whereby. Gorakhpur might emerge as a net exporter of the goods.

- 8.4 On a more generalised aspect and from a microeconomic analysis, projects can be taken up at Gorakhpur, where there is a proven overall demand supply gap, like in the cases of certain categories of drugs, speciality chemicals including dyes, leather and rubber chemicals etc. There are other unexplored areas of packaging materials like tin and glass containers, polypacks & tetrapacks.
- 8.5 The critical aspect of the development foci has to take into account the areas of microeconomic and macroeconomic balances and its effect on the regional as well as overall industrial initiative not only at the present state but also at the future. We have, accordingly, identified the overall areas of effort to harness the local advantage and to position for a broad industrial base and the specific industries are highlighted herein in the following paragraphs.

#### **Paddy based Industries**

- 8.6 With a large Agricultural Resources Base outlined in section 2 of this report, Gorakhpur Division has immense potential to develop Agro-based Industries to facilitate a smooth transition from a Subsistence Agrarian Economy to a modern Industrialised Economy. However, it is to be noted that the agro based industries that can be set up may not necessarily depend on the
- Existing Crops and Cropping Pattern of the Region, because, industries can be planned on
  - Possible Crops (that might not have been cultivated on a wider scale till now, e.g. Sunflower) that would have a significant usage pattern linkage with proposed units.
- 8.7 Paddy is the most important crop in Eastern U.P. after Wheat with about 1.2 million hectares area under cultivation. The production recorded by the Agricultural Statistic Department are given below
- Area under Paddy in Gorakhpur Division is 1.2 million ha.
  - Annual Production of Paddy is 4.5 million metric tons.

Since Wheat is also abundantly available in this area and comprise the staple food of local population, the surplus paddy brings cash to all growers including marginal and land owners.

- 8.8 The area is in close proximity to the rice deficit region e.g. West Bengal/Nepal. A part of the surplus rice is exported to the Tarai Region of Nepal which is linked to Nepal Border 90 km. to Gorakhpur on Highway. The marketing of surplus paddy is not at all difficult in this region.
- 8.9 At present in this region there are a number of licensed and unlicensed small Rice Mills in the rural areas. A major proportion of the output of paddy produced in their region is milled in these units. Presently the mills are primarily operated on customer basis. These mills are wasteful with a low recovery of rice and increased breakage; besides the downstream utilisation of by-products i.e. manufacture of edible grade rice bran oil can not be organised. At present the existing small rice mills produce a mixture of husk with bran - a by product which is lower in value than pure bran. The item is taken away by the farmers and which is used as a cattle feed.
- 8.10 In a Modern Rice Mill the milling operations would include a centrifugal deshusser and a screen type cleaner separator with the huller and motor. With modernisation the rice from 1 quintal paddy is likely to be 70 kgs. with no broken against 65 kgs. and with broken as at present at a polish varying 4 to 6 percent. Further the yields of pure bran will be 8 kgs. A farmer will be a gainer as he can sell a part of the good quality rice and the pure bran at a higher price.
- 8.11 In the cases of an Integrated Rice Mill the sale of by-products can be effected to the miller either in cash or against adjustment of rice milling charges to the mutual benefit of the farmers and the rice millers. At the proposed integrated Modern Rice Mill, the miller can use the pure bran obtained from Husking Mill and then manufacture edible grade rice bran oil. Since the bran is usually parboiled, the yield of oil would be approx. 20 to 30% of the bran which would be much higher than in the case of raw bran.
- 8.12 The deoiled bran resulting from the extraction of oil from rice bran would have a yield of 70 to 80% of the parboiled bran. Now these can be used for the production of cattle feed. This bran can be marketed (mixed with waste molasses or other cheap ingredients) as a cattle feed which is superior to the huller bran now being used by the farmers in respect of preservation, protein content and in respect of digestibility. These would result in a higher yield of milking cows triggering further growth of the milk based industries in the region. A project profile of a Modern Rice Mill is outlined in Schedule 1.
- 8.13 It is visualised that an Integrated Modern Rice Mill at a large scale would be successful at GIDA. An Integrated Modern Rice Mill, though not covered under the Project Profiles, would typically have an actual production capacity of around 1000 tons per day. This would necessitate backward linkage with the farmers to a great extent to obviate the scarcity of raw materials.
- 8.14 This Integrated Rice Mill would generate
- 600 tons of Rice

- 300 tons of Rice Husk
- 50 tons of Rice Bran

It is envisaged that, the Rice Husk would be fed into a boiler which would generate steam of about 600 tons to be used for the Captive Power Plant, and 54 tons of Ash for further processing. The Ash contains 90% of Silica which is treated with Caustic Soda and low pressure Steam to form Sodium Silicate. This Sodium Silicate is further treated with (mineral) Acid to form Precipitated Silica (current market price of which is stated to be around Rs. 40 per kg.) of about 48 tons. The residue would be around 5 tons which would be treated further for obtaining activated carbon.

- 8.15 The Rice Bran obtained for around 50 tons would be treated in an oil expeller and processed thereafter to obtain 20 tons of Refined Edible oil. The residue of 30 tons of deoiled bran would be available for treatment together with that of the residue of around 5 tons obtained from Rice Husk after obtaining Precipitated Silica, for obtaining Activated Carbon.
- 8.16 The residues therefor obtained would be around 35 tons. This would be treated with Zinc Chloride and thereafter be heated in furnace. The intermediate product thus obtained after heating, would be further treated with Zinc Chloride to obtain Activated Carbon of about 10 tons. Activated Carbon great export potential if the Quality of Production and the cost of production can be effectively controlled. In the Overseas market the item can be exported @ \$1000 / ton to \$1320 / ton minimum for powdered and granular forms respectively.

#### **Horticulture based Industries**

- 8.17 U.P. is rich in horticulture production. The important fruits are mango, Guava, Banana, Citrus, Pine Apple and important vegetables are Potato, Onion, Tomato, Peas, Cauliflower, Carrot, Cabbage etc. No definite estimate of annual production is available. However, an estimate by FAO indicates a level of production around 24.76 million for the fruits including nuts and 48.71 million tonnes of Vegetables. Based on the available local resources the following Food processing Industries have been identified in table below :



**Table 8.1 : Horticulture based Industries based on Local Agro Produce**

Resource Base	Potential Industries
FRUITS	- Mango, Chutney & Preserve (Jam, Jelly)
Mango, Guava, Leechi, Cider, Banana	- Apple, Cider & Fruit Wines, Squashes and Serups
	- Banana Processing
	- Fruit Juice Concentrate/Nectors/Honey
VEGETABLES & SPICES	
Potato, Tomato,	- Processed Vegetables
Ginger, Garlic	- Potato Wefers/Potato Powder
	- Tomato Paste, Sauce
	- Ginger, Garlic Processing

(In the processed Vegetables area, Individually Quickly Frozen Vegetables is a bright area where investments have already been in Uttar Pradesh. Hindustan Lever and a farmers Cooperative in U.P. has joined hands in this venture.)

- 8.18 In the recent times the processed foods market has witnessed rapid growth. The popularisation of ready-made noodles, fruit juice packed in tetrapacks (Frooti), low-cholesterol edible oil (sunflower oil), packed wafers. etc. indicates that there have been a remarkable shift in the attitude of the India Urban populace towards processed and/or semi-processed foods. This trend is commensurate to the increase in average frequency to media exposure of the urban and up market rural people. Therefore the prospect of Processed Foods Industry is seems to be bright in GIDA.
- 8.19 The exports potential of processed vegetables, fruits, cereals to the Far East (UAE and others) is immense. Table 8.2 below shows the major suppliers of processed vegetables and fruits in the international market.

**Table 8.2 : Major Suppliers of Processed Vegetables, Fruits in the International Market**

Food Item	Major Suppliers
Fruit Juice & Concentrate and Vegetable Juice	Brazil, Israel
Tomato Paste	Greece, Italy, Portugal
Canned Tomato	Italy, Spain
Canned Pineapple	Thailand, Philippines
Semi-processed fruits & Berries	Italy, Poland, Spain
Canned Mushrooms (dehydrated)	China, Taiwan, Korea
Dehydrated Vegetables	USA, Egypt, India, Bangladesh
Canned Asparagus	Taiwan
Tropical Fruit Pulp	India

The demand for above items are likely to grow in the international market, and with large agricultural resources, Gorakhpur can join the national mainstream of Export of Processed Foods/Fruits.

- 8.20 The Survey reveals that the International Trade for Fruit and Vegetables juices was US\$ 200 million in 1981 and with an estimated growth rate of around 15% the estimated value in 1993 is over US\$ 1,000 million. International trade for fruit & vegetable juices was 2 million tons in 1985 as against a meagre 40,000 tons for tropical fruit pulp & juices. There is good scope for increasing exports of tropical fruit pulp / juice, particularly Guava, Mango, Papaya from India. Since in Gorakhpur division is rich in Guava, Papaya, Mango and other fruits, a strong case exist for setting up a fruit processing plant based on these agro resource.
- 8.21 The Government Policy is conducive for food processing industry as observed by the following :
- All processed foods are open to MRTP/FERA Companies.
  - All processed foods including processed foods and vegetables (Barring those reserved for small scale) brought under broad-branding
  - MRTP/FERA Companies are allowed to set up units in centrally notified Category A, B & C backward districts without any export obligations
- 8.22 The following facts has to be borne in mind while considering setting up a Food Processing Unit in GIDA :
- High cost of packaging materials e.g. quadro/teetrapacks, tinsplate cans & other flexible materials
  - Inadequate facilities, particularly for frozen products (Refrigerated vans/containers)

and thereby necessitating utilisation of dryice (Solid Carbon di oxide)

- c) Infrequent availability of refrigerated containers / ships for export
- d) Inadequate cold storage / refrigeration facilities, incidence of local levies, high costs for launching a product - advertising through PDS/POP Displays, Outdoor Hoardings, Press, Television, Video etc.
- e) Quality parameters to be maintained to satisfy FDA regulations

### **Oil Extraction Through Solvent Process - A Potential Area of Growth**

- 8.23 The importance of Vegetable oil in Indian ways of life can hardly be ignored. In Indian life style no other commodity can meet simultaneously the energy and protein requirements of the human body as oil seed do. In Indian context vegetable oil apart from their use in our daily diet have also wide application in soap, lubricants, surface coatings and plastics. The demand and supply gap has to be managed through import. Hence this sector of industry need special emphasis in the initial phase of Industrial Development in GIDA context.
- 8.24 Gorakhpur Division is rich in Oil Seed production. The Oil seeds that are produced in Gorakhpur Division are mainly Mustard, Groundnuts and Sunflower. In Basti Oswal Foods Company have successfully initiated a shift in the Crop pattern. The total production of Mustard in this division is 27,000 MT and production of Groundnut is 8,000 MT. It is interesting to note that mustard oil is used as the cooking medium in the households of the region and usage of groundnut and sunflower oil is limited mostly to the urban centres. In the rural household the alternative cooking medium is vanaspati. Along with this unit the Oil Cakes being a by-product can be an export item, earning valuable foreign exchange for the country. Moreover, Castor Seeds can be cultivated for Usage in Oil Extraction Plants to manufacture, Crude Oil, De Oiled cakes, BSS Grade Oil etc.
- 8.25 Apart from Oswal Foods Co., the edible oil producers are mostly in the small scale sector and there is hardly any Vanaspati unit in the region. Therefore opportunity subsists for oil extraction through Solvent process from locally available products.
- 8.26 Alongwith a solvent extraction plant, it is recommended that commensurate investment be made in the Oil Extraction and Refining for edible oil to generate suitable economies of scale.

### **Soya and Soya Based Products**

- 8.27 U.P. is one of the important Soya a regions in India. The total area under Soya Bean cultivation is not significant now but it has growth potential. Based on this potential

crop (resources) the following units are proposed to be set up

- a) Solvent Extraction Plant for Oil
- b) Deflated Soya Flakes converted into Textured soya protein.

8.28 India and Internationally, Soya and Soya Based Products are increasingly used as food and fruit supplement due to the following facts :

- a) It has highest protein content (of around 40%)
- b) It has a well balanced profile of essential Amino Acids
- c) By suitable blending with wheat and other cereals high protein efficiency ratios can be obtained approaching that of milk protein
- d) It has better shelf life and is eminently suitable for blending, supplementing with other protein contents
- e) It is estimated that in the Domestic Urban Market the demand for soya product is approximately 2 million tonnes per annum. The target market segment i.e. the lower middle class, urban poor and rural people especially growing children and pregnant women if added, would have a demand base not less than 4 million per annum.

8.29 In Gorakhpur region, the large Consumer Market base would provide for the regular offtake of Soya and Soya based products as food/food supplement to enhance the nutrition levels of the population. Apart from the local market, Soya can be marketed nationally as well as internationally. The strong case for manufacturing Soya based products in GIDA is reinforced because the basic produce (Soya) is available locally and can be cultivated on a larger scale to meet the industrial requirement.

#### **Distillation of Natural Essential Oil Bearing Plant**

8.30 A general survey of local plants and herbs in Eastern U.P. reveal a great potential for development of industries based on the products / extract for such plants / herbs the importance of which have been re-discovered through R&D efforts of the advanced countries e.g, Germany, UK, Japan, USA. The market potential of these re-discovered items immense both in domestic as well as export market. The recent discovery of the multitude of products, provide a case for setting up Neem products i.e. Extraction of Neem oil and other extracts from Neem needed special mention. Therefore a case for setting up distillation/extraction industries of essential oil bearing plants in GIDA exists.

8.31 Oil from Eucalyptus, Lemongrass and Neem are essential oil which are odoriferous bodies oily nature mostly obtained from vegetable kingdom. However it appears that significant infrastructural and Technical Support is required for setting up such units.

### Dairy Farm Products

- 8.32 GIDA command area is rich in livestock resources (Ref. section 2). In GIDA there is a considerable scope for setting up livestock based food processing industries particularly of milk foods and meat packaging. In Gorakhpur Division in 1988 (the latest available figures with the Divisional Animal Husbandry Dept., Govt of Uttar Pradesh) there are 33 lacs Cows, 12 lacs Buffaloes, 14 lacs Goats, moreover there are around 3 lacs Pigs, 18 lacs Poultry Birds and 1 lac sheep. These figures have substantially increased over the last five years with an estimated annual rate of growth of 5-7% per annum. The Projected figures of Livestock Population for 1995 and 2000 is stated as under in Table - 8.3

**Table 8.3 : Projected Population of Livestock, 1995 and 2000**

Livestock	Present (1988) Population	Projected Population	
		1995	2000
Cow	3.31	4.92	6.28
Buffaloes	1.23	2.10	2.81
Pigs	0.28	0.42	2.20
Goats	1.49	2.09	2.66
Poultry Birds	1.77	2.89	4.64
Sheep	0.12	0.14	0.18
Other Livestock	0.05	0.07	0.08
	8.25	12.63	18.83

These resources are part of the present rural economy of the Division which can be further developed through an intensive programme further.

- 8.33 It is estimated that out of 9 lacs tonnes, around 4 lacs tonnes of Milk is consumed internally within Gorakhpur Division leaving 5 lacs tonnes of Milk that can be processed for further Value Addition (e.g. Condensed Milk, Milk Powder, Butter, Cheese etc.) and Marketing by setting a large Dairy Unit of around 4,00,000 lpd. While there is an immense potential for Dairy Firms there has hardly been any concerted effort in this regard. The experience of GMMCL (Amul), Anand can be utilised in this regard.
- 8.34 It is estimated that in Gorakhpur region and adjacent area nearly 2,00,000 tons of meat from Buffalo, Goat, Pig and Chicken (as estimated by the Local Officials in the Dept. of Animal Husbandry) is available per annum a part of which can be processed for further value addition in form of Processed Meat to be sold retailed in the urban market and manufacturing BONE MEAL to be utilised as cheap fertilizer in the agricultural fields.

## **Sugarcane based Industries and its Downstream Products**

### **A) Molasses**

- 8.35 It has been outlined in Section 2 & 3 that Sugarcane is the most important agro resource base of Eastern U.P. and the Sugar Mills play the most important role in the industrial scenario of Eastern U.P. The industry provides the most significant direct employment potential besides indirect employment in Sugarcane cultivation. From a value addition angle, the industry has a great potential if the main by-product molasses are used for value added alcohol production. The recent trend is toward the integrated Sugar Complexes where the existing sugar mills have been establishing distilleries and also formulating schemes for turning out alcohol based chemicals.
- 8.36 Molasses and Bagasse are the two important by-products of the sugar industry. In Gorakhpur Division around 5,74,285 MT of Molasses is produced out of which the local offtake by the two distilleries is around 1,07,435 MT leaving a surplus of 4,66,850 MT which can be utilised profitably by a potential new Distillery / IMFL Unit. However, before setting out such an unit detailed survey is essentially required as to the availability of input in sufficient quantity on a sustained basis. However, the field survey results of the PW team reveal the following positions of molasses available in the Gorakhpur division :
- |                      |                       |
|----------------------|-----------------------|
| a) Total Production  | 5.74 lakh metric tons |
| b) Offtake           | 1.07 lakh metric tons |
| c) Surplus Available | 4.67 lakh metric tons |
- 8.37 Apart from Molasses around 6 Million Tonnes of Bagasse is produced but more than 3 million tonnes is used as fuel in the sugarcane factories leaving a surplus of around 3 million tonnes which can be utilised profitably. Opportunity subsists for new units in the manufacturing areas of
- |   |
|---|
| a) Bagasse Based Paper Unit                       |
| b) Bagasse Based Rayon Unit                       |
| c) or Bagasse Based Integrated Rayon & Paper Unit |
- However, Bamboo and Wood Pulp is required correspondingly as supplement to Bagasse for manufacturing highgrade writing Paper and Rayon Grade Pulp.
- 8.38 Driven by strong environmental pressures, the Paper industry worldwide is resorting to nonconventional sources of raw materials for paper making. In India also Govt. have resorted to fiscal concessions to encourage production of paper through agro waste and other renewable sources of input. In this scenario availability of 6 million ton of Bagasse provide a unique opportunity to set up a series of Bagasse based paper unit in GIDA

command area.

### **Agricultural Implements Industry**

- 8.39 Agricultural Implements are used in this primarily agrarian economy. It is important to note that, at Gorakhpur there is no organised sector manufacturer of these implements. It is envisaged that a proposed Agricultural Implement Industry would serve the need has a high potential of Success.

### **Electronics Based Industry**

- 8.40 Electronics industry is on the fast track. The Govt. of India has set an ambitious target of Rs. 100000 crores of electronic goods production by the end of year 2000. A comparative position of actual production in 1988-89 vis-a-vis the estimated production of 1993-94 and 1994-95 as envisaged in the plan document is given in Table 8.4

**Table 8.4 : Actual Production vis-a-vis Planned Production**

(Rs. crores)

Sector	1988-89 Actual	1993-94 (Projected)	1994-95
Consumer Electronics	2650	7200	8500
Industrial Electronics	1000	2550	3100
Communication & Broadcast	1010	3500	4500
Strategic Electronics	410	1000	1200
Computer System	560	2250	3800
Equipment Total Components	5630	16500	20000
Export Oriented Production	160	1000	1500
Software for Exports	115	700	1000
<b>Total</b>	<b>12660</b>	<b>23300</b>	<b>29000</b>

- 8.41 In this scenario the role of GIDA in the development of Electronics industry in the entire process of industrialisation of Eastern U.P. cannot be overstated.
- 8.42 A Centre for Electronic Design & Technology (CEDT) have been set up at Gorakhpur by Dept. of Electronics, Govt. of India and U.P State Govt. The centre have been established with an objective to make it a centre of excellence in the field of Electronics for Eastern U.P Centre round GIDA. This is set up temporarily in M.M.M. Engineering College, Gorakhpur to be shifted in their own Administrative Building close to the Engineering College campus. CEDT has been set up to interact closely with large and small scale industry to be set up in GIDA which would have close linkage with the R &

D lab. and Govt. bodies on all India basis. The objective of CEDT interalia include training of personnel for Human Resources Development and to assist in promotion of small scale Electronics units in GIDA.

8.43 The interaction of PW Consultants team with CEDT at Gorakhpur indicate immense potential for setting up an Electronics Complex in GIDA having special thrust in the following areas :

- a) Software for Export
- b) Industries Electronics specially to meet Railway Requirements/Sugar Industries/ Paper Industries
- c) Medical Electronics
- d) Selected Consumer Electronics

However, it is to be noted that setting up Electronics Units require high degree of Technical and Infrastructure Support.

#### **Railway Need Based Industries**

8.44 Gorakhpur is the head quarters of the North Eastern Railways and therefore a number of industries can come up based on the demand from the Railways arising from

- a) Ongoing Modernisation of Railways (particularly Sleepers)
- b) Replacement of vital Electrical Equipments
- c) Spare Parts Requirement

8.45 This reflects a highly potential market demand that is already existing and is catered to by the outside suppliers at present. The list of items in regular demand by North Eastern Railway have been indicated below

- a) Electronic Machine & Parts
- b) Telegraph & Telephone Equipments
- c) Wireless Equipments includes Electronic Components
- d) Electrical Signally & Interlocking Equipments
- e) Pipes & Pipe Fittings
- f) Hardware Items & Fasteners
- g) Rubber, Leather, Canvas, Plastic Flooring Materials
- h) Pre stressed Wire & Wire Ropes



## **Other Industries**

8.46 Since there are not much Mineral Resources available in the region, only a few mineral based medium scale industries can be proposed to be set up in GIDA. The identification of the medium scale industries is largely based on the Raw Material availability and marketing is expected to be carried on a national scale or at least on a regional basis. Accordingly, potential is identified for the industries elaborated below.

### **A) Mini Cement Plant**

Limestone is abundant available in Bihar which is very close to Eastern U.P. The nearest source to limestone is Mirzapur-Banda region wherefrom limestone can be transported to GIDA. The market is largely determined by expanding Building activities in the region. With increasing pressure on existing urban housing facility in Gorakhpur region, a Mini Cement Plant of VSK technology of capacity 200 TPD can be set up in GIDA. A downstream application of Cement Products (Pre-cast Concrete Structural Unit), for various construction activities have also been outlined.

### **B) Sheet Glass**

There is potential for Sheet Glass industry in India because a large quantity is being IMPORTED. With only a few manufacturer in this area and growing demand from the Building Industry the Sheet Glass Industry is poised for further growth. In GIDA a similar unit can be set up to take advantage of this emerging potential based on the Local/Regional availability of RAW Materials (Silica).

### **C) Textile Processing**

The potential for a Textile Processing Mill in GIDA arises mainly because,

- a) Gorakhpur division has a large Consumer Base generating a huge demand for textiles, in particular Processed Textiles (for Dress Materials, Wedding etc.)
- b) It will facilitate processing of clothes manufactured by the Local established Handloom & Small Scale Powerloom Industry and will contribute towards Value Addition of the local textile products.
- c) There is at present no local facility for Carding and Twisting the Silk Thread produced in the region, which are sent outside the region. As a Horizontal Integration exercise, there is further potential for a Textile Processing Unit to set up a separate section for carding and twisting of silk thread.

### **D) Chemicals**

There is a potential emerging in GIDA for manufacturing chemicals for use in the

- a) Bulk Drugs

- b) Pesticides
- c) Dyestuffs
- d) Rubber chemicals
- e) Speciality chemicals
- f) Citric Acid & Oxalic Acid

for User Industries that are already there in Uttar Pradesh and expected to be established in the near future (with particular reference to industries in GIDA). Additionally, a unit can be set up to manufacture

- Para Nitro Chloro Benzene (PNCB)
- Ortho Nitro Chloro Benzene (ONCB)

Manufacturing Mono Chloro Benzene (MCB) can be integrated. The project profile organic chemicals processing unit required in Drug/Pesticide/Rubber Chemicals have been outlined in relevant Schedule.

#### **E) Leather Finishing Chemicals**

Gorakhpur and the adjacent region has a large leather market (e.g. Chaurichaura) and the leather processing is done in the household. A large quantity of (around Rs. 30 - 40 crores in value) leather is sold through the wholesale market in this region, to the leather goods manufacturers of Kanpur and other regions (including Customers from outside UP).

Potential subsists for a new unit to manufacture leather chemicals, for leather finishing & quality processing of leather to be used in the tanneries. A short project profile of leather finishing chemicals e.g. Nitrocellulose lacques, pigments etc. have been furnished in appropriate Schedule.

#### **F) Plastic Mono Filaments**

Potential subsists for a new unit to new unit to manufacture Polymer twines made by extrusion process usually monofilaments of high density polyethylene or polypropylene. The application areas are viewed e.g. fishing nets, woven filter for fabric for industrial use Shopping Bags, furniture tapes and ropes for various uses.

#### **G) Jute Viscose Fine Yarn Unit**

The Jute production in Eastern U.P. is sufficient to support 1/2 Jute Mills of medium size to make the local demand. The existing Jute Mill can undertake Jute Fine Yarn manufacture for optimum utilization of their capacity which have very good export market. A profile of such Jute Fine Yarn unit have been attached in relevant

Schedule.

**Hotel Industry**

- 8.47 The rise of hotel industries in Gorakhpur would be a natural culmination of increasing business activities. As the industry base would widen increasing number of business executives needed to be accommodated. The existing accommodating places are not equipped with facilities for conference, seminar, formal business parties etc. A three star hotel, targeting to business executives, has bright prospects.
- 8.48 Furthermore, Gorakhpur is of tourist and pilgrimage interest. The famous Gorakhnath temple complex is just 9 kms. and is a sacred place for all Hindus. Kushi and Lumbini, are located nearby. People, irrespective of their religious allegiance, visit these places in search of peace and spiritualism. Presently, Gorakhpur lacks in catering to the needs of such tourists. It is one of the oldest and most influential monastic centres of the Nath-Yogi or Siddha-Yogi Sampradaya in Northern India.
- 8.49 To sum up, the potential of Industries development in GIDA appear to be very bright and the industries identified in the studies as outlined in this section are not exhaustive. Quite a few tiny industrial/ service unit based on local demand can be set up as either stand alone or ancillary units. These tiny units should come as supportive to the main units which have been covered in the various Section/Schedule mentioned above.