PIF STUDY ON PLASLTIC/POLYMER BASED INDUSTRIES IN NORTH EASTERN REGION

(FINAL REPORT)

(B-3200)

Prepared for

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EXECUTIVE SUMMARY
TITLE OF THE STUDY

PRE-INVESTMENT FEASIBILITY STUDY ON PLASTIC/POLYMER BASED INDUSTRIES

1.1 North Eastern Development Finance Corporation (NEDFi) is the premier financial and development institution of the North East India. The main activities of NEDFi are towards providing credit and other facilities for promotion, expansion and modernisation of industrial enterprises and infrastructure projects in the North Eastern Region of India

1.2 NEDFi, as part of their development efforts, proposes to sponsorPre-Investment Feasibility Studies on Plastic/Polymer Industries, and has accordingly approached Tata Economic consultancy Services (TECS) for formulation of Pre-Investment Feasibility Study on Plastic/Polymer based Industries, vide their communication No. TEDF/Phase-III/No. 286,dated 1st August 2002.

1.3 Tata Economic Consultancy Services (TECS), a premier consulting outfit, belonging to the business House of Tata, with an indepth exposure and professional expertise in the fields of interest to NEDFi in the present context, has carried out the study, and the following report has been formulated.

Methodological Approach

1.4 The methodology adopted for carrying out the study entailed a three- pronged approach. First, detailed and in-depth in-house based study of relevant published information on the plastic/polymer sector with specific emphasis to the North Eastern region, study of developmentsin other sectors in the region which have relevance to the plastic/polymer industry, and other economic and related aspects. In the second phase, field based investigations were carried out in the region to gather primary data on relevant sectors. The respondents included relevant government departments, small scale industry organs, the plastic processing units, dealers of plastic products, usersof range of plastic products, and other knowledgeables in the field, such as the associations/institute associated with plastic/polymer products like Plastindia Foundation, CIPET, etc. In the third phase, the primary and secondary data collected from the earlier phases were compiled and analysed and the report formulated.

Structure of the Report

1.5 In order to have a better perspective on the plastic/polymer sector inthe North Eastern region, in relation to its status in the country as a whole, the report has beenformulated along the following lines:

Chapter I	Executive Summary
Chapter II	Methodology for conducting the Study
Chapter III	Plastic Processing Sector in India – aPerspective
Chapter IV	Plastic Processing Sector in the North EasternRegion: a) Market Scenario b) Industry Scenario
Chapter V	Prospects for Plastic/Polymer Sector in theNorth Eastern Region
Chapter VI	Action Plan for the Development of PlasticProcessing Sector in the North Eastern Region
Chapter VII	Identification of Plastic/Polymer Productsto be manufactured in the N.E. Region

The Plastic Processing Sector in India – A Perspective

1.6 The plastic/polymer sector in India can be segregated into three sub- sectors, viz.: (a) The feedstocks sector, (b) the Processing Sector and
(c) the Equipment/Machinery Sector.

1.7 On the **feedstocks** sector, India made modest beginnings during 1950's, with the commissioning of plants for the manufacture of LDPE and Polystyrene. Over the years, other polymers were added and now India boasts of manufacturing virtually the entire range of commodity plastics such as LDPE, LLDPE, HDPE, PP, PVC, Polystyrene, etc. besides other performance polymers such as ABS, SAN, Polycarbonate, PBT, etc. Till 2000, the Indian polymer demand outstripped the supplies and the country resorted to imports to meet the requirements. At times the import intensity reached as high as 60 per cent. The major players in the polymer production in the countryare: IPCL (now under Reliance management), the Reliance Industries, Finolex Industries, Supreme Petrochemicals, Haldia Petrochemicals, Gas Authority of India Ltd. (GAIL), etc. With the commissioning of these major complexes, India's production of polymer resins increased from 0.9 million tonnes during 1990-91 to over 4.0 million tonnes during2002-03. During the 1990's the polymer production recorded growth rate of the order of 16 per cent per annum. At present, the demand andsupply sides are more or less evenly balanced and imports have virtually been stopped. In fact, some quantity of polymer resins are exported atpresent. However, considering the ambitious targets set for plastic demand for the decade, the country is again poised to re-enter the imports field. India's per capita consumption of polymers now has reached 4.0 kgs.- much better than around 1 kg. recorded during 1990-
01. However, India has a long way to go near global standards, or even for that matter, developing country like China which has a per capita consumption of 14 kgs. This indicates that tremendous scope exists for expansion of the polymer sector in the country.

1.8 The **processing sector** in the country is nearly 70 years old. There are around 19000 units existing in the processing sector. The sector is dominated by the small units which account close to 30 per cent of the polymer processed. There are around 250 units in the medium/large scale category which consume a major chunk of the polymer production. The processing capacity has increased from 2.512 million tonnes per annum during 1991-92 to 3.660 million

tonnes per annum during 1994-95 and to 6.01 million tonnes per annum during 2000-01. Of this, the extrusion process accounts for a lion's share, close to 50 per cent, followed by injection moulding (30 per cent) and balance by blow-moulding and others. The capacity utilization of the polymer units is in the range of 55-60 per cent. The polymer sector in the country is concentrated in the western, northern and southern regions in that order. Theeastern region, of which the North Eastern region is a part, accounted for just about 8 per cent of the polymer processing, that too

largely concentrated in West Bengal. The processing sector provides direct employment to around 3.9 million. The overall employment generation by the processing sector is placed at 6.72 million persons.

1.9 The **Equipment/Machinery** sector in the country has truly matured with production capability of a wide range of state-of-the-art process equipments. An important feature of the equipment/machinery sectoris that it has attracted the global majors in this field to set up their units in India viz. Klockner, Mannesman Demag, Buttenfield, Toshiba, Cincinnati, etc. However, the Indian plastic process machinery manufacturing capacity of around 6000 machines per annum, fallsshort of therequirements, thereby necessitating imports.

1.10 The above sectors of the plastic/polymer industry are well supportedby a a matured tooling, mould making, training and technology infrastructure. These are vital for smooth running of the processing sector.

THE PLASTIC PROCESSING SECTOR IN THE NORTH EASTERN REGION

1.11 The North Eastern region consumes a wide range of plastic/polymer products. However, the penetration level of plastic/polymer products in the region is much less as compared to the national levels, due mainly to lack of a matured processing sector. Besides, the industry sector, which is universally the major user of polymer products, is quite insignificant in this region. Until recently, the entire eastern region accounted for a share of just around 8 per cent of the polymer consumption of the country whereas it has a share of 23 per cent of the Indian population. With the commissioning of the Haldia Petrochemicals in 2000, this region got the necessary fillip in feedstock sourcing and the impact has already been felt on the polymer processing sector in this region. In the initial stages, West Bengal, specially around Haldia and Kolkata region, attracted substantial investment interests, including those from the national majors in the polymer field. In the recent past, the investor-friendly industrial policy pursued by the NE region has had the effect of attracting considerable entrepreneurial interests in this line of business. A few medium/large sized polymer processing projects have already been commissioned by leading players in the field. In order, therefore, to having a clear understanding on the polymer/plastic scenario in the North Easten region, and for a right perspective in this regard, the evaluation has been structured along the following sections: Section A : Market Perspectives and Section B : Industry Perspective.

Section A : Market Perspectives

(a) Current Plastic/Polymer Usage Pattern

1.11 The region uses a wide range of plastic/polymer products viz. consumer/ household products such as buckets, trays, mugs, jugs, baskets, blow moulded containers, tiffin boxes, soap boxes, brushes and brooms, tooth brushes, water tanks, bottles, stands, moulded luggage, furniture, thermo ware, toys, footwear, etc. In recent times, there has been an

increasing trend in use of plastic/polymer products, mainly as a result of urbanization taking place, as also due to relatively increased supplies from West Bengal. Assam, by virtue of its unique position as the entry point to the entire North Eastern region, as the highest populated state in the region – 26.64 million, or 67 per cent of the entire North Eastern region - and most industrialized, assumes a position of significance for plastic/polymer market in the region. The major activity in the field of plastic/polymer sector, in the NER is therefore, centred around the Guwahati, in Assam. The region is found to use leading consumer products brands such as Prince, National, Neelkamal, Supreme, Blow-plast, Milton, Bata, Cello, Moderna, Samsonite, Sintex, etc., The important non- consumer products (for industrial use) are: packaging materials like range of films, woven sacks, plastic pipes/tubes, crates, etc.

(b) Sourcing Pattern of Plastic/Polymer Products

1.12 A few household products such as moulded containers, small trays, basins, soap dishes, moulded chairs (recently started), and a range of films, etc. are produced locally in small quantities. With a number of plastic units set up, mainly as a result of the North East Industrial Policy 1997 incentive schemes (notably Excise Duty Exemption Scheme), a number of new units have come up during the past two years or so, which will enhance the domestic sourcing in the near future. The entire requirement of the region for other plastic/polymer items is otherwise being met by imports from the rest of the country like West Bengal (Kolkata), Maharashtra, Gujarat, Delhi and from Nepal. The products enters the region through Siliguri in West Bengal.

1.13 The commissioning of Haldia Petrochemicals complex in 2000, which produces polymers such as LDPE, LLDPE, HDPE, PP, has resulted in the emergence of a number of plastic/polymer processing units, including some leading brands of the country, in the Haldia – Kolkata region. As a result, Kolkata has, of late emerged as an important source of supplies of range of polymer products to the region. The transport cost component involved here is relatively low (say Rs. 1800-Rs. 2000 per tonne), as compared totransport cost from the western region (say around Rs. 5500 per tonne),

1.14 Sourcing of plastic products is mainly effected through a few leading distributors/ dealers, in respect of the consumer or household products.In respect of the industrial products, say woven sacks, the sourcing is done either directly by the user,or by way of tendering.

(c) Overall Consumption of Plastic/Polymer Products

1.15 Assessment of overall consumption was essentially made based on a series of steps including discussions with institutions devoted to the plastic sector, and more importantly, with the leading dealers who handle major part of the imports. Based on an analysis of the volumes handled by the dealers over the past few years and considering other aspects such as the performance and consumption pattern of polymer products by various industries, the overall consumption of plastic/polymer products in the North Eastern region is placed in the region of 15,000 tonnes per annum. This demand is largely met by imports of the order of around 12-13,000 tonnes and local production, around 2,000 tonnes.

1.16 The recent past has witnessed higher growth rates in consumption of plastic products in the region, mainly due to the increase in supplies from West Bengal. Based on the performance of the local polymer sector and taking into consideration the offtakes effected by the main dealers over the recent past, the growth rate during the past five years can placed in the region of 10 per cent per annum, as per the following break- up:

Year	1998-99	1999-00	2000-01	2001-02	2002-03
Consumption of Polymer products (MT)	10,180	11,200	12,300	13,600	15,000

Consumption pattern of Polymer Products by the Non-consumer / IndustrialSector

1.17 The major non-consumer or industrial products used in the region are thefollowing:

Woven Sacks is the major non-consumer polymer product used in the region, by sectors such as cement, fertilizers, chemicals, flour, poultry products, etc. It is estimatedthat around 26 million numbers per annum of woven sacks are used by the above industries (polymer equivalent of 2000-2200 tonnes), for bulk packaging of their products, normally of 50 kg. packs. Scope exists to increase the demand based on the improve performance by the using sectors, fructification of expansion plans, planned by the fertilizer sector, etc. Woven fabrics are also imported into this region in the form of tarpaulins which is used by the transport sector, the warehouse sector, etc. There exists around 4 woven sacksmanufacturers in the region, mainly in Assam. These units are reported to be only carrying out conversion activity, i.e., converting the woven fabrics imported from places like Kolkata, Chennai, Bangalore, etc. into woven sacks by undertaking stitching, printing, etc. Therefore, the requirement ofwoven sacks in the region is at present, being met indirectly by imports. Of late, Nepal has emerged as a source of supply of woven sacks to this region. The entry of 2 new woven sacks units in the region, during the current year, is poised to change the woven sacks market scenario in the region.

- **Plastic films** – multi layer co-extruded films, bi-axially oriented polypropylene film, PPTQ, HMHDPE, PVC films, etc. are used by sectors like textile and ready-made garments, tea, processed food, milk, etc. Around 500 tonnes of films are assessed to be used by these segments as a packaging medium. In addition, the **tea** sector accounts for around 420 tonnes of films (LDPE & BOPP), for unit packing of tea for retailsale. The other sectors, which account for plastic films use are: cosmetics,food processing, groceries, etc. etc. The overall consumption of plastic films for packaging bythese sectors work out to 1000 tonnes at present.

- **Petroleum/Lubricants** sector is currently a major user of polymer products – moulded containers of various sizes, for unit packing of lubricants, and drums for bulk packing. Though IOC (Indian OilCorporation) Assam is the major producer of lubricants in the country, the unit packing is done at their Paharpur depot in West Bengal and therefore this market is not open to polymer use in the NER, at present. As for bulk packing, the preferred medium is mild steel drums because of its reusability. This segment therefore constitutes a potential future market for plastic blow moulded containers, barrels, etc., if the packaging activity is carried out in the state of Assam itself.

- **Cosmetics and toiletries** sector is another sector of significance and promise in respect of plastic use, as containers, container caps etc. of various sizes. The North Eastern region has attracted a number of well- known cosmetics manufacturers to set up their manufacturing base. The prominent amongst these are Hindustan Lever Ltd., Jyoti Laboratories, Ozone Ayurvedics, Modi Revlon, etc. While these units have plans for increased activity in the region for catering to the national andinternational markets, the polymer components used in their products are of very high quality and therefore, units like Jyoti Laboratories manufacture their requirements captively, whereas other players like Hindustan Lever source the same from centralized sourcing and franchisemoulders, etc. The other recent entrants in the FMCG sector are Proctor and Gamble, Dharampal Satyapal Group, etc. Due to attractive tax incentives given as a part of the North East Industrial Policy 1997, this region is likely to become a manufacturing hub for a range of consumer products. This sector is thus poised to present investment opportunities to

processing units – injection moulding, blow moulding, films, etc.

- The other sectors of importance are : the beverages sector (aerated water and soft drinks, Mineral water) where use of PET bottles is in vogue, acrylic sheets, pipes and tubes, PVC profiles, etc. [In fact, both Pepsi and Coca Cola have set up or engaged in expansion plans towards largesized bottling facilities in the region which will increase the production volume of aerated water in the region. Similarly leading brands in the mineral water such as Bisleri have set up plants in the NER in the recent past. These developments augur well for increased demand for PET bottles of various sizes, plastic crates, etc. in the future].

1.18 The overall consumption of around 5700 tonnes per annum by the non- consumer/industrial sector is largely accounted for by the state of Assam - of the order of 80+ per cent. The share of other states israther insignificant.

State-wise Estimated Consumption of Plastic/Polymer Products

1.19 The demand for plastic/polymer product in a particular region is influenced by a range of factors such as the population, the per capita income of the population, literacy rate, status of supplies of the products, status of the commercial/industrial sector, availability of substitute products, etc. The following table gives a comparative account of different states of the region in respect of the demographic features:

State	Population in 2001 ('000)	Share in theNE Region(%)	Per capita income at current prices(Rs.)
Assam	26638	67.0	9720
Arunachal Pradesh	1091	2.7	13352
Manipur	2389	6.0	12721
Meghalaya	2306	5.8	12803
Mizoram	890	2.5	14909
Nagaland	1989	5.0	12594
Sikkim	540	1.5	14751
Tripura	3791	9.5	13195
Total	39634	100	

1.20 The above demographic details and the earlier discussion on the status of the industrial sector in the region clearly points towards Assam's dominance in an overall sense. For example, in respect of population, the share of Assam is 67 per cent in the region, whereas the next most populated state of Tripura has a share of just 9.5 percent in the region. Assam is the most industrialized state in the region. Besides, the state holds the unique strategic position as the entry point to the rest of the states in the region, with the result that there is a tendency to absorb more of the polymer products that enter the state for transit. This also has an added advantage to the state of Assam,
i.e. the price of the polymer products in Assam is the lowest amongst the states of the region. All these factors place Assam to have a relatively higher share of the demand for polymer products than the other states in the region.

1.21 Considering the above aspects and based on the insights gathered from the discussions held with the dealers and others, the following pattern of consumption of plastic products emerges.

State	Estimated Consumption of Plastic Products(MT)
Assam	11600
Arunachal Pradesh	270
Manipur	620
Meghalaya	600
Mizoram	270
Nagaland	500
Sikkim	180
Tripura	960
Total	15000

Future Demand

1.22 The analysis of future demand for plastic/polymer products in the North Eastern region has been made taking into consideration factors such as: population/demographics, per capita income, literacy rate, volume of trade in plastic products, the status of commercial/industrial sector, status of supplies of plastic products, status of the infrastructure. The following features emerge:

- The region, together has a population close to 40 million, and the growth raterecorded during the 90's has been 2.28 per cent per annum.

- The per capita income of the states in this region more or less compares with several other states in the country, and most of the states in this region have recorded double digit growths during the90's. In respect of literacy, this region represents one of the highest literate in the country.

- As far as status of the commercial/industrial sector in the region is concerned, this is one of the lowest industrialized zones in the country. Universally, the demand for polymer products is driven by the industrial applications. This clearly brings out the fact that the status of the industrial sector will have a significant impact on the volumeof polymer products use in the region. Besides, industrialisation has a multiplier effect on the plastic/polymer demand – first, its direct use as packaging medium and other uses, second, the industry sector generates workforce which is a potential demand base for the plastic products. The industrialization process in the region is currently being stepped up as a result of the investor friendly industrial policies, specifically the North East Industrial Policy 1997.

- It has been established in India and elsewhere that the demand for plastic/polymer products is largely 'supply driven'. India's per capita consumption of plastic products which was just around 1 kg. during 1990-91, increased to 4 kgs. at present, which was made possible by large sized petrochemical complexes producing the feedstocks, set up by the major players like Reliance Industries, Finolelx Industries, Supreme Petrochemicals, Haldia Petrochemicals, Gas Authority of India Ltd., etc. during the 90's. Considering the overall demographic features, the region certainly has the potential to increase its consumption, if adequate and competitive sourcing of the products are ensured. The commissioning of the Haldia Petrochemicals, which supplies the major feedstocks for the polymer industry, started showingits favourable impact on the plastics/polymer industry in the region, with around 10-15 medium scale units already come up and more are in the process of being commissioned in the near future.

- The growth of polymer processing sector also needs support of an efficient infrastructure consisting of tool-room facilities, mould facilities, training institutes, testing laboratories, as also process equipment manufacturers, within easy access. Availability of these infrastructure facilities is likely to enhance favourable investment decisions.

Duly factoring in the above considerations and based on appropriate approaches relevant to the region for estimating the future demand, such as trend analysis, per capita consumption potential in line with the national average, etc., the demand for plastic/ polymer products is assessed to be in the region of 50-55,000 tonnes by 2010. This translates to a growth rate of around 21 per cent per annum during the next seven years. Though the growth rate looks ambitious considering the past experience, the emerging scenario in the industrial sector in general and polymer/plastics processing sector in particular, as a result of the favourable investment policies being pursued, is assessed to have the potential to sustain this demand growth, in the future.

Section B : Industry Perspectives

1.23 In a recent study sponsored by one of the leading petrochemical majors in the country, it was estimated that the entire eastern region consisting of West Bengal, Bihar, Orissa and the North Eastern states together has 2200 plastic processing units of which 1300 units are in the state of West Bengal alone. According to the study this region with a share of 23 per cent in population, accounted for a share of just around 8 per cent of the plastic/polymer consumption in the country. The main reason for this low level of activity was that there was not a single feedstocks manufacturing facility in the entire region, and as a chain reaction, this region lacked in adequate infrastructure facilities for the processing sector, such as tooling, mould making, training, testing laboratories, etc. However, the commissioning of the Haldia Petrochemicals complex with manufacturing facilities for polymers such as LDPE, LLDPE, HDPE, PP, has already began to show a positive impact on the plastic/polymer sector, including related infrastructure.

1.24 The entire North Eastern region is estimated to have around 60-70 plasticprocessors - mostly small/tiny units. By virtue of unique position held by Assam, viz. being the entry point to the entire North Eastern region, the most populated and most industrialized state, there is a concentration ofplastic processing units in the state, specially in and around the Guwahati region. The units produce a range of plastic products such as films, nursery bags, extruded household products such as small trays, soap dishes, brushes, etc., moulded furniture (chair), water tanks,blow- moulded containers, pipes and tubes, woven sacks (conversion), etc. The output of the units currently aggregates to a polymer resin consumption of 2000 tonnes per annum. [The situation is poised to change considerably in the near future, with new units being set up as a result of the North East Industrial Policy 1997].

1.25 The performance of the plastic processing units in the region in the past, was subdued for various reasons, and some of the units are not in operation at present. The problems faced by the polymer units canbe summarized as under:

- The local producers were unable to match the variety and designs of the imported products from Kolkata, Mumbai, Gujarat, etc., and hence the consumer preference tilted towards the importedproducts. In short, the units suffered from limitations of range. [This is mainly due to lack of tooling, mould facilities, trained technicians and equipment manufacturers in close proximity].

- Mould making industry is absent in this region. This is a key facility which helps to bring out a wide range of products to meet varied consumer preferences.

- From cost competitiveness angle, the average cost of production and marketing of polymer products in the region tended to be higher than the other parts for various reasons: polymer resins and other inputs had to be sourced from the western or southern regions entailing transportation other incidental costs. During the period prior to 2000, polymer resins were in short supplies, which, coupled with the small lot sourcing made the procurement cost even higher. The local products were subjected to an excise duty component of 16 per cent, sales tax ranging between 8 per cent and 14 per cent, as against the CST component of 4 per cent applicable to the imported products.

- The plastic processing units set up earlier in the region also faced competition – from quality as well as cost angles - from within, i.e.,

  the new units set up recently, which enjoyed a range of fiscalincentives.

- Working capital constraints. In the shortage situation, the credit allowed on sourcing the feedstocks was limited whereas the recoveries from their customers, specially the small traders, the public sector or other corporate sector units tended to delay inordinately. Moreover, institutional lending rates were high, due to high risk perception of the region.

- Restricted marketing networks. The dealers of imported products have better market coverage due to product quality and better margins, which the local producers found it difficult to match.

- The units in the region faced shortage of adequate trained and skilled manpower to run and manage the plastic units. [Opening of CIPET centers recently in the region is expected to go a long wayin providing the required skilled manpower torun plastic units].

1.26 In the above aspects, the relative status of the states other than Assam were even more pronounced due to their geographical location.

1.27 The industrial policies introduced by the states in the region in the recent past, and the North East Industrial Policy of 1997, indeed paved the way towards a more investor-friendly industrial environment in the region. The policy has attracted investment proposals from different industrial sectors, including plastic processing. However, development of the service infrastructure to support the plastic processing sector needs to be simultaneously taken care of, to sustain the growth..

The performance of the Processing units

1.28 The processing machinery stock of the sector is by and large dated. Most units havejust one equipment of their line, e.g. extruder, injection moulding, blow moulding equipments, etc. Big units, and specially those set up in recent times, have multiple equipment stock, of standard makes, for different product lines.

1.29 The average capacity utilization by the units in the region works out to 40-50 percent. Manufacturing, specially to cater to industrial use, is related to offtake by the respective users. A number of small units operate during the currency of contract and remain idle till the next order comes through.

1.30 The units manufacturing range of films meet most of the local requirements from sectors such as textile, dairy, food processing, etc., thereby reducing import dependency, to some extent.

1.31 Woven sacks is currently the major polymer product used by the industrial sector, accounting for a polymer consumption in the range of 3500 tonnes. However, the activity of around 4 units in the region is mainly restricted to conversion of the woven fabrics imported into woven sacks by carrying out simple works as stitching, printing, etc. According to the woven sacks manufacturers, the market within the region is competitive because a good part of the sourcing is done through bidding process, which attracts players from outside the region also, including Nepal.

1.32 The rotomould units which produce water storage tanks of different sizes havelimitations in bringing out a variety of designs, etc., and as a result, branded water tanks such as Sintex are being imported from therest of the country.

1.33 The performance of small units engaged in the manufacture of household items like mugs, trays, soap dishes, combs, brushes, etc. is reported to be erratic. Only around 4-5 units are reported to be operating round the year, while other units have intermittent or irregular operations.

1.34 The recently set up units, including those manufacturing plastic furniture, PVC pipes, pet bottles, etc. have reported reasonably goodbeginning in their respective fields.

Profitability of the Processing units

1.35 Among the units set up earlier, the major ones are reported to be relatively better placed in terms of margins from their operations, mainly because of their size and span of market. Being located in and around Guwahati (most urbanized center in the region) they are better placed to access both feedstocks as well as the customers who are in close proximity. The smaller units are however reported operating on tight margins. Some of the units set up earlier face competition from recently set up units which enjoy range of fiscal incentives. It is observed that given the incentives and competitive feedstock sourcing, the polymer units, existing and new, have a reasonable chance to operate better.

Current Sourcing Pattern of Polymer Resins (feedstocks)

1.36 The region has representative offices of the major petrochemical players of the country viz. IPCL (Reliance), Haldia Petrochemicals, etc.,based in Guwahati. These companies supply a range of polymer resins such as LDPE, LLDPE, HDPE, PP, PVC, etc., used by the processors in the region.

Competitiveness of the Plastic Products ManufacturedIn the Region vis-à-visImported Products

1.37 The important parameters of competitivenss are scales of operation, competitive sourcing of the feedstocks and utilities, skilled manpower, easy access to infrastructure facilities like tooling, mould making, equipment manufacturers, etc. The situation prior to a couple of years, presented an unfavourable case, which had an adeverse impact on their competitiveness. The recent times has, however, witnessed favourable developments, e.g. the commissioning of Haldia Petrochemicals provided a better cost effective feedstock source; secondly, the establishment of technical training institutes such as CIPET has improved the scope of labour productivity. Besides, the recently set up units are economically scaled. Thus, the plastics/polymer process

sector has attained some level of competitiveness, from the productivity angle. From the financial angle, the fiscal incentives offered certainly have added some level of competitiveness for units which are set up in the recent past. For the existing units, however, levies such as excise duty, sales tax, etc., are applicable as before, which affects their competitiveness. For example, the sales tax applicable for the local processors range between 8 per cent and 14 per cent whereas the imported products carry a CST of just 4 per cent. Thus, in an overall sense, the competitiveness of the products of the region has shown significant improvement in the recent past, but still has to improve a lot, in a qualitative sense, by way of covering all the units under the incentives umbrella.

Plastic Processing Sector in the NE Region-a SWOT Analysis

1.40 Considering the emerging scenario on the industrial front, as a result of the industrial policy being pursued and other related developments, the following SWOT analysis has been cast for the plalstic processing units in the region:

Strengths

- The fiscal incentives, capital subsidies etc. offered for new investments, under the North East Industrial Policy 1997, are perceived to have a significant and a favourable impact on the competitiveness of the new investment proposals.

- Competitive feedstock sourcing made possible by the commissioningof Haldia Petrochemicals.

- The Growth Centres/Industrial Estates with necessary infrastructure being developed in the region can be chosen to locate a number of plasltic/polymer processing units (cluster units) with added advantageof collective procurement, marketing, and service. These centers canbe turned into 'poly parks'. (However, these centers are yetto be commercialized).

- The North Eastern region can be considered as a corridor for exports of plastic/polymer products through cross-country trade with the neighbouring countries like Myanmar and Bangladesh. The Trilateral Highway linking NER with Myanmar and Thailand is expected to be a boon to the growth of the polymer sector in the NE region.

- Favourable investment decisions from some well-known players in the plastic/polymer field already in existence.

Weaknesses

- The size of local market is rather small and spread out. There is a general tendency (specially for major investors) towards concentration in one or two states .

- The region represents one of the least industrialised zones, thus restricts the range and size of market for products catering to industrial use. Universaly, the industry sector accounts for the major share of plastic use.

- At present, access to the tooling, mould making and other infrastructural facilities andplastic processing machinery manufacturers is difficult.

Opportunities

- Opportunities to establish modern and efficiently run plastic processing units.

- Opportunity to establish cluster units/plastic industrial estates, or 'poly parks' with inherent

overall operational advantages.

- Opportunity to introduce new processing technologies / new products in theregion.
- Opportunity to replace the existing expensive, energy intensive and/or depleting products such as steel, timber, etc., by plastics products
- Employment opportunities.

Threats

- Competition from imported products.

PROSPECTS FOR PLASTIC/POLYMER SECTOR IN THE NORTH EASTERN REGION

1.41 The prospects for plastic/polymer sector in the North Eastern region has been evaluated from two angles: viz. the Market angle and the Operating Competitiveness angle.

Prospects – Market related

1.42 In general, the demand for plastic/polymer products is supply driven. The current low consumption is, therefore, largely attributed to lack of localized availability of the products. Considering the economic and demographic features of these states, in comparison to the rest of the country, the prospects for increased consumption of plastic/polymer products than the present levels appear bright.

1.43 Universally, the demand for polymer products is driven by their industrial applications, which is true in the case of India also. Theregion, however, presents a different picture at present. A substantial expansion of polymer products market in this region, therefore, presupposes expansion of the industrial sector itself, specially those whereuse of these products is relevant.

1.44 Cross-border trade with Myanmar and Bangladesh, which is slated to take shape in the near future augurs well for the plastic/polymer products in this region, being closest to these countries. The SAARC initiatives on common market for member countries, and the proposed Trilateral highway connecting the North East with Myanmar and Thailand, all offer immense trade potential for the NER in the years to come.

1.45 The new industrial policy pursued by the governments in the region, coupled with the North East Industrial Policy 1997, is assessed to have an overall favourable impact on the industry sector and therefore on the polymer processing sector.

1.46 The demand from existing industrial uses can also be increased considerably if appropriate efforts are undertaken. For example, rejuvenation of the sick fertilizer unit, implementation of the expansion plans of Hindustan Fertilisers, etc. Encouraging the unit packaging of lubricants in plastic moulded containers by the IOC refinery, in Assam itself (currently the unit packing is done at Paharpur, West Bengal) can also open up increased opportunities for plastic blow moulding containers market.

Prospects – Operating Competitiveness based

1.47 The feedstock sourcing scenario has already changed for the better, with the coming up of the

Haldia Petrochemicals complex. Similarly, if positive action on the Assam Gas Cracker Complex is considered, it can indeed make the region a very competitive sourcing point for a range of polymer feedstocks. Revival of Bongaigaon Petrochemical complex is another major area which can contribute immensely to the prospects of the plastic/polymers sector. This, along with the fiscal incentives offeresas a part of North East Industrial Policy 1997, has the potential to attract even larger sized plants in the region, with sizeable export component..

1.48 At present, certain types of input costs are different in different states, for example power cost, which is the lowest in Meghalaya. Rationalisation of costs of inputs in the region as a whole gives an added impetus to overall competitiveness of the region.

ACTION PLAN FOR DEVELOPMENT OF PLASTIC/POLYMER SECTOR IN THE NORTHEASTERN REGION

1.49 The action plan suggested takes into consideration the insights gained in the course of the investigations in the region. The following action plan is suggested for consideration:

- Feedstock suppliers such as Haldia Petrochemicals to be encouraged to establish their own managed and operated distribution wharehouses and sales offices at the major centers. Regular supplies, besides ensuring smooth operation of the units, also helps in reducing working capital requirements. If necessary, steps considered towards rationalization of levies on the feedstocks imported into the region.

- In order to facilitate efficient processing and to save on the procurement time and cost of various inputs, appropriate compounding/masterbatch units may be established at important locations.

- Working capital availability being one of the major problems faced by the polymer units in the past, adequate measures to be taken to ensure sufficient availability of the same at reasonable rates through commercial banks and financial institutions, etc. The existing interest subsidy scheme to be pursued with, and the term loans should also be covered under interest subsidy scheme.

- The fiscal and other incentives extended to new investments in the region to be pursued vigorously.

- Opening of the Guwahati and Imphal Chapters of the CIPET is a welcome development which can increase the skilled technicians stock in the region. This, coupled with its service activities on related technical aspects, has the potential to enhance the investor confidence in this region.

- Necessary mechanisms to be initiated so that the overall operating environment is made uniform in all the states of the region, to provide a level playing field for the prospective investors from all the states. At present, most of the activities is centered around Guwahati region.

- Some leading players in the plastic processing field has already initiated steps towards entry into the plastic processing sector in the region. The major players have their own means and expertise to take care of their business. **Hence, from the government's point of view, in the initial stages, focus should be on investment in small plastic processing units to cater to the local demand**. These units, besides promoting employment, can also be set up at places which are not currently covered by the processing units. Simultaneous efforts to be initiated to encourage the infrastructure service providers – tool room facilities, mould making facilities,

testing labs, equipment manufacturers, etc., which can pave the way towards a matured plastic/polymer sectorin the region.

- ❖ Cross border trade to be encouraged. The government should devise additional incentive schemes for such an investment proposal. An added advantage of this is that the investor interests can be diverted to other states also, which are along the international border. This, therefore has the potential to bring in some amount of balanced growth of the sector in the region as a whole.
- ❖ Cluster industry concept, or making of 'poly parks' may be adopted for thedevelopment of the sector. The units being small in nature, this will have favourable impact on different aspects of the polymer processing activity, such as collective sourcing, servicing, more or less uniform costs structure, etc. In order to facilitate speedier implementation, the developed industrial estates already established, can be chosen for siting these clusters. Ideally, infrastructure created, such as growth centers, industrial estates, etc. in different states, can be the prospective location for the units.

- ❖ Increased use of polymer products from the existing industries in the region, as suggested earlier, viz. fertilizer, lubricants sectors, to be pursued with.
- ❖ Efforts may be initiated with the leading manufacturers of plastic/polymer machinery, such as Kabra Extrusions, HMT, Klockner Windsor, etc., toset up their representative offices in the region.
- ❖ Development of an Application Development Centre, to help identify and develop new application areas for plastics.
- ❖ Efforts to be stepped up towards industrialization of the region, since the industry sector is the largest consumers of plastic/polymer products.
- ❖ The Centre may be persuaded to increase the validity of the present incentiveschemes.

Role of Agencies in Promoting Plastic/Polymer Processing Sector in theNorth EasternRegion

1.50 Governmental Development Agencies such as the State Industrial Development Corporations, regional developmental agencies such as NEDFi, the North Eastern Council, etc. can play important roles in the process of development of the plastic/polymer sector in the region. The NEDFi, which has been specifically set up to guide the overall economic development of the region, is already actively engaged in providing diverse range of services towards meeting the goal. With
respect to the development of plastic/polymer sector in the region the Agency is advised to focus onthe following aspects:

Creation of a database on the sector, covering the products,technology, market, costs and other related details, to be used as back-up support on taking appropriate policy decisions on specific product/project proposals.

1.51 The agency should hold regular seminars at important centers of the country, to propagate the investment potential of the region. The project profiles and other details such as the range of incentive schemes offered, should be distributed to prospective investors visiting the seminars.

1.52 The agency should make appropriate guidance to the local governments on adopting relevant policies, for example, attracting the interest of players in setting up of infrastructural facilities by providing incentives to the prospective providers.

PLASTIC/POLYMER SECTOR IN THE NORTH EASTERN REGIONRECENT DEVELOPMENTS

1.53 The industrial policies of the states in the region announced recently, and the North East

Industrial Policy 1997, announced by the Centre, have had a very favourable impact on the industrial front of the region, including the investments on the plastics/polymer sector. The policies cited have attracted some of the industry majors including the multinationals into setting up manufacturing base in the region in sectors like cosmetics, FMCG , etc.

1.54 As far as the plastics/polymer sector is concerned, the region is at present, witnessing a dramatic transformation from a low profile production base accounted for by the local entrepreneurs, to a scenario in which the major players in the field in the country are focusing on investments opportunities in the region. A few leading players have already implemented and/or are in the process of implementation medium to large sized processing units in the region. During the recent past, say the last one year or so, at least 3 well- known moulded furniture brands have set up manufacturing facilities. Besedes, at least 2 woven sacks manufacturing units, 2 rota mould tanks manufacturing units, and 3 multi-layer extruded films units for packaging applications, are being set up. More investment proposals from some of the major players in the field are in advanced stages of decision making process. Most of the investments have taken place as a result of the excise duty exemption scheme, among others, of the North East Industrial Policy 1997.

1.55 As a result, the region, which used to process around 2000 TPA of polymer resins till recently, is poised to witness plastic processingactivity of the order of 12-13,000 tonnes per annum in the next 2-3 years time. This is a big leap indeed. Considering the size of the units being set up, or are planned in the near future, there appears to be substantial export component in the investment proposals. In other words, the recent developments – on the feedstock sourcing, training and fiscal incentives – have the potential to make the region a competitive manufacturing hub for plastic products.

1.56 Viewed from another angle, most of the new investment interests are focused on Assam-Meghalaya belt, based on consideration of a number of aspects, such as better access, power cost (Meghalaya has one of the lowest power costs in the country).and other infrastructural and logistics considerations.

1.57 The above developments clearly brings out the fact that entrepreneurial interests from leading players in medium to large processing units in the region is already catching on, which is likely to continue further. This development therefore offers a good opportunity for the concerned agencies towards **concentrating on developing small sized processing units**, in the initial stages of development. This has the following favourable angle:

1.58 The interests of the major players from the rest of the country are likely to be concentrated in one or two states purely from the businessinterests angle. If, therefore, the agencies concentrate on small investment proposals, this can lead to development of local entrepreneurship and spread of the polymer sector in NER.

Identification of Plastic/Polymer Products To be Manufactured in the NE region

1.59 The main considerations in the above regard should normally be: the market size, feedstock sourcing, access to infrastructure, overall competitiveness made possible by specific locational characteristics, etc. Some of the products require large investments, whereas some other products can be manufactured in small scale set up. As forspecific locational advantages, some states lead the rest, for example Assam. Investments in relatively large projects have already come up and more are in the process of being set up. The identification process therefore leads to suggest that, in the initial stages of development, the products requiring relatively small investment

be chosen. Because, investment in large projects are already set in motion which is expected to continue, if the interests of the major players are any indication. Therefore, projects for the manufacture of household items and other small items needed by the consumers, like office items are considered in respect of identification. The advantages of selecting the small scale ventures in the initial stage of development have already been explained earlier.

1.59 As for specific location, the choice can be any state where infrastructural facilities, such as growth centers, etc. are available. In order to make all the states on par (except perhaps the advanced stages such as Assam, Meghalaya) in respect of range of factors, necessary efforts are required that units set up in one state can cost effectively market its products in the region as a whole.

1.60 As for specific products, there appears to be considerable investor interest taking place in respect of the industrial items such as films, woven sacks, pipes, etc. Therefore, concentration should preferably be on the consumer products. Since the existing manufacturing base for these products in the region is small, any products can be chosen for taking up. In this regard, it will be highly advisable to take the assistance of the major polymer resin manufacturers such as Haldia Petrochemicals, Reliance Industries, IPCL, etc. who have developed investment ideas on a widerange of products.

1.61 A select list of Project Profiles on products such as blow-moulded items, officestationary, plastic shoes, extruded items etc. which are in the small to medium investment range are appended in the Annexure to this report.