

**Investment liberalization and
environmental protection.**

**Conflicts and compatibilities
in the case of India.**

By Dr. Veena Jha

Report as part of UNCTAD/DICM Project

**Cross border environmental management
in transnational corporations**

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Background to paper

The globalization of economic activity in general, and the growing role of transnational corporations (TNCs) in particular, have increasingly directed attention toward the environmental consequences of these developments. Increasingly, TNC activity in developing countries has become an issue for various normative initiatives at the international level, in the OECD and in the WTO. However, there remains a pertinent need to gain a better understanding of the environmental implications of TNC activity in developing countries. On this background, the United Nations Conference on Trade and Development (UNCTAD) and Department of Intercultural Communication and Management, Copenhagen Business School (DICM/CBS) in 1997 received a grant from the Danish International Development Agency (DANIDA) to conduct a study of environmental practices in TNCs. The project is called: "Cross border Environmental Management in Transnational Corporations". The project examines environmental aspects of foreign direct investment (FDI) in less developed countries by conducting case studies on environmental practices in Danish and German TNCs with operations in China, India and Malaysia. The project will produce a series of research reports on cross border environmental management seen from home country, host country as well as corporate perspectives. The reports will serve as input to a conference on Cross Border Environmental Management hosted by UNCTAD.

Abstract

This occasional paper reviews the changes in FDI policies and its consequences for FDI approvals and inflows in the Indian economy. Attention is drawn to the fact that differences between environmental practices and regulations of different states have an important bearing on FDI flows as well as the behavior of TNCs in India. The author argues that resolving the tradeoff between environment and FDI in India should also include a consideration of how to extend FDI flows to all states. Environmental legislation though of a long-standing nature has proven to be difficult to implement. Consequently, the positive role that TNCs could play in conjunction with the Indian government in achieving higher environmental standards should be actively encouraged. So far, in the context of generally weak governance capacities in India, urging TNCs to adopt better environmental practices has depended more on community groups/NGO reacting to specific cases of environmental violation than on government action.

Please note that the views and opinions expressed in this paper reflect those of the author and do not necessarily represent those of UNCTAD or CBS.

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Abbreviations

| | |
|-------|--|
| BIS | Bureau of Indian standards |
| CET | Common effluent treatment |
| CFC | Chloro-fluoro-carbons |
| CII | Confederation of Indian Industries |
| CPCB | Central Pollution Control Board |
| EIA | Environment Impact Assessment |
| EMS | Environmental Management systems |
| FDI | Foreign Direct Investment |
| FIPB | Foreign Investment Promotion Board |
| GNP | Gross National Product |
| GOI | Government of India |
| LOI | Letter of Intent |
| MEA | Multilateral Environmental Agreement |
| MOEF | Ministry of Environment and Forests |
| NIP | New Industrial Policy |
| NOC | No Objection Certificate |
| PLI | Physical Liability Insurance |
| SIA | Secretariat for Industrial Assistance |
| SME | Small and Medium Enterprises |
| SPCB | State Pollution Control Board |
| TNC | Trans National Corporations |
| TRIPS | Trade related Intellectual Property Rights |
| WTO | World Trade Organization |

Investment liberalization and environmental protection

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By Dr. Veena Jha

I. Introduction

During the 1990s, foreign direct investment (FDI) has come to play an increasingly important role with respect to providing India with sources of long-term capital. Increasing levels of FDI also holds the promise of promoting sustainable development in so far as it encourages the transfer and harmonization of environmentally friendly technologies and practices across borders. However, it is not clear whether FDI and its associated Transnational Corporations (TNCs) have contributed enough leadership in fulfilling local and global environmental targets. The principal emerging issues with respect to international investment and the need for sustainable development focus first and foremost on the incorporation of a large number of sectors and regions that have not so far benefited from FDI in India. This paper thus reviews the changes in FDI policies and its consequences for FDI approvals and inflows in the Indian economy (see Section II).

Second, the positive role that TNCs could play in conjunction with the Indian government in achieving environmental goals and third the competition between states for FDI should not induce a race to the bottom approach. Governments will increasingly have to consider and weigh policies with a view to encouraging and fostering healthy competition and avoid policies that seek to attract capital on the basis of lowest common denominator variables in terms of health and environmental standards. The role of the national government as a regulator and its ability to implement environmental regulations, norms and standards thus becomes very important (see section III of the paper). The differences between environmental practices and regulations of different states also have an important bearing on FDI flows as well as the behavior of TNCs. The role of NGOs and public interest litigation groups in inducing TNCs to behave in an environmentally

responsible manner has also not been negligible in the Indian economy (see Section III and IV).

Though India has a federal structure of administration, there is a fair amount of decentralization of administrative activities at the provincial or state level. If the State is better administered than implementation of environmental norms and standards may be better though this is not necessarily the case. The "dirty industry" migration hypothesis would suggest that States with a lower record of implementation of environmental standards would therefore attract the highest levels of FDI. This theory is however not vindicated by actual inflows of FDI to various States. The States that are best administered, and therefore have better track records of implementation of environmental legislation, may also attract the highest levels of FDI.

There are several other specific concerns associated with the environmental behavior of TNCs that deserve attention. NGOs have raised a number of concerns summarized in Section IV. This section also documents both positive and negative examples of TNC's environmental behavior in India. Through the study of specific examples, the role of public interest groups, governments as well as other stakeholders have been highlighted. The concluding section summarizes the main points and identifies issues, which need to be empirically examined.

II. The role of FDI in India's development process

The definition of FDI in the Indian context needs clarification. In fact articles and journals have often focussed on this critical aspect in determining FDI's contribution to India's development process.¹ According to the IMF, FDI aims to "acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise. Investments that do not imply such a permanent relationship are classified as portfolio investment".² This is the definition used in this paper for FDI flows.

There are three main categories of FDI:

- Equity capital which is the value of the TNCs investment in shares of an enterprise in a host country;
- Reinvested earnings which is the share of affiliate earnings not distributed as dividends or remitted to the parent corporation;
- Other capital that is short and long-term markets borrowings and lending of funds between parent and subsidiaries of TNCs.

¹ See Dhar, B., and S.Chaturvedi, Multilateral Regime for Foreign Investment: An assessment of emerging Trends, paper prepared for the Research and Information System for the Non-aligned and Other Developing Countries, India Habitat centre, New Delhi.

² See UNCTC, World Investment Report (WIR), 1994.

a. The evolution of India's FDI regime

The investment regime of the Indian economy can be spelt out in four distinct phases:

- From independence to the late 1960's phrased as a period of cautious promotion.
- The late 1960's to the 1970's when restrictive policies were introduced.
- The decade of the 1980's which started with a gradual loosening of controls.
- The 1990's when liberalization was made more holistic, open and transparent.

Investment Liberalization Measures in the New Industrial Policy

- Easing and in most cases lifting licensing requirements on TNCs
- Allowing majority ownership in most industries.
- TNCs can set up fully owned subsidiaries.
- TNCs need not bring in technology with their investments.
- TNCs can expand their operations freely. TNCs can use their own brand names and trade marks.
- TNCs should adhere to dividend balancing only in some groups of industries; i.e. exports should be approximately equal to their imports.
- TNCs can manufacture products reserved for SMEs and can enter into equity partnership with SMEs.
- TNCs can repatriate profits at the market rate of exchange.

During the first phase, while the Industrial Policy Resolution of 1948 recognized the role of FDI, it emphasized that ownership and control of all enterprises involving foreign equity should lie in India's hands. In 1973, on the other hand, the Foreign Exchange Regulation Act (FERA), marked the beginning of restrictions on TNCs. FERA with a few exceptions put a ceiling of 40% on foreign equity participation in India. This forced many TNCs to cut equity participation or leave the

country and deterred new entrants. While liberalization began in the 1980's it was only in the 1990's that proactive approaches to encouraging FDI inflows were begun. As part of the New Industrial Policy (NIP) starting 1991, the promotion of foreign direct investment was seen as an important vehicle to globalization, improved competitiveness, and for promoting an optimal utilization of natural and human resources. The NIP brought in substantial and far reaching changes reflecting a quantum shift in the government policies on FDI. Many controls and regulations were either removed or diluted, and a whole range of industrial activities has been thrown open to TNCs. While a number of reforms have been instituted under the NIP, the operation of these policies is often confusing. Some of the major policies affecting FDI are summarized in the box.

1. Policies directly affecting investment

Two routes are available to the foreign investor for obtaining approval. One route covers automatic approval procedures granted by the Reserve Bank of India (RBI), under which FDI is automatically approved provided specified parameters are met. The second route covers all other cases, which are dealt with by the Foreign Investment Promotion Board (FIPB) and the secretariat for Industrial Approvals (SIA) on a case by case basis. Most of the approvals in the post reform period have come from the FIPB route. To promote FDI a two pronged approach

is followed: (i) to simplify the procedures for applications and approval of FDI with a fast track approval scheme and (ii) further liberalizing investment regimes by expanding the list of industries eligible for automatic approval, increasing the limit of foreign equity from 51% to 74% in key infrastructure sectors,³ as well as expanding under some conditions foreign equity ownership to 100%.⁴

In addition to these incentives, several state governments are also offering a variety of incentives such as capital subsidies, sales tax exemptions, power subsidies, and the allotment of land on a priority basis. A transport subsidy scheme for the movement of raw materials into and finished goods out of selected areas is also under operation.⁵ A 5-year tax holiday for industries set up in selected backward areas was also begun in 1994. Similar tax holidays also apply to infrastructural investments. In power projects, additional tax concessions can be obtained because of revised depreciation norms.

State governments have also launched promotional measures including publicity campaigns, both within and outside India. A Foreign Investment Promotion Council was set up in 1997, whose basic functions were to identify the sector/projects requiring FDI and target specific regions/countries of the world from where FDI could be encouraged into India. The Council also prepares sectoral profiles and project proposals for such industries and presents these to selected international companies and foreign investors.

2. Policies indirectly affecting investment

Apart from these policies which are expected to directly affect FDI, the Indian government has initiated a wide range of economic reforms since July 1991. Policies expected to have a favorable impact on FDI include: the abolition of industrial licensing (except in strategic industries), abolition of import licensing, deregulation of interest rates, full convertibility of the rupee on current account, automatic approval of Foreign Direct Investment in many sectors, opening of areas previously reserved only for the public sector, and a realignment of subsidies. These reforms accompanied by a greater degree of macroeconomic stability than comparable countries in South East Asia, as well as accelerated economic growth of over 6% since the beginning of economic reform is expected to put India in a good position to attract foreign investment.

³ These include an automatic clearance system for FDI and technology agreements through the Reserve Bank of India. Foreign equity up to 50% in 3 additional categories of mining related industries, foreign equity up to 51% in 13 additional categories, and foreign equity up to 74% in 9 additional categories will be allowed.

⁴ The guidelines laid down for granting 100% equity ownership is also indicative of India's developmental priorities and the key role that FDI could play in it. See SIA newsletters.

⁵ This scheme is applicable to industrial units located in hilly and intractable areas, but does not include plantations, refineries, and power generating units, as profits in these sectors are high.

Policies for promoting Investment in Infrastructure

- In the telecommunications sub-sector, FDI in setting up capacities to manufacture telecom equipment is particularly encouraged.
- In the power sector, 100% foreign equity has been allowed and permission to set up projects of any size or type of operation and distribution can be granted. Tax holidays, guaranteed equity returns, as well as automatic clearance for upto 74% foreign equity participation in electricity generation, construction and maintenance of power plants are allowed.
- With respect to roads, 100% foreign equity participation in highways as well as the Build, operate and transfer concept has been introduced. According to this concept, foreign investors would be permitted to recover their investment by way of collection of tolls for a specified period in some highway projects. At the end of the agreed concession period the facility will revert back to the government.
- As far as civil aviation is concerned, upto 40% equity participation is allowed for the operation of air taxi/air bus, as well as 74% for construction and maintenance of runways. With respect to ports and railways, 70% equity participation will be automatically cleared for the construction and maintenance of ports and harbors, as well as for construction and maintenance of railroads, bridges and tunnels.

3. Deterrents to FDI

There are however serious deficits in India's infrastructure that may be a significant deterrent to foreign direct investment. Realizing that government budgets would be inadequate to cover these deficits, the government of India (GOI) has formulated specific policy initiatives to render the infrastructure sector an attractive destination for FDI. Included among the policy initiatives are the following:

- establishing a framework for the integration of public and private sector initiatives,
- market driven pricing for infrastructural services making investment in this sector particularly profitable,
- packages of fiscal incentives for investment in this sector including reduced import tariffs, tax holidays of 5 years, income tax exemptions, and cuts in capital gains tax,
- streamlining procedures for foreign investment,
- encouraging and providing special facilities for financing of such investments.

State governments are also required to provide the requisite infrastructural facilities, amenable law and order situation and other facilities for attracting investment to their states. A Growth Centre Scheme started in 1988 proposes the setting up of growth centers, which would be endowed with basic infrastructural facilities like power, telecommunications, water, banking etc, with a view to attracting industries. These Centers are to be financed by both the Central and the State governments, as well as by borrowing in the open market. These centers are at various stages of implementation.

While in some components of the infrastructure sector, lack of transparent guidelines and governmental delays are acting as bottlenecks to the entry of TNCs, in others non-workability of BOOT (build-own-operate-transfer) and BOLT (build-own-lease-transfer) schemes are holding up progress. The government estimates that in accordance with the projected economic growth scenario,

around \$115 to 130 billion worth of investment will be required in infrastructure over the next five years. About 15% of this are expected to come through FDI.

b. Trends in inflow of investment

| FDI inflows to India (millions of US dollars) | |
|--|---------|
| Year | Inflows |
| 1991 | 155 |
| 1992 | 233 |
| 1993 | 574 |
| 1994 | 1314 |
| 1995 | 1929 |
| 1996 | 2587 |
| 1997* | 3500 |

Source: Figures from 1991 to 1996 are from the World Investment Report, 1997.
* Estimates provided by the GOI.

The Industrial Policy Resolution as far back as 1948 recognized that participation of foreign direct investment would help to attract foreign capital in sufficient amounts to supplement domestic savings for a more rapid economic development and to secure scientific, technical and industrial skills. In practice however over the years different constraints and conditions as outlined above have meant that FDI has been very low. In 1985, while some liberalization did take place and FDI grew slightly it grew erratically till the NIP. FDI inflows have gone up significantly in the post reform era undoubtedly due to the radical changes in policies that have increased the confidence of the investors.

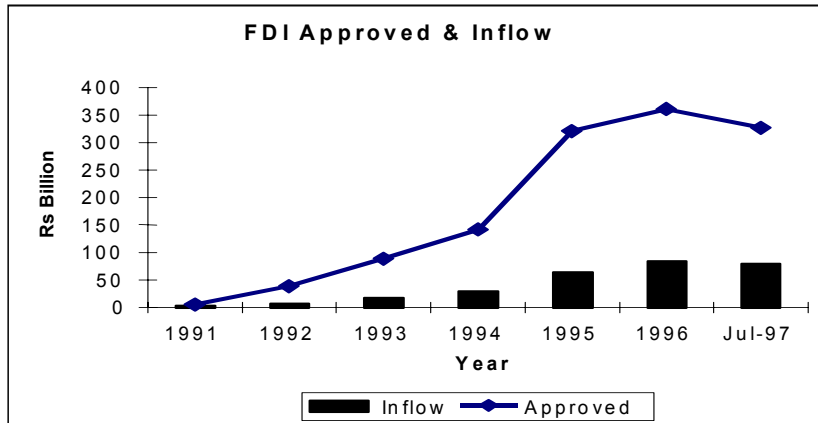
Notwithstanding the extensive range of inducements offered by the government, the levels of FDI inflows into India are low by comparison to other countries of comparable economic size. However, since the process of economic reforms began in 1991, foreign investment has shown a marked and rapid increase, tripling from less than US\$0.75bn to US\$2.5bn at current exchange rates. In 1997, FDI increased to US\$3.5bn.

| Approvals & Inflows (in Rupees billion) | | |
|--|---------|----------|
| | Inflows | Approved |
| 1991 | 3.5 | 5.3 |
| 1992 | 6.8 | 38.9 |
| 1993 | 17.8 | 88.6 |
| 1994 | 29.8 | 141.9 |
| 1995 | 63.7 | 320.7 |
| 1996 | 84.4 | 361.5 |
| Jul97 | 79 | 327.4 |

It is also to be noted that the actual inflows in rupee terms have been increasing rapidly, and in 1995 the total inflows were greater than the inflows cumulated over the four previous years. This trend indicates that FDI projects are being set up and foreign equity inflows are on an upward trend. The box and the figure next page shows the total foreign investment inflows over the period of economic reform.

Though some time lag between approvals and actual inflows are understandable, concern has also been expressed over the fact that inflows are persistently much smaller by comparison to approvals.

Various explanations have been put forth to explain this discrepancy. One explanation suggests that gestation periods for projects, particularly mega infrastructural projects (e.g. power and oil refineries) take much longer and thus actual inflows are spread out over a longer period of time. The approval-inflow ratio in this sector is close to 4:1; i.e. approvals per year are approximately four times the actual inflows. Excluding these mega projects, the approval-inflow ratio appears to be 2:1, which appears more reasonable.



A less generous explanation of this discrepancy between inflows and approvals is the myriad of approvals that are needed subsequently at the state level, once a project has been approved by the FIPB. Monitoring of the projects is to be

primarily done by the State government, since commissioning of most projects depends upon various state level clearances including land, power, etc.

Recently the PHD (stands for its motto which is progress, harmony and development) Chamber of Commerce brought out a report that showed that FDI in India has to go through 27 clearances after the FIPB has approved the investment.⁶ Among the problems cited are ambiguities in policy, lack of unanimity between Central and State governments and the inevitable delay in administrative decision making, which persist particularly at the state operating level. It called for greater coordination between State and Central Boards in order to avoid bureaucratic and procedural delays.⁷ In an attempt to estimate the exact status and the problems in obtaining clearances at the state level, the FIPB sent questionnaires to entrepreneurs of approved projects requesting them to furnish information on the progress with the implementation of their projects, but so far the response has been minimal.

1. Sectoral composition

About 40% of the approvals for foreign collaboration between 1991 and 1997 are in priority areas.⁸ This is in sharp contrast to the trends in the 1980s. The sectoral distribution of FDI shows an overwhelming concentration of joint ventures in infrastructural sectors, with power and oil refineries as well as telecommunications accounting for over 46% of the total FDI.

⁶ In response to the problems arising at obtaining clearance on FDI at the State level, a Committee under the chairmanship of the Chief Secretary, government of Gujarat was set up with representatives from the governments of Haryana, Karnataka, Maharashtra, Orissa and Tamil Nadu and the National Informatics Centre, which inter-alia made recommendations on: (i) simplification of procedures for various approvals of industrial projects at the State level; (ii) prescription of a single form for the multiplicity of approvals required at the State level; (iii) Format for monitoring investment proposals both domestic and foreign; and (iv) Suggest simplification of land Acquisition Laws and procedures for industrial ventures. The recommendations of this Committee have been discussed in the Committee of Secretaries and its suggestions have been forwarded to the States for Implementation.

⁷ See Study Finds FDI proposals need 21 clearances, Business Standard, 10 April 1998.

⁸ These refer to basic infrastructural sectors such as power, telecom, road, ports and airports.

| Sectoral break-up of actual inflow of FDI | | |
|--|-----------------|-------------------|
| From 08/01/91 to 06/30/98 | | |
| Sector | Inflow | % of total |
| Fules | 2650.47 | 6.77 |
| Electric equipment | 3577.12 | 9.14 |
| Telecommunication | 3706.42 | 9.47 |
| Transportation | 3528.91 | 9.02 |
| Metallurgical industry | 441.65 | 1.13 |
| Industrial machinery | 256.38 | 0.66 |
| Machine tools | 137.46 | 0.35 |
| Fertilizers | 69.66 | 0.18 |
| Chemicals (excl. Fertilizers) | 3295.97 | 8.42 |
| Dye stuffs | 46.41 | 0.12 |
| Drugs & pharma | 690.49 | 1.76 |
| Textiles | 679.35 | 1.74 |
| Paper & pulp | 681.52 | 1.74 |
| Food processing | 1904.93 | 4.87 |
| Leather industry | 110.33 | 0.28 |
| Cement | 155.73 | 0.4 |
| Service sector | 3485.07 | 8.91 |
| Hotel & Tourism | 246.50 | 0.63 |
| Trading | 539.90 | 1.38 |
| Miscl.industries | 3029.50 | 7.74 |
| Other | 9900.03 | 25.3 |
| TOTAL | 39133.80 | 100 |

Engineering accounts for the maximum share in total investment inflows, followed by chemicals and allied products, food and dairy products, finance and electronics and electrical equipment. Other sectors account for a relatively small share of FDI inflows.

2. Regional location of foreign investors

The regional distribution of FDI is also fairly uneven with the states of Delhi and Maharashtra accounting for a little over 30% of the total FDI in the post reform period. Other regions that are major recipients include the state of Karnataka, Gujarat, Tamil Nadu, Madhya Madhya Pradesh, Orissa and West Bengal, together accounting for another 30% of the total FDI in the post reform period.

Origins of FDI

The major foreign investors in India are the United States and the U.K and have maintained that position during the entire period of economic reform. However, the top ten investors also include Germany, Japan, and the Republic of Korea, Malaysia, and Australia. The other major investor's are Mauritius and Cayman Islands probably used for Offshore banking by major investors. Thus while funds are channeled through these two countries, it is unlikely that they are actually investing in India. NRI approvals and inflows have been classified in the category termed as others in the table next page.

The country wise break-up of investment shows that while USA was the largest investor in the 1980's, Italy is a major newcomer. UK dominated all others in terms of the stock of FDI in the early 1990's, though in terms of new investments it has lagged behind others. Non-resident Indians (NRI) flow is still significant though it has decreased from 37.03% in 1993-94 to 7.54% of total investments in 1997-98. NRIs are included in the 'others' category. Investment flows from Denmark and Germany is described in Annex 1. The regional spread of FDI inflows to 14 selected States is listed in detail in Annex 3.

| Regional distribution of approvals | | | |
|---|--|--|--------------------------------------|
| All figures are in Rs.million | | | |
| Country | Total approvals (1991-1997) | Total approvals (1996-1997) | Total inflows (1996-1997) |
| Mauritius | 152290 | 104280 | 30047 |
| USA | 390470 | 135700 | 8576 |
| Germany | 59070 | 21560 | 5899 |
| Japan | 62300 | 19060 | 3433 |
| Singapore | | | 2684 |
| Sweden | | | 2169 |
| South Korea | 56730 | 19560 | 2056 |
| U.K | 98130 | 44910 | 1924 |
| Netherlands | 35670 | 8710 | 4393 |
| O thers | 536340 | 137520 | 11939 |

c. Perceptions on the role of FDI in India's development

FDI is supposed to add to the stock of productive capital, create necessary infrastructure for the take-off stage of the economy, and generate a critical mass of new and cutting edge technologies. While FDI has a great potential to contribute to development, it is perceived by many commentators in India that expectations of what FDI can achieve, may be exaggerated particularly in solving balance of payments problems or in shoring up foreign exchange reserves, or in supplementing domestic savings. Part of this problem is also attributed to the ambiguities surrounding the definition of FDI that includes takeover bids. Takeovers do not necessarily generate greenfield investments nor result in an additional stock of productive capital and thus depending on the proportion of takeovers in total FDI, supplementing domestic savings through FDI may be a distant goal.

The viewpoint that FDI's positive effect in transferring intangible assets such as technology and human skills is an argument considered even more ambiguous by many Indians. A study conducted by the Reserve Bank of India (RBI) in 1996 observed that FDI has not contributed significantly to India's technological capacity or its export competitiveness.⁹ This finding is particularly significant in view of the NIP's explicit aim to encourage FDI to "promote foreign technology and collaboration in order to obtain higher technology to expand exports and the production base". The study further states that Indian firms with non-equity participation of TNCs have in certain cases done better both in terms of technology acquisition and export promotion than their foreign counterparts. The study notes that FDI in India continues to confine its operations to cater to the Indian domestic market despite the ease with which they can seek access to their parent companies' advanced technology, investment related intellectual property rights, as well as equipment under the liberalized import regime.

⁹ See Reserve Bank of India, 1996, Foreign Collaboration under Liberalization Policy, published by the RBI.

A counter view is presented by a World Bank study that argues that lack of intellectual property protection has deterred several foreign investors from transferring their top of the line technologies to India.¹⁰ It is also contended that while the RBI study uses the amount of royalties and lump-sum payments as a proxy for technology transfer, there may be several cases in which the affiliates receive the technology from the parent company without any payments. These cases would largely go unrecorded and undocumented. The orientation of TNCs towards India's domestic markets is also attributed to the fact that the overall industrial and trade policy in India before the NIP operated in a framework of import substitution resulting in sheltered markets with high mark ups. This induced TNCs to optimize profits in the domestic markets instead of exporting products.¹¹

Another commentator notes that while most of the approvals have been in the core sectors actual inflows of FDI have only occurred in the consumer goods sector. This has weeded out a number of local enterprises, particularly makers of soft drinks, cosmetics, cars and motorcycles. Consumer electronics and electrical industries are also rapidly becoming comparatively uncompetitive. TNCs in consumer goods sector have merely sold their brand name and have shifted production bases to India without transferring technology. Technology may have been sold by the parent company to the subsidiary, but local Indian talent has not been nurtured by joint ventures nor has there been any adaptation of indigenous technology.¹²

Views have also been expressed that FDI should only come into sectors where there are clear technological gaps. Examples of China are cited whereby TNCs are only allowed as long as their investment does not distort employment. Fears have also been expressed about TNC operations in sectors reserved for small and medium enterprises (SMEs) on the grounds that this would disturb the most dynamic sector of operation of the economy.¹³ FDI in India is also considered to have crowded out domestic investment in some sectors leading to further loss of domestic competitiveness in those sectors. But this impact has not been significant in macro terms as the proportion of FDI continues to be small in total investment (2%).

Concerns have also been expressed about indiscriminate liberalization. The Confederation of Indian Industries (CII) showed that domestic enterprises were often worse off than TNCs. Citing examples from the newsprint, fertilizer, cement, oil and natural gas industry, CII pointed out that indigenous capital goods industry was at a cost disadvantage of 18-23% due to the lifting of import duties. Similarly the stipulation that domestic cement be packed in jute bags put them at a cost disadvantage of 50%, as there was no such stipulation on imports. Sugar and

¹⁰ See Mansfield, E., 1994, Intellectual Property Protection, Foreign Direct Investment and Technology Transfer, Discussion paper no.19, International Finance Corporation. A counter view on this issue is that restrictions on export of products originating from the technology by the technology suppliers have often stalled technology transfer agreements from the Indian side.

¹¹ See PH.D Chamber, 1998, op.cit.

¹² See Majumdar, S., 1998, "FDI and the China syndrome", in the Business Standard, April 1, 1998.

¹³ See "Dandavate for 'selective' foreign investments" in the Business Standard, June 26, 1997.

newsprint were also being dumped in the Indian market causing injury to domestic producers. Similarly, domestic airlines had to pay a higher price for aviation fuel by comparison to TNCs.¹⁴ These factors called for greater internal liberalization in order to ensure that domestic and foreign firms compete on an equal footing. It has also become imperative that State governments implement economic reform and are able to live up to the demands of a liberalized era.¹⁵

Liberalization of FDI, particularly in the consumer goods sector also appears to have generated a lot of controversy in the Indian economy. There is concern that TNCs would:

- dump obsolete technology in India,
- invest in "low-tech" consumer product markets with no benefit to the country,
- focus on "unproductive" areas like marketing or trading rather than manufacturing,
- be interested in short-term "quick profits" investments,
- exploit India's vast domestic markets rather than contribute to exports.¹⁶

On the positive contribution made by FDI to the Indian economy, many intangible benefits have been quoted by a number of observers. First of all, it is felt that the culture of competition that FDI introduces is of tremendous benefit to the national economy. The example of the Maruti-Suzuki collaboration is particularly quoted in this context. The introduction of better technology not only meant that Maruti was able to capture 80% of the small car market, but also other domestic car manufacturers introduced major technological improvements, many of which were environmentally beneficial.¹⁷

Second, FDI can according to some observers contribute to other direct positive effects such as raising the level of total factor productivity, better management and quality control. All these features have been noted for FDI in India though in varying degrees depending on the sector being considered. There is also some informal evidence that a variety of indirect spillover benefits may be associated with FDI. These include the rapid spread of sophisticated products, management techniques or access to foreign markets to unrelated local businesses. Training of local labor and management as well as increased competition can force efficiency improvements as shown by the Maruti-Suzuki example.

¹⁴ See Mishra, M., 1998, "CII seeks level playing field for domestic industry", in the Business Standard, April 8, 1998.

¹⁵ See "Internal Economic Liberalization - Assocham wants panel to study industry suggestions", in the Business Line, March 23, 1998.

¹⁶ See Sengupta. N.K., A.Banik, and R.Karthuria, 1996, FDI inflows to India in the post reform period: An analysis of the Structural and Policy Impediments, Occasional Paper no.3, IMI Research Paper Series.

¹⁷ Ibid.

However, the benefits of FDI appear to be higher in export-oriented sectors and economies rather than in import substituting ones. Apart from trade liberalization policies, policies that expand the scope for domestic competition may increase the technology spillovers from the presence of FDI.¹⁸ As India followed an import substitution path of development for several decades and has only recently changed its growth strategy, the positive impacts of FDI on Indian development are yet to be fully experienced.

Given this mixed picture on the role of FDI, most commentators acknowledge that the spillover effects of FDI both in terms of technology dissemination and in terms of actual capital generation were at best uncertain.¹⁹ It is also recognized that positive benefits would flow from a more dynamic interaction between domestic and foreign industry. Increasing the level of FDI inflow is seen to be crucial in this regard.²⁰

Policy wise the attitude towards TNCs has radically changed, but still there is an element of caution particularly with regard to their entry in the core-infrastructure sector (excluding telecommunications) and apprehensions about their growing importance in the consumer goods sector, especially consumer non-durables.

d. How do foreign investors view India?

While most policies since 1991 have been directed towards increasing FDI inflows, an interesting question is whether foreign investors consider India an attractive location for investments. Many workshops and seminars for potential investors have recently been held in India, and several different views have been expressed on this issue. While a number of investors from S.E Asia appear to be retrenching or at least shelving their expansion plans, investments from Western Europeans and the USA appears to be on the rise. At recent forums on FDI, the dominant view that appears to have emerged is that India is an important market and would be an attractive location in the medium term. However, the bureaucracy and the slowness of the process of economic reforms, lack of clarity in the guidelines and procedures, as well as poor infrastructure is seen as important deterrents to FDI.

India has been a relatively insignificant recipient of FDI. But the quality of investment is very important. Investment approvals in India have been mostly in high technology industries not just in low-scale manufacturing activities. In contrast to approvals given, FDI inflows have however been in the consumer goods sector, but these have revolutionized the retail and service culture in India. This development has been characterized by an expert, who states that unlike the

¹⁸ See India's Country Economic Memorandum, World Bank, 1996.

¹⁹ See Panchmukhi, V.R., 1996, Multilateral Agreement on Investment: What should be the Response of the Developing Countries, RIS Digest, Vol. 13, Nos. 2-4, December 1996.

²⁰ See Sengupta et al., 1996. op.cit.

nineteenth century where economic strength was determined by labor and natural resources, in the 21st century the strength of a nation is going to be determined by its human capital.²¹ In this light, India scores well and may have a competitive edge for at least a decade. Other positive aspects of the Indian economy include effective and familiar legal systems for the western investor, a large market potential and adequate institutional capacity. India can play a key role in information technology and other such sectors. India has an educated middle class of 300 million people who can sustain rapid industrial growth. It also has an impressive industrial base and a strong tradition of private enterprise with 7,000 listed companies. It is accustomed to the rule of law, English is widely used, and financial and accounting systems conform to international standards. These positive factors have made India an attractive destination as witnessed by the steady growth in FDI since 1991. The 21st century and India's capacity to absorb FDI especially in knowledge based products makes it an attractive destination for exports.

India is considered to have a middle class population of approximately 400 million people with an emerging rural market of another 300-400 million people. However, the recent market slump particularly in the consumer durables, cars and other such sectors appears to have discouraged a number of foreign investors and has cast serious doubts on the size of the Indian market. FDI inflows as pointed out earlier were much higher in 1997, bearing testimony to the increasing importance accorded to India by foreign investors. Surveys quoted by some leaflets issued by FIPB reflecting the view point of foreign investors present a more optimistic picture. Interviews and seminars also reflect a mood of cautious optimism about India's future FDI prospects. Summarized below are some of the results of the Surveys:

- According to a study conducted by the German Asia-Pacific Committee in 1996, India was found to compare favorably with other developing countries in terms of legal and cultural factors, costs and personnel skills and effectiveness in carrying out tasks.
- According to a Survey of UK based companies, the main attractions of India are its market size, a familiar legal system, developed and well established banks and capital markets, as well as liberal policies towards FDI.
- According to the Export-Import Bank of Japan, India has been ranked as the third most promising developing country over a ten-year investment horizon.²²
- India is among the top ten priorities markets for a growing number of business executives in Canada.²³

²¹ Statement made by the Managing Director of Hesei Research Institute, a corporate think-tank for over 300 big corporations in Japan.

²² See Investment Promotion & Infrastructure Cell, SIA, GOI, India - A Profile, published by the GOI.

²³ See "PM's Assurance Perks up Canadian investors" in the Economic Times, 24 March 1998.

- Top US executives visiting India on a business mission have expressed the view that they were confident that economic reforms would be carried out. In fact 3M's top executive expressed the opinion that his high expectations for doing business in India was now becoming a reality.

Thus given these positive feelers from a number of foreign investors, as well as the GOI's attitude towards FDI, it is likely that future developments in the FDI regime will favor policies that attract FDI. The major countries which top the list of foreign investors also wish to invest in sectors which are considered high priority by the GOI, including energy, power, liquefied natural gas, and telecommunications. Given that the GOI has defined priority sectors, but declined to define non-priority sectors a number of foreign investors are uncertain about their investment and expansion plans in India. A recent survey by Kearney consultants of the United States pointed out that India was considered one of five most attractive destinations for FDI at the global level. However, it was also pointed out that India was not taking advantage of the vacuum created by the South East Asian financial crisis by implementing economic reforms speedily and by improving its infrastructure rapidly. A view has often been expressed that India has not effectively marketed itself as a viable and lucrative FDI location.

Other problems in India relate to the high level of budget deficit, its unfinished reform agenda, and even political uncertainty. India's productivity growth of 3.0% per annum pales besides China's growth of 8.0 % per annum. The high level of budget deficit will imply that the government's demand for resources will dampen economic activity in general leading to higher taxation. India's dis-investment program of loss making public enterprises is also yet to be completed.²⁴

Foreign investors have also expressed the view that the FDI policy in India should be flexible, consistent, non-discriminatory, unambiguous, non-discretionary and transparent with long-term objectives and with minimal mid-course policy changes to boost the foreign investor's confidence.²⁵ They emphasize the need for a fast track clearance of approvals and mechanisms for speedier implementation of FDI projects. Though the current FDI policy is perceived as being balanced with reasonable prioritization, it lacks the desired pace of implementation and the trickle down of reforms to the operational level. Mechanisms for improving the coordination between the state and central governments, reducing bureaucracy and the paper work are also essential. Many commentators note that these reasons are largely responsible for India's failure to increase its FDI inflows substantially, despite having more liberal regimes for FDI than many other countries, some of which do not even allow 50% foreign equity holding.

²⁴ See Speed up core sector reforms: US business, Business Standard, August 17, 1998.

²⁵ See Proceedings from the PH.D Chamber's seminar on FDI held in April 1998.

e. Possible future developments in the FDI regime

Most political parties and the bureaucracy are also of the opinion that FDI if channeled the right way and in growth promoting sectors can positively contribute to economic growth and development. It is perceived that progressive and prudent liberalization and management of the trade regime so as to calibrate their impact on macroeconomic stability would be critical in enhancing the positive contribution of FDI to economic growth. The importance of making trade and investment policies conducive to employment, income and wealth generation in a manner which is commensurate with India's natural, human, and entrepreneurial resources is also of prime importance to all political parties.

The process of liberalization also appears to be an irreversible one, and no matter which government comes to power, a piecemeal approach to investment liberalization appears to be unsustainable. A dominant view that has emerged is that India is not in a position to isolate itself from the globally increasing integration of markets and manufacturing bases. The increasing globalization of technology, research and development has also activated India's desire to be an important recipient of FDI. Thus within a short time of coming in power, the Finance Minister announced that there would be little change in the government's stance on FDI, but special positive incentives would be provided to investments in infrastructure. The new government also decided not to label specific industry categories as "non-priority" for FDI purposes. The realization that a blanket ban on FDI in the consumer goods sector would simply be non-viable and that positive spin-offs could be generated in terms of employment, better quality products, better culture of competition, proper balance of environmental incentives and the promotion of exports. It may also help prevent rent seeking and misallocation of scarce resources by domestic investors.

The Indian government expects FDI flows to increase to US\$10bn from its current levels of about US\$3-4bn. A proposal to introduce a single window clearance scheme for FDI India is also being floated.²⁶ Special measures will probably also be instituted to encourage FDI in the electronics sector. Priority status has also been accorded to the infrastructure sector, but the insurance sector has not as yet been opened to foreign investors.

In terms of sectional priorities, FDI is welcomed in certain sectors such as infrastructure where practically all restrictions have been removed and incentives are being offered. In areas where India lacks technology, emphasis is being placed on FDI that can result in technological upgradation. FDI is also being welcomed in areas where there large investments are required or where there is a substantial and largely untapped export potential. In other sectors, the prevailing view is that a case-by-case approach should be used with certain safeguards and clear and transparent guidelines. The latter would include industries where the Indian industry has made substantial R&D, or involve small-scale firms. As regards consumer non-durables, it is feared that extensive TNC operation would siphon off

²⁶ A single window clearance scheme would ensure that all clearances, both of the central and state governments be done in one place. A proposal to delegate all clearances of US\$375 million or below to the state level has already been mooted.

domestic resources or crowd out domestic investment. In the food processing sector on the other hand integrating the production structure with TNCs is perceived to generate employment, exports and to improve quality.

To summarize, FDI in so far as it brings in modern technologies, management practices and new markets is likely to be encouraged. Entry of FDI into low priority areas may be discouraged through suitable fiscal and other measures. FDI in infrastructure and core sectors is to be encouraged.²⁷ However, the Indian industry also views internal liberalization as a necessary first step to external liberalization. The latter should take account of the fact that the Indian industry has operated in a controlled regime for several years and should gear itself up for the competition by proper domestic reforms such as the replacement of archaic economic legislation like FERA, before it is exposed to external competition.

While liberalization and globalization appear to be the dominant tenets of the Indian economy, the environmental dangers associated with indiscriminate liberalization are not unknown in India. Several industrial accidents leading to environmental disasters, the environmental consequences of large infrastructural power projects and other such issues have been the subject of extensive public debate in India. This debate has resulted in the formulation of a comprehensive set of environmental legislation. This formidable body of law is also meant to ensure that industrial development does not sacrifice environmental interests, that industries are accountable to citizens and that polluting industries should be made to pay in accordance with the polluter pays principle. The next section reviews the evolution and norms of current environmental legislation as well as its implementation in the Indian economy with special emphasis on how this relates to foreign investors.

III. Environmental regulation in India

The overall framework of environmental legislation in India is set by the National Conservation Strategy and Policy Statement on Environment and Development issued by the Ministry of Environment and Forests (MOEF), GOI in June 1992. The Indian constitution enjoins the "States to take measures to protect and improve the environment and to safeguard the forests and wildlife in the country". It also makes it a "fundamental duty of every citizen to protect and improve the natural environment including forests, lakes and rivers and wildlife, and to have ecological compassion for the living creatures".

²⁷ See Ranabir Ray Choudahry, 1998, "A hidden agenda for Governance?" in the Business Line, March 23, 1998.

a. The nature of environmental regulation in India

Recognizing the severe problems related to the issue of pollution, both air and water, the Policy statement for Abatement of Pollution, 1992, identifies the following steps in order to integrate environmental considerations into decision making at all levels:

- prevent pollution at source
- encourage, develop and apply the best available practicable technical solutions
- ensure that the polluter pays for the pollution and control arrangements
- focus on protection of heavily polluted areas and river stretches
- involve the public in decision making.

In order to ensure that the projects are adequately monitored the following requirements have been put in place:

- investors are required to report every six months on the implementation of the environmental safeguards stipulated in the clearance by the MOEF.
- field visits by MOEF and its regional offices to collect samples and data on the environmental performance of the cleared projects.
- in cases of inadequate compliance, the issue is taken up with the concerned State governments and nodal ministries.

The division of powers between the Central and the State government with respect to environmental legislation is not entirely clear. In general, it appears that while the Central Government is the legislating authority, the State governments are the implementing agencies. Specific differences are however discernible with respect to the different Pollution Control Acts as outlined below. In addition, governments may according to their political mandates provide more or less power to the state governments.

1. Major environmental laws

The main body of environmental legislation in India is outlined below in the box along with the dates of enforcement.

Environmental legislations

- Wildlife Protection Act, 1972
- Forest Conservation Act, 1980
- Water (Prevention and Control of Pollution) Act, 1974
- Water (Prevention and Control of Pollution) Cess Act, 1977
- Air (Prevention and Control of Pollution) Act, 1981
- The Environment (Protection) Act, 1981
- The Public Liability Insurance Act, 1991
- The Environmental Impact Assessment Notification, 1994

The Environment Protection Act, 1986 is an umbrella legislation and seeks to plug loopholes of earlier legislation relating to environment. Several sets of Rules relating to various aspects of management of

hazardous chemicals, wastes, microorganism's etc have been notified under this Act. The Central Government has the power to set standards of quality of air, water, and soil for specified areas and for specified purposes under this Act. The maximum allowable limits of concentration of various environmental pollutants as well as the procedures and safeguards for the handling of hazardous substances and related restrictions, the restrictions regarding the location of industry, as well as the procedures and safeguards for the prevention of industrial accidents which may cause environmental pollution are legislated under this Act. However, if a particular state pollution control board (SPCB) so desires it may set more but not less stringent standards in respect of a specified category of industries within its jurisdiction. Those industries that require consent under the Water Act, Air Act or both, or authorization under the Hazardous Waste (Management and Handling) Rules, 1989, are required to submit an environmental audit report to the concerned SPCB by 30th September of each year under this Act.²⁸

The Water Prevention and Control of Pollution Act, 1974, called the Water Act is implemented through resolutions passed by the state governments. The main provisions of this Act aim at prevention and control of water pollution as well as restoration of water quality. The Central and the State governments appoint Central and State pollution control boards respectively, which are entrusted with the task of implementing this Act. The Central Pollution Control Board (CPCB) formulates standards, establishes and accredits testing laboratories that test samples of water, provides training, organizes awareness building campaigns, and compiles statistics. The SPCB is entrusted with the actual task of planning and executing programs to prevent pollution and inspecting factories etc to ensure that they comply with the Act. The SPCB also stipulates specific conditions relating to temperature, volume, composition, rate and point of discharge of emissions and effluents. The actual certificate that a firm meets the requisite standards has to be issued by the SPCB. State governments also have some flexibility in fixing standards, though they generally follow the standards set by the CPCB. The CPCB advises the government, coordinates the activities and provides technical assistance to the SPCBs, and resolves disputes between them.

The Water Cess Act, 1977, authorizes the collection of cess on water consumed by certain categories of industries specified in the schedule appended to the official notification of the Act. Local authorities may also specify the categories of such industries. The CPCB and the SPCB use the money thus collected to prevent and control water pollution. The purpose and the amount of water consumed by the industries determine the rate of the cess.

The Air Pollution and Control Act, 1981, likewise is administered through the CPCB and SPCB. The objective of this Act is to prevent, control and reduce air pollution including noise pollution and to establish Boards at the States for this. Unlike the Water Act however, it is applicable to the whole of India and States do not in general set their own standards except in consultation with the CPCB. The division of labor between the CPCB and the SPCB is very similar, with SPCB acting

²⁸ See Government of India, 1994, Handbook of Environmental Procedures and Guidelines, issues by the MOEF, GOI.

as the implementing arm. As far as FDI is concerned, the SPCB advises the State Government with respect to the suitability of any premises or location for carrying out any industrial activity which is likely to cause air pollution. In cases of dispute between the CPCB and the SPCB, the Central government intervenes to solve the disputes. The SPCB also specifies the air pollution control equipment that must be installed by factories and other industrial establishments and from time to time reviews the state of such equipment. The SPCB may also install pollution control equipment and other measures on behalf of the firm should the need arise and charge the costs to the firm.

Persons handling specific categories of hazardous wastes (18 categories have been identified so far) are required to obtain an authorization from the SPCBs. A safety report is to be prepared by the concerned industry for the handling of such wastes. New industries are required to prepare such reports within five years of coming into operation. It is also required that workers on site will be provided with information, training and necessary equipment to ensure safety. Contingency plans in case of accidents have also to be prepared and notified to the local authorities.²⁹

Under all the major environmental Acts, state governments may have some flexibility to set standards, within the framework of the guidelines provided by the Central pollution Control Board. There are some instances where the State and Central governments have varied in their opinion regarding specific FDI projects. The decision in these cases is ultimately deferred to the Central government, but the State government may on occasion not permit the location of a particular plant in its territory on environmental grounds. Hence the hierarchies clearly set out by the various Acts between the Central and State governments may actually be very difficult to implement in practice.

²⁹ See Handbook of environmental regulations, op.cit.

In addition to the Water, Air and Environment Protection Act, the Factories Act (which is not an environmental Act) was amended in 1987 making it mandatory for hazardous manufacturing units to submit a detailed disaster management Plan and an assessment of its possible environmental impact to the government.³⁰ The amendments also made the non-executive top officers like chairpersons of these companies liable for prosecution in case of an accident. These amendments followed the Bhopal gas disaster, when the GOI was unable to sue the top executive of Union Carbide posted in India at the time.

Other relevant legislation includes the Public Liability Insurance (PLI) Act, 1991, that imposes on the owner the liability to provide immediate relief in respect of death or injury to any person or damage to property resulting from an accident while handling any of the notified hazardous chemicals. To be able to meet this liability, the owner handling hazardous chemicals has to take an insurance policy of an amount equal to its "paid up capital" or up to Rs.500 million, whichever is less. The policy has to be renewed every year. The owner also has to pay an amount equal to its annual premium to the Central Government's environment relief fund (ERF). The liability of the insurer is limited to US\$ 10-15 million per accident up to a maximum of US\$30 million per year or up to the tenure of this policy. Any claims in excess to this liability will be paid from the ERF. The payment under this Act is only for immediate relief, owners shall have to provide the final compensation if any arising out of legal proceedings. This Bill was also passed following the Bhopal gas disaster and was meant to ensure that the suffering undergone by the victims would never be repeated.

2. Fiscal incentives to encourage control and prevention of pollution

In order to encourage environmental conservation donations given by the corporate sector for conservation of nature and natural resources are exempt from income tax. A depreciation allowance of 30% is also allowed on devices and systems installed in industrial units for minimizing pollution or for conservation of natural resources. In order to encourage plants to shift from congested urban areas, capital gains made in moving from urban to other areas are exempt from taxes if these are used for acquiring land and building production facilities in non-urban areas. Excise and custom duty exemptions or reductions are given for the use of environmentally friendly raw materials.

³⁰ Ibid.

b. Evolution of Environmental legislation with respect to TNCs

Till January 1994, obtaining environmental clearance from the Central

Industry Categories in Schedule I of EIA Notification

Industries such as petroleum, chemicals, petrochemicals, synthetic rubber, storage batteries, pulp & paper, dyes, raw hides and skins, etc.

Mining

Thermal Power Plants

River Valley projects

Ports, Harbors and Airports

Communication

Atomic Energy

Transport (Rail, Road, Highway)

Tourism (including hotel, beach resorts)

Note: Over 80% of FDI approved since 1991 fall in one of the above categories.

Ministry was only an administrative requirement intended for mega projects undertaken by the government or public sector undertakings. However, the new notification referred to as the Environmental Impact Assessment (EIA) Notification makes an EIA statutory for 29 different activities listed in Schedule I (see box). This EIA notification also includes details of procedures for obtaining environmental clearance and for public involvement besides setting time schedules for decision taking. All investments including FDI for activities listed in schedule 1 require an EIA.

Applications for environmental clearance have to be accompanied by a project report that includes an EIA/environmental Management Plan prepared in accordance with the guidelines issued by the MOEF. These guidelines are revised periodically subject to the availability of additional information or policy changes. In the case of site specific projects, such as mining, a two-stage clearance is required, whereby site clearance has to be obtained prior to environmental clearance. Over and above this the GOI notifies certain areas as ecologically sensitive/fragile areas and all development projects located within this area need to obtain environmental clearance from the central government. A decision is normally taken within ninety days of the application. The environmental clearance certificate also specifies the size or capacity of operation. Environmental clearance procedures for all industries not included in schedule I of the EIA Notification, 1994 are listed below (see box).

All individual investment projects, including FDI, listed in Schedule I of the Environmental Impact Assessment Notification, 1994 require an environmental clearance of the Central Government.³¹ SMEs however, require no such clearance as long as they carry low pollution loads. In addition they do not require periodic renewal of environmental consent, unless the process of production itself is changed. Broadly speaking this schedule includes all major sectors in which FDI is important, particularly infrastructure such as power, highways, Ports, Harbors and Airports. It also includes a number of chemicals, distilleries, raw hides and skins,

³¹ See MOEF, GOI, 1994, The Environmental Impact Assessment Notification, 1994, as amended on 4-5-94, issued by the GOI.

bulk drugs and pharmaceuticals etc. While at this present point of time clearance by the Central Government is mandatory; there is a proposal by the new Government to give the states autonomy to clear investment projects up to a limit of US\$375million approximately. Environmental clearance can only be given after an EIA has been conducted and accepted by the Committee of Experts.³² However, in practice as the next section will show there have been a number of contravention's (including some by TNCs to) these rules.

Environmental clearance procedures for investments including FDI.

(not included under schedule I activities)

The investor obtains a LOI (letter of intent) from the ministry of industry.
 The investor approaches the concerned SPCB and/or the State forest department should the location involve the use of forestland.
 The SPCB evaluates the quantity and quality of effluents likely to be generated, as well as the efficacy of the control measures proposed to meet the prescribed standards.
 The SPCB issues a No Objection Certificate (NOC) to the investor. Normally valid for 15 years.
 Once an NOC is obtained the LOI is converted into an industrial license by the State authorities.

Environmental clearance for specific projects relating to items specified in Schedule 1 of Notification No. S.O.60 (E) dated 27.1.1994 should be obtained from the Ministry of Environment and Forests (MOEF) of the Central Government. For items not falling under schedule 1 environmental clearances have to be obtained from the State government. Projects whose total value is less than US\$ 12.5m in certain sectors such as

power, fertilizers etc can be cleared by the State government even though they may be listed in Schedule 1. Special environmental consent is required for investments in forested areas, coastal stretches and other environmentally fragile areas. This clearance is given by the MOEF of the Central Government.³³

EIAs are conducted on the basis of the stipulations of the Water Act, the Air Act, the Environment Protection Act and the Public Liability and Insurance (PLI) Act. Stipulations of the Forestry Act also become relevant to the extent that forestland is cleared and used for non-forest purposes. This would be especially relevant for infrastructural projects, including those involving FDI.

The EIA report is subsequently evaluated by the Impact Assessment Agency that in turn may consult a Committee of Experts. The Committee of Experts can enter and inspect a site or the factory premises at any time before or during the operation of the project. Summaries of the report of EIAs can also be made available to the public on demand and comments can be obtained through public hearings. Approval can also be granted to projects by default, i.e. if comments from the Impact Assessment Authority have not been received within the time limit the project will be deemed for approval.

³² The MOEF, GOI has the following responsibilities: to establish procedures for environmental impact assessment and clearance with regard to selected types of projects prior clearance of projects requiring diversion of forests for non-forest purposes under the Forest (Conservation) Act, 1980. Formulation of Environmental guidelines for projects in various sectors.

³³ See SIA, 1998, Manual of Policy and Procedures governing Industrial Approvals, published by the GOI.

While there are no special provisions for TNCs in environmental laws, some investment liberalization policies may, however, result in enactment's favorable to TNCs. For instance, a proposal to delegate powers to the State to clear foreign direct investments up to approximately US\$ 375 million in sectors such as power and other infrastructural activity has recently been put forward. This would imply that environmental clearance could also be given by the SPCB's subject to their observing the guidelines framed by the CPCB. As stated earlier the SPCB's ability to enforce environmental Acts are limited and vary extensively from state to state. Thus in effect relegating this authority completely to the SPCBs would imply that TNCs would in effect have more flexibility in implementing environmental ACTs.

In addition, further simplification is being sought for environmental clearances in order to expedite the processing of investment applications. For example, as of now the EIA notification requires all projects involving an investment of US\$12.5mn and above to go through an environmental clearance. It has been proposed that this exemption limit be raised from US\$12.5m to US\$25mn for new projects and for expansion proposals. There is also a proposal for exempting some industries from a mandatory public hearing on its EIAs before giving them environmental clearance. Currently, 29 different industries listed in schedule 1 of the notification are covered by Section 2-III(c), whereby interested parties and NGOs have to be given a public hearing. In addition an earlier proposal for adding more sectors to the list of industries in Schedule 1 may be dropped.³⁴

These modifications may de facto benefit TNCs more as the paid up capital for each enterprise is generally higher than local firms. Thus more TNCs rather than local firms would benefit from such exemptions. Moreover, public hearings have been more harmful to TNCs rather than local firms on account of their need to maintain an image of environmental consciousness as well as the fact that TNC violations of environmental norms are much more publicized by comparison to such violations by local companies. Finally, most of the sectors in which the TNCs operate in India are covered by Schedule 1 and therefore reducing or not expanding the scope of industries to be covered would be beneficial to TNCs.

c. Major problems with implementation and enforcement of environmental regulation

The standards set and implemented in a State depends on the governance capacity of the State. If the State is better administered than implementation of environmental norms and standards may be better though this is not necessarily the case. The "dirty industry" migration hypothesis would suggest that States with a lower record of implementation of environmental standards would attract the highest levels of FDI. This theory is however not vindicated by actual inflows of FDI

³⁴ See Singh, Gurbir, "Moef may loosen clamps - Exemption limit for new units likely to be doubled" in the Economic Times, 3 April 1998.

to various States. The States that are best administered, and therefore have better track records of implementation of environmental legislation, appear to attract the highest levels of FDI.

Some provisions of environmental laws have however either not been implemented or have been interpreted liberally so as to defeat the very purpose of the legislation. For example, while the statute of the Water, Air and Environment Pollution Act tackle quite broad based environmental problems and suggest punitive actions for the offenders, they are implemented by the SPCBs that in general have poor track records of implementation. One of the reasons attributed for this is that members of the State Control Board have sometimes been political appointees and may not have the relevant environmental expertise or resources.³⁵

There are several examples of the inefficient functioning of these Boards. One important example often quoted by the Press is that the Madhya Pradesh (one large State in India) SPCB had given a pollution control clearance to Union Carbide's pollution control equipment just a few weeks before the Bhopal gas accident.

Further SPCB's may be slow to respond to community and NGO initiatives. Section 15 (d) of the Environment Protection Act allows for community action against industries responsible for polluting the environment. However a 60 days notice is required to be given to the SPCB presumably to enable it to initiate action on its own. In several instances these community initiatives have not been acted upon. Also according to the Act, to convict a polluting industry, air and water samples have to be collected by the SPCB, which the latter have been known to delay indefinitely.

According to the Factories Act, submitting a detailed disaster management Plan and environmental impact assessment to the factory inspectorate and the environment ministry is mandatory for hazardous units. The act also stipulates that these documents have to be produced on demand by any citizen of India. These provisions have often been flouted by industries, including public sector industries. The pollution control boards technical capacity to carry out EIAs is also limited leading to further difficulties in the implementation of the provisions of the Factories Act.

Notwithstanding the constraints to the implementation of various acts, 415 projects were appraised for environmental clearance using the prescribed EIA methodology for the year 1996. Of these 415 projects, only 170 were able to obtain environmental clearance. Of the remainder, 18 industrial projects were exempted from environmental clearance and the rest of the projects were rejected.³⁶ It is difficult to obtain data on the proportion of TNCs in the rejected projects. However, the proportion of FDI in sectors in which EIA is mandatory is

³⁵ See Kane, R., 1991, Where Environmental Laws go up in Smoke, Indian Express, 19.2.1991.

³⁶ See MOEF, GOI, Annual Report, 1996-97.

quite high, and therefore it is possible that the rate of rejection of FDI is at least as high as that of domestic firms if not higher.³⁷

The largest number of environmental offenders is in those States where the levels of FDI and industrial activity are the highest. Looking at the Status of Court Cases filed under both the Air and the Water Control Act as of 31-10-97, it is interesting to note that almost as many cases were lost by the CPCB as were won by it.³⁸ This finding can be interpreted in two ways: a) when reprimanded, firms were in practice able to meet environmental requirements and b) the firms were able to buy their way out of the legal tangles. Whichever interpretation one chooses it bears testimony to the difficulties of implementing environmental laws.

While disaggregated data on the relative environmental performance of domestic and foreign firms is not available, informal talks with officials at the CPCB suggest that foreign firms may be included in the list of environmental offenders. According to the officials at the CPCB, the capacity of the firm to meet environmental requirements crucially depends on the technologies used by them. The newer the technology the lower the level of pollution and vice versa. Few foreign firms according to the CPCB are transferring the top of the line technologies to India. Nor is there evidence, CPCB argue, to prove that foreign firms necessarily use better technologies than local ones.³⁹

IV. Environmental Issues in relation to Foreign Investors in India

It is difficult to generalize on the environmental behavior of the TNCs. Several factors are relevant and while macroeconomic studies reflect the absence of significant "dirty industry" migration, they do not take account of the projects, which have been shelved on account of environmental considerations. While it is difficult to get an estimate of TNCs are environmental defaulters, or to estimate whether their environmental performance is better or worse than comparable local firms are, an analysis of some specific examples will help clarify the rationale behind the environmental behavior of specific TNCs in specific activities. Both positive and negative views and examples are considered below.

³⁷ See Handbook of Environmental Guidelines and procedures, 1994, op.cit.

³⁸ Out of a total of 6,624 cases filed by the CPCB and SPCBs under the Water and Air Acts, 2,947 cases have been decided and the rest are pending in various parts of the country. See Ministry of Environment and Forests, Government of India, Annual Report, 1997-98.

³⁹ See RBI, 1996, op.cit.

a. Environmental concerns associated with foreign investors

A number of environmental concerns have been voiced about the operations of TNCs in India. NGOs believe that given the high fiscal deficit as a proportion of total GNP, the national government would be reluctant to control the operations of TNCs thus leading to ecological disaster. The dominance of TNCs in environmentally harmful sectors also is a matter of concern, as this would imply that a large proportion of TNC investment in India would necessarily focus on these environmentally sensitive sectors.

Indian NGOs have also expressed concern about the depletion and excessive use of India's genetic resources by TNCs. As TNCs control much of the world's genetic seed stocks as well as finance the bulk of biotechnology research worldwide, they can reap large financial rewards from patenting life forms in India.

Other concerns voiced by various stakeholders relate to resource depletion caused by the scale of operation of TNCs, e.g. deep sea fishing, and the transfer of environmentally harmful technologies and products. In the case of Multilateral Environmental Agreements (MEAs), some commentators have claimed that though TNCs have access to the right technologies, they may be using sub-optimal technologies in their affiliate concerns. MEAs may also be conferring double advantages by providing TNCs with a captive market (generated by MEAs such as the Montreal Protocol) and monopoly prices accruing from the use of patented technologies.⁴⁰

1. Cases of highly publicized environmental incidents involving TNCs

The most publicized environmental disaster involved Union Carbide in the Bhopal Gas disaster. A leakage of a toxic gas from the plant killed thousands and injured as many. It also polluted the waters, the soil and caused cancer in a number of victims. Efforts of the Indian Government to bring criminal charges against Carbide's top officials were frustrated. When the GOI (representing Bhopal victims) tried to bring this case to the US courts, the judge ruled that the case should be transferred to Indian courts on the grounds of "forum non conveniens", i.e. lawsuits brought in by non-US plaintiffs could be dismissed if it is too inconvenient or improper to try the case in the US. This doctrine according to some gives TNCs strong protection from having to account financially for the damages that they cause outside their home country.⁴¹ To challenge this judgement a counter doctrine on "multilateral enterprise liability" which emphasizes that the parent company has control over its subsidiaries and should have controlled the subsidiary's affairs was invoked but not accepted by the court.

⁴⁰ See Watal, J., 1997, Technology Transfer in the context of the Montreal Protocol, paper prepared for the UNEP-UNCTAD Project on the Use of Trade and Positive Measures under MEAs.

⁴¹ See Hager, R., 1995, "Bhopal: Courting Disaster", *Covert Action*, Summer 1995.

The case was shifted to Indian courts where according to some a settlement about a sixth of the original claim was made.⁴²

Another highly publicized case that was more successfully resolved involved the US based chemical giant Du Pont and its joint venture partner Thapar. This joint venture in the mid 1980s applied for permission to build a manufacturing factory for nylon 6,6, a synthetic cord used in tyres. For this purpose they proposed to put up their plant in a remote village in Goa. With a slotted investment of US\$200 million, it

was supposed to become the world's largest producer of nylon 6,6. Citizen's groups opposed this project and later an Expert Committee that was appointed to look into the safety aspects of the project rejected it on several grounds. In addition to environmental claims, several other claims regarding the economic benefits of the project were also made. It was claimed that the employment generated by the plant would not be comparable to several small units with the same capacity, and benefits being offered by the government in terms of land at near zero cost and infrastructure (i.e. roads), were considered excessive and disproportionate to the economic benefits generated by the project.

Protests against this plant were voiced as early as 1988 by

environmental groups and local communities located near the project. In response to rising public enquiry, Goa's Legislative Assembly created a House Committee to examine the nylon 6,6 project. The Committee instituted a series of public hearings. After interviewing Du Pont employees as well as many people and organizations in Goa, in late 1990 the Committee recommended on both environmental and social grounds that the project be shelved. The Goan State government refused to abide by the Committee's findings, but its findings helped to galvanize public opinion and three governing councils of villages near the plant passed resolutions against the project. During the next two years several campaigns were held, but Du Pont started construction of the plant in September

Would Du Pont Endanger the Environment?

It was feared that Goa would be used as a dumping ground for the hazardous chemicals produced by the plant. The Companies rejected these fears as baseless on the grounds that both the CPCB and the SPCB had granted them no-objection certificates. It was also claimed that Du Pont had been running this plant in several locations worldwide well within the specified toxic limits.

Critics argued that Du Pont was bringing in an outdated product, whereas users all over the world had switched to "kevalar" which were considered technically superior to 6,6. Du Pont's defense to this was that the superior product would cost more, and in any case 6,6 was superior to nylon 6 which was being widely used in India.

It was believed that outdated machinery was being brought in by Du Pont from its Richmond Virginia Plant and could endanger the workers at the plant in addition to increasing the possibility of causing environmental damage. Du Pont's counter claim suggested that only a few machines not exceeding five percent of the total cost was being brought from Richmond, the rest of the plant was new.

There has been no site appraisal or environmental impact or disaster management plan for the project. Moreover, raw materials like hexamethylene diamine and adipic acids were considered to be hazardous and classified as being hazardous health substances by US health authorities. In both cases extensive care and protection was demanded in their use. Du Pont claimed that in the US adipic acid was used to make candy and the economic benefits of the project would be substantial.

NGOs also questioned the fact that the disposal of wastes was given to contractors rather than disposed off by the firms themselves. This was considered tantamount to transferring their environmental responsibilities to contractors. Du Pont issued a counter assurance that the contractors would be trained. As it had the technology to ensure their safe disposal it could assure the citizens that wastes would be disposed safely.

⁴² Jaising, op.cit. I.,1994, "Legal Let-Down" in T.R. Chouhan, et. al, Bhopal-the Inside Story, Apex press, New York and the Other India Press, Goa, India.

1994. At the actual construction site, there was a large rally by citizens in which they pledged to tear down the boundary wall and equipment. There was a wide scale boycott of those people involved in the project, with shops and hotels refusing to service them. Several anti-nylon protestors were arrested and one activist died during a campaign. This marked a turnaround in Du Pont's attitude. In June Du Pont announced that it would be shifting its plant to another State Tamil Nadu.⁴³ The shifting of the 6,6 nylon plant from Goa to Tamil Nadu could be indicative of two factors: (a) the environmental absorptive capacity of Tamil Nadu may be higher than that of Goa (b) economic considerations in Tamil Nadu were given priority over environmental considerations.

Another case which has been publicized in the media concerns the transfer of a hazardous technology that is banned for domestic use in Norway. The controversial technology was a membrane cell plant whose operations were shut in Norway in 1992, under pressure from environmental groups against the use of chlorine in pulp bleaching. Norway has a national policy that targets organochlorine chemicals, which includes a provision that the technology in question be reduced and ultimately eliminated. In addition, its international commitments for reduction and elimination of harmful chemicals such as the North Sea Ministerial Declaration of 1987 and 1990, should have put natural restraints on the transfer of environmentally harmful technologies. In a counter claim however, the Norwegian firm claimed that the technology being sold to India was not the outdated one and the intermediary, another multinational, through which the deal had been affected however claimed that it had not brokered the deal.⁴⁴

Other cases which have been brought up by the media concern distilleries for making alcohol. A number of these companies are foreign owned and considerable skepticism has been expressed over claims by a distillery called Kedia Castle Dellon that a distillery could be a Zero-pollution plant. A plan submitted by the company to the SPCB in Rajasthan claims that about 1800 cubic meters of spent wash from the distillery would be processed daily to produce cattle feed. About 90-95% of the wash would be evaporated, thus claiming that effluents and wastewater would not be let out to neighboring agricultural land. Citizen groups have however questioned as to how much energy would be required to evaporate such large quantities of water and where would the spent wash go in case of a shutdown of this cattle-feed plant. They object to the granting of a no-objection certificate without a proper EIA. Apart from the possible pollution by this plant, local residents were also worried about possible ground water depletion by water guzzling distilleries.⁴⁵

An Expert Panel held Century Rayon IS THIS A TNC? responsible for 11 deaths from the inhalation of toxic gasses emanating from the release of untreated spin bath solution in an open sewage canal. The Panel suggested that all major

⁴³ See Greer and Singh, 1996, op.cit. Also see Cabral e Sa, M., 1991, "Thapar-Du Pont: Troubled times" in Business and Finance, 31.1.1991.

⁴⁴ See Paul, Seema., 1995, "Norway ships banned technology to India", in the Telegraph, 1.4.1995.

⁴⁵ Krishna. A., 1995, "Is Zero-pollution distillery really possible", IED, 20.05.95.

hazardous industries should systematically identify the processes used for treating and storing hazardous chemicals, and factories should carry out a consequence analysis in cases where effluents include chemicals beyond threshold safety levels. This would help prevent disasters.⁴⁶

2. Political views of different constituencies on environmental responsibilities of TNCs

There are several divergent views on the impact of FDI on environment and development. Some, notably NGOs contend that in a rush to attract foreign investment, environmental regulations are now being violated.⁴⁷ Many TNCs which produce products that are hazardous to human health and the environment have been given permission to establish operations in India. Examples of Dow, Atochem, Kumaia Chemicals Limited, and Mitsubishi have been cited. It is claimed that these companies faced with shrinking international markets on account of environmental concerns are setting up plants in India to boost their share in the Indian Agrochemicals market.⁴⁸

Many foreign investment projects approved for augmenting foreign exchange earnings such as fisheries, aquaculture and agribusiness operations have not been found to be environmentally benign. Foreign companies involved in deep sea fishing and fish processing have been accused of over-fishing, leading to a loss of traditional fisher's livelihood as well as loss of domestic markets and depletion of marine resources. According to the National Fish Workers Forum, 100% export oriented joint ventures are likely to deprive nearly 300 million Indian consumers of fish, as well as displace seven and a half million fisherfolk.⁴⁹

Foreign corporations involved in shrimp and prawn corporations, including aquaculture have been accused of ignoring the long-term consequences on the people and the environment. It is claimed by a number of environmental groups that the State and the Central Government in their desire to earn foreign exchange have ignored the impact of shrimp farming on agricultural land. In just ten years, land used for shrimp farming becomes barren and unproductive. Additionally, shrimp farming leads to degradation of coastal mangroves and water pollution.

It is also claimed by environmental NGOs that further to the liberalization of investment and trade in 1991, concessions on taxes and customs duties have created a boom in the chemicals industry in India. It may also have encouraged the dumping of toxic wastes as well as migration of polluting and hazardous

⁴⁶ See "Toxic waste: Action against Century Rayon sought", The Hindustan Times, 13.04.95.

⁴⁷ See Greer, J., and K.Singh, 1996, TNCs and India, Issued in public interest by the Public Interest Research Group, printed at the Press, Shahdara, Delhi.

⁴⁸ See Karliner, J., "The Bhopal Tragedy: Ten Years After" in the Global Pesticide Campaigner, December 1994.

⁴⁹ See Kocherr, T., 1995, "Campaigning Against Joint Ventures" in the State of India's Economy 1994-95.

technologies to India. These plants are being set up without proper environmental clearances from pollution control authorities and NGOs have expressed serious concern about the health and safety of workers living near such plants. They view the Bhopal Gas tragedy as an example where the TNCs can walk away from their environmental responsibilities.

The Liberalizers argue that TNCs provide enormous financial resources for investment in India, and are thus likely to be more careful of the environment than comparable local firms. In addition, the top of the line technologies available to them, their access to distribution and marketing networks, as well as their export intensities furnishes a number of intangible assets that could be directed to environmental improvements. Their considerable expertise in facets of product development, using brand names for marketing, advertising and R&D can also be used to enhance their environmental performance. It also exposes them to a lot of criticism should they renege from their environmental obligations. The liberalizers' further argue that in India protection levels are still excessively high, and thus India is unable to reap the full benefits, including environmental benefits of FDI. They therefore advocate further liberalization as an effective mechanism for enforcing standards, including environmental ones both on national companies and on TNCs.⁵⁰

There are several differences in the perceptions of different states regarding the problems associated with foreign investment. Their perspectives are also colored by their ability to influence FDI as well as their ability to attract FDI. Sometimes these perspectives have been at variance with the Central Government as was exemplified by the case of Enron in Maharashtra.

It is also interesting to note that while the nylon 6,6 plant was shelved in Goa, negotiations on establishing it in another state, i.e. Tamil Nadu were immediately undertaken. That States may enter into some kind of competitive deregulation in order to attract FDI though not impossible is however unlikely. This is because FDI flows into states that have better infrastructures and markets. Generally speaking there is a positive correlation between better infrastructures and better governance, with the result that implementation of environmental laws and norms are also better in states with better infrastructure.

b. Positive Environmental Contributions of TNCs

While the preceding section has highlighted several examples of TNCs willfully flouting environmental regulations and Acts, there are equally a number of examples of TNCs having a positive effect on the environment, and consequently affected public perception. The most striking examples are the activities of TNCs in environmental services such as the provision of solar power, waste management

⁵⁰ See Sengupta. , A. Banik and R.Karthuria, 1996, FDI Inflows to India in the Post Reform Period: An analysis of the Structural and Policy Impediments, Occasional Paper No.3, International Management Institute Research Paper Series.

consultancies and water cleaning projects. TNCs have also been active in testing and certification, including certification for environmental management.

An opposing view however holds that TNCs have introduced many dynamic changes in the Indian economy. The example of Maruti Udyog (which is collaborating with Suzuki) is often cited as an important example. Maruti cars were the first to use catalysators and unleaded fuel. Today a number of the new vehicles on the road are designed to use unleaded fuel. In the auto-components sector as well, the strict quality controls and the close cooperation with vendors has "changed the market's perception of design and quality and revolutionized the components industry through its philosophy of vendor upgradation". Maruti actively nurtured some critical component industries by establishing eleven joint venture companies for auto parts to help push quality and productivity concerns upstream. It has also pushed up the levels of fuel efficiency so those competing cars are forced to adhere to higher fuel efficiency standards.

1. Examples of TNCs building environmental infrastructures

TNCs are becoming active in the generation of alternative and renewable energy sources. TNCs such as Amoco and Enron are in the process of creating a large solar Photovoltaic power project. Another California based company called the Optimum Power International is in the process of generating wind power from the breezy high altitude locations in the State of Kerala. Agreements to supply electricity from these units to State governments at economic and fixed prices are also being negotiated. Some of these projects are being assisted by funding from the World Bank, the Asian Development Bank and by national aid agencies such as DANIDA (The Danish Development Agency). Some of these power stations will also test equipment used in wind turbines, train personnel in the wind energy sector, provide an information center on better and alternative sources of energy, including building a library.⁵¹

A number of Canadian and American TNCs are currently entering into joint ventures in the area of waste management in India. These companies are in the process of negotiating the provision of such services to local municipalities.

Some TNCs such as Philips are providing training to local companies to implement ISO 14,000 standards on Environmental Management Systems. 32 companies in India have obtained ISO 14,000 standards of which a significant number are Indian companies. Some testing and accreditation bodies which are transnational in nature, e.g. the SGS are also collaborating with the National Standardization bodies, such as the Bureau of Indian Standards to build the infrastructure required to implement ISO 14,000 standards on a wider scale.

The Indo German Board of trade has also set up several testing agencies in India to test for toxic chemicals (such as pentachlorophenol) in products such as leather and textiles. These testing agencies were either set up by TNCs or funded by some of them. Multinationals have also taken the lead in manufacturing

⁵¹ See "MNCs to enter alternative energy sector", in the Economic Times, 15-4-95.

environmentally friendly substitutes to Azo dyes and for providing testing facilities for them. Most of these substitutes and testing facilities can however only be utilized by large firms as they are too expensive for small and medium enterprises, which comprise about 70% of the textile industry in India.⁵²

In response to the ban on the use of Azo dyes in Germany, several large firms including TNCs carried out detailed analysis of the chemical components of the dyes used in order to judge their eco-friendliness, and in order to understand the extent to which they were required to find substitutes. Once this was established, they could convince the dyestuff manufacturers, also dominated by TNCs, to switch to environmentally friendly substitutes. In fact within a year TNCs and other Indian large firms had switched to environmentally friendly alternative dyestuffs.⁵³

In both the leather and textiles sector, some TNCs have not only set up Common Effluent Treatment (CET) plants, they have also provided consultancy services to local companies to set up CETs. Again, these services are beyond the economic capacity of small and medium enterprises, which dominate production in both sectors. In the leather sector however, environmental infrastructure is better established locally than in the textiles sector. While testing for environment friendliness of products is done both by TNCs and government sponsored agencies, often the waiting time for the latter is much longer than that of the former, perhaps because of the much higher prices charged by TNCs.⁵⁴

Another example is that of NOCIL, an agro-chemical producing TNC which installed environmental infrastructure following a notification by the CPCB that its environmental standards did not meet the requirements. This firm has taken care to ensure that spills and wastes are minimized, as well as put up R&D efforts to overcome problems identified in maintaining and operating a Common Effluent Treatment plant. The company has established a well-defined organization for environmental management under the Managing Director of the Company. The set-up is designed to emphasize a self-regulatory mechanism. Following these changes the CPCB gave its consent for its operation.⁵⁵

2. Examples of TNCs co-operating with authorities on the setting of high environmental standards

TNCs have had a much more decisive influence in setting voluntary standards rather than mandatory environmental standards. Examples of TNCs acting in collaboration with national authorities are to be particularly observed in dyestuffs and in refrigeration in India. Both these industries are dominated by TNCs.

⁵² See Das, S., 1996, The differential impacts of environmental policies on small and large enterprises in India - with special reference to the textile and clothing and leather and footwear sectors, Report prepared for UNCTAD under project INT/92/A58.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ See Environmental Audit of NOCIL Agrochemicals conducted by the Central Pollution Control Board - Programme Objective series, Probes/49/1992-93.

In the dyestuff sector there are no statutory eco-standards. However, the European Manufacturers of dyes and organic pigments have voluntarily formed the "Ecological and Technological Toxicological Association of Dyes and Organic Pigments Manufacturers" (ETAD) which recommends certain standards for handling, packaging and labeling dyestuffs. Although ETAD is a voluntary organization and does not have the authority to enforce compliance, it is compulsory for all ETAD members to adhere to ETAD's guidelines and standards. It is nevertheless believed that TNC affiliates of ETAD have been active in getting governments to ban several benzedine based dyestuffs that are known to be carcinogenic. In India as well, it is believed that the members of ETAD have cooperated actively with the Bureau of Indian standards in obtaining this ban.⁵⁶

In the pharmaceutical sector, a TNC called Biocon India adheres to the detailed specification for eco-friendly pharmaceuticals laid down by both US and UK and later the Bureau of Indian standards has included these specifications. Guidelines on packaging and the use of recyclable symbol as well as environmental information on products initially begun by TNCs are now widely used for several products. Standards on food exports, particularly for Marine products, earlier adhered to by Japanese TNCs are now also being followed by local firms. In all these cases however, a clear economic advantage, either in terms of brand image, premium in export markets or better recognition is seen to be the driving force behind local firms adopting higher standards. These higher standards may or may not translate to norms advocated by the Bureau of Indian Standards.

The North-South collaboration: ECOFRIG

The specific objective of this project is to adapt hydrocarbon technology for Indian domestic and commercial refrigeration appliances in cooperation with industry and research partners.

The aim is to demonstrate the feasibility of this option in order to facilitate an early phase-out of CFC11 and CFC12 through an environmentally friendly and cost effective technology. This feasibility phase is expected to lead to expeditious submission of hydrocarbon based investment proposals to the Multilateral Fund of the Montreal Protocol by Indian refrigerator manufacturers.

The project shall make available consumer and policy oriented information and initiate steps to achieve improvements in energy efficiency and demonstrate further applications of natural and environmentally friendly fluids to the refrigerator sector. Towards that end, the feasibility of extending the hydrocarbon technology in the Indian commercial refrigeration and water chilling sectors will be assessed. The project will also identify increasing training needs in the servicing sector, both formal and informal, caused by conversion to the hydrocarbon technology.

Source: Ministry of Environment and Forests, India, Swiss Agency for Development Cooperation, GTZ, and Ecofrig – Phasing out CFC in India – A new Venture in North-South Collaboration.

In the refrigeration sector, a collaboration of TNCs' has been established within the Indo-Swiss Collaboration in Ecological Domestic Refrigeration and the German government is investigating options for producing Ecological Refrigerators. It is hoped that the standards set by these refrigerators will not only address concerns of ozone depletion under the Montreal Protocol, but will also address concerns of Climate Change. The governments of the respective countries, TNCs and research institutes are jointly setting up the project. To gain experience in operating under Indian

conditions, pilot projects are being established at refrigeration factories of Godrej and Voltas. The Technical Safety Inspectorate will certify these pilot plants for

⁵⁶ See Bharucha, V., 1997, "The Impact of Environmental Regulations and Standards set in Foreign Markets on India's Exports", in Jha, et.al (ed) Trade, Environment and Sustainable Development - A South Asian Perspective, Macmillan Press, New York and Basingstoke.

Energy and Environment, located in Germany. The box provides more details on the objectives of the ECOFRIG program.

3. Examples of TNCs affecting the adoption of environmental management (EMS) in the local industry

Technological upgradation in both Textiles and the Leather sectors contribute significantly to their better environmental performance. While large companies have been able to form joint ventures and access superior eco-friendly technologies and management systems, smaller firms are unable to do so. Even if the collaborating company is a relatively small TNC, they seek the larger and better established Indian company as a partner. Thus the dissemination of better technology and environmentally friendly products in these sectors have been limited to the large scale segment of the producers.⁵⁷

TNCs have been particularly active in helping firms set up EMS in order to comply with ISO 14,001 group of standards. Four TNCs have virtually dominated the market for certifying that firms comply with ISO 14,001. Nearly 32 firms have obtained ISO 14,001 certificates out of which most are local firms. TNCs, which were earlier involved in pre-shipment inspections, are now also certifying Indian firms against ISO 14,001 standards. They also provide training and have organized various seminars to promote the adoption of these standards by firms.

TNCs have also required their suppliers, sub-contractors and vendors to adhere to ISO 14,001 standards. These TNCs also provide auditing and other forms of training. However the rates charged by these firms are approximately double those charged by the Bureau of Indian Standards (BIS) in granting ISO 14,001 standards. BIS has so far only certified one firm versus the 30 odd certified by TNCs. This difference can be attributed to several factors such as the late entree of BIS in the certification scenario, the aggressive marketing strategies of the TNCs, and perhaps the wider acceptability of TNC certification by buyers down the supply chain.⁵⁸

c. India's stance in international debates involving environmental aspects of TNC activity

In the debate on MAI and the WTO discussion group on MFI, India has pointed to certain inequities between investor and host country obligations. Discussions at the OECD on the MAI and environment have placed the entire burden on the host country by insisting that binding language on not lowering environmental standards be included in the text on MAI. A proposal was also

⁵⁷ See Das, S., 1996, op.cit.

⁵⁸ Information provided by the Bureau of Indian Standards.

floated to include common minimum standards of environmental protection in the host countries. This proposal was however opposed by some OECD countries themselves on the plea that the higher environmental standards of the more advanced countries would be uneconomic for others. In India's view such macro policies will serve no purpose as individual investment contracts are negotiated on the basis of several factors among which environmental performance is one of the less important ones. India would prefer to legislate in a way in which there is a higher level of investor obligation, even though comparable standards cannot be met by domestic firms on account of capital and technology deficits. Source?

1. A policy oriented approach to environment and political views of a possible multilateral framework on investment

To ensure that TNCs make the greatest contribution to their economies, host governments' may need to institute screening mechanisms that weed out detrimental FDI projects and encourage beneficial ones. They would also need to institute a mechanism of investor's obligations on various economic, social and cultural necessities, protection of the environment and the promotion of sustainable development. A moot point in this regard is, whether TNCs are asked to maintain the same environmental standards in host countries as they have in home countries, even though host country domestic investors may be unable to maintain the same standards on account of lack of capital, technology, or relevant skills? Discussions on MAI at the OECD have not given much thought to these considerations.

Noting those stronger public liability clauses on FDI has a chilling effect on FDI inflows, the requirement of not lowering standards may be difficult to both define and implement in practice.⁵⁹ For example, policies to attract FDI such as exempting some industries from FDI clearance procedures, including environmental clearance, could be interpreted as lowering of environmental standards. Similarly, raising the exemption limits on FDI from US\$12.5 to US\$25.0 mn could be interpreted as a lowering of standards, but strictly speaking these proposals were directed at facilitating the approval of FDI projects. A MAI, which allows developing countries little flexibility in balancing competing economic, social and environmental interests, may find little support in India. On the other hand, given the vast resources of TNCs to undertake environment protection measures, either a code of good business practices or investor obligations on a case by case basis may better meet India's concerns.

2. Public debate on regulation of TNC's environmental performance

Another contentious issue that involves TNCs is the Trade related intellectual Property Rights Agreement of the WTO. According to a number of NGOs, the

⁵⁹ See OECD, 1997, FDI and the Environment - An Overview of the Literature, Note by the secretariat.

Indian Patents Act should be amended in view of the developments concerning Plant Genetic Resources, Plant Breeding and the development of Biotechnology. The current TRIPs Agreement may increase the monopolies of TNCs operating in the pharmaceutical and seed sectors. NGOs argue that the Indian Patents Act could exclude patents on life forms, prevent patents on indigenous knowledge from being registered both in India and in foreign countries, and put under compulsory licensing some essential and generic drugs. It is claimed that these developments would reduce the profitability of TNCs, but would have a beneficial impact on the preservation of India's bio-diversity.⁶⁰

NGOs argue that a pressure to have laws on plant varieties has come from TNCs that seek monopoly rights to global seed companies. Laws however should be drafted to focus on conservation of bio-diversity and the protection of farmer's rights and innovation with limited rights being granted to the seed industry. Again there appears to be a conflict of interests between the protection of indigenous knowledge and the interests of TNCs.

Debates on technology transfer and the role of the TRIPs agreement in facilitating such transfers have also been the subject of public debate in India. India has argued that trade secrets, copyrights, and patents awarded to TNCs for environmentally sound technologies should be amended in order to facilitate the wider dispersion of such technologies. This position appears to be changing somewhat with the recent signing of the Paris Convention and the hope that some TNCs may consider relocating their R&D activities to India if India were to have a stronger IPR regime.

V. Conclusions

Debates on environment and investment abound in generalities. Little distinction is made between the macro and the micro aspects as well as between observations and causative factors. On the one hand it is claimed that companies are transferring production abroad in order to avoid the higher environmental legislation at home. On the other hand it is claimed that TNCs are the main agents of change in host economies, often bringing better technologies and products particularly to developing countries. Both views may be valid, depending on the sector of operation. Similarly several factors including but not exclusively the regulatory regime of the host country determine the level of environmental protection offered by the investor in the host country.

The environmental practices of TNCs in developing countries have so far had both negative and positive effects on their environment. Most FDI is however concentrated in the sectors that have been deemed to be highly polluting. It is

⁶⁰ See Shiva, V., and C.Alvares, 1998, "BJP on Swadeshi: the great U-turn", in the Third World Network Features - India.

therefore likely that a number of new investments would take place in these polluting sectors.

The process of trade and investment liberalization appears to be irreversible irrespective of the government in power in India. However, a large number of sectors and states are still largely excluded from FDI inflows and therefore resolving the tradeoff between environment and FDI should also include a consideration of how to extend FDI flows to all states.

Environmental legislation though of a long-standing nature has proven to be difficult to implement. While many developing countries have a comprehensive body of environmental legislation, implementation depends crucially on the governance capacity of the executive machinery. The political situation in India over the past few years has not been conducive to good governance especially in the environment sector. In this context of generally weak governance capacities, the question of corporate governance assumes greater importance. TNCs as generators of higher standards and performance with respect to environment should be actively encouraged. However whether more regulation is an appropriate mechanism for doing so is an open question.

Urging TNCs to adopt better environmental practices depends more on community groups and grassroots NGOs than on government action. The weightage given to better environmental performance has been determined by factors that are often case specific. Thus, generalizations of the kind which show that TNCs can be made to adopt better technologies and environmental practices through more regulation is difficult to ascertain empirically. On the other hand little support can be found in developing countries for the view that TNCs should be left completely unregulated. More case studies are needed to ascertain TNC practices. It would also be necessary to evaluate TNC performance against specific environmental goals, such as the preservation of bio-diversity, which are either of great national or of global significance.

The overall environmental performance of TNCs is difficult to judge. This could in part be attributed to the fact that cases of environmental violation receive more publicity than positive practices. Environmental performance of TNCs is not uniform across borders, partly because environmental standards are not uniform across borders. The only case where this is so is in the case of multilateral environmental agreements that address global environmental problems. It may also be useful to explore whether special environmental safeguards may be needed in particular sectors in order to promote sustainable development. Logically speaking both the host governments as well as investors must have a stake in promoting sustainable development.

VI. Annexes

a. Danish and German FDI in India

Denmark is ranked 28th in terms of cumulative FDI in the post reform period, while Germany is considered one of the ten largest foreign investors in India. Investments from both Germany and Denmark have been increasing steadily over time.

| Investments Approved from Germany and Denmark | | |
|---|---------|---------|
| <small>(in millions of US Dollars at 1998 rate of exchange)</small> | | |
| Year | Germany | Denmark |
| 1991 | 10.5 | 3.0 |
| 1992 | 21.5 | 6.3 |
| 1993 | 43.9 | 8.0 |
| 1994 | 142.4 | 13.3 |
| 1995 | 335.0 | 30.8 |
| 1996 | 381.8 | 18.3 |
| 1997* | 301.4 | ... |

* Refers to the first eight months of 1997. Figures on Denmark were not available at the time of writing this report.

While data on actual inflows are not available, data on approvals indicate a significant increase. The regional distribution of FDI approvals from these countries follows the trend of other FDI with an overwhelming concentration in the States of Maharashtra, Tamil Nadu, Andhra Pradesh and Gujarat. The sectoral composition of German Industry is consistent with its overall strengths.

Most investments are in sophisticated high technology products, computer software, electronics, heavy machinery, pharmaceuticals, chemicals and dyestuffs. Investments originating

from Denmark include Deep-sea fishing, refrigeration equipment, industrial and agricultural machinery, cement etc. Very little investment from both these countries is directed to the consumer sector such as textiles and leather.⁶¹

⁶¹ Information provided by the FIPB, GOI.

b. Global FDI inflows

| Estimates of FDI Inflows, selected host region and economies | | | |
|---|----------------------------------|----------------------------------|----------------------------------|
| (Million dollars) | | | |
| | 1983 to 1988 average | 1993 | 1994 |
| Total | 91554 | 208388 | 225692 |
| Developed countries | 71779 (78.4%) | 129073 (61.9%) | 134984 (59.8%) |
| Developing countries | 19757 (21.6%) | 73350 (35.2%) | 84441 (37.4%) |
| China | 1823 | 27515 | 33800 |
| Singapore | 1947 | 6829 | 7900 |
| Argentina | 512 | 6305 | 1200 |
| Malaysia | 731 | 5206 | 4500 |
| Mexico | 2272 | 4901 | 4432 |
| Indonesia | 341 | 2004 | 3000 |
| Thailand | 439 | 1715 | 2700 |
| Hong Kong | 1343 | 1667 | 2000 |
| Colombia | 570 | 950 | 1504 |
| Chinese Taipei | 448 | 917 | 1350 |
| TOTAL of ten above | 10426 (11.4% ;; 52.8%) | 58009 (27.8% ;; 79.1%) | 62386 (27.6% ;; 73.9%) |
| Chile | 439 | 891 | 2533 |
| Brazil | 1503 | 802 | 2241 |
| Philippines | 249 | 763 | 1500 |
| Turkey | 142 | 663 | 807 |
| TOTAL of four above | 2333 (2.5% ;; 11.8%) | 3119 (1.5% ;; 4.3%) | 7081 (3.1% ;; 8.4%) |
| India | 92 (0.1% ;; 0.5%) | 586 (0.3% ;; 0.8%) | 947 (0.4% ;; 1.1%) |
| Kore, Rep. of | 387 | 516 | 791 |
| Venezuela | 50 | 372 | 993 |
| Peru | 5 | 349 | 2695 |
| Bermuda | 1383 | 2960 | 2923 |

c. FDI approvals and proposals for selected states

| Period: From August 1, 1991 to June 1, 1998 | | | | | | |
|---|---------------|----------------|---------------------|----------------|----------------|---------|
| | Approvals (A) | | | Proposals* (P) | | A/P (%) |
| | No. | % to total No. | % to total Inv. No. | No. | % to total No. | |
| Leaders | | | | | | |
| Maharashtra | 1132 | 14.44 | 12.62 | 6355 | 17.31 | 17.81 |
| Tamil Nadu | 757 | 9.66 | 6.17 | 3656 | 9.96 | 20.71 |
| Karnataka | 612 | 7.81 | 5.41 | 1385 | 3.77 | 44.19 |
| Delhi | 587 | 7.49 | 14.05 | 463 | 1.26 | 126.78 |
| Andhra Pradesh | 384 | 4.9 | 3.51 | 2544 | 6.93 | 15.09 |
| Gujarat | 334 | 4.26 | 5.29 | 5249 | 14.29 | 6.36 |
| Haryana | 320 | 4.08 | 1.28 | 2340 | 6.37 | 13.68 |
| Uttar Pradesh | 300 | 3.83 | 1.8 | 3700 | 10.08 | 8.11 |
| West Bengal | 230 | 2.93 | 4.43 | 1494 | 4.07 | 15.39 |
| Laggards | | | | | | |
| Punjab | 86 | 1.1 | 1.14 | 1792 | 4.88 | 4.8 |
| Kerala | 76 | 0.97 | 0.34 | 417 | 1.14 | 18.23 |
| Orissa | 65 | 0.83 | 4.71 | 263 | 0.72 | 24.71 |
| Bihar | 38 | 0.48 | 0.11 | 332 | 0.9 | 11.45 |
| Himachal Pradesh | 27 | 0.34 | 0.21 | 371 | 1.01 | 7.28 |
| ALL INDIA | 7839 | 100 | 100 | 36722 | 100 | 21.35 |

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