

BOOK REVIEWS

TRADE AND ENVIRONMENT ISSUES AND OPTIONS FOR INDIA (2003) Edited by Veena Jha,. United Nations, New York. Pp.296. Price: Not Mentioned).

Can the relation between trade and environment be assessed through identification of linkage between development and environment? Asserting positive on this question, the present book under review¹ endeavours to propose policy through a number of write-ups suitable for developing and least developed countries. It tries to assert that in developing countries with a weak industrial base, a rapid and sustained rise in the levels of income depends on increasing investment. Most often than not, development in such situation and capacity may have very high requirement of import content, which could be directly proportional to natural endowments of export earning.

The book under review explores the generic linkage between trade and environment on the one hand and consequential impact on liberalization and development on the other. It claims to lay down guidelines for policy formulation at the level of governance and its 'trickle down' effect on the governed. The book has tried to find a mechanism that can balance the challenges and opportunities for reconciling trade and environment policy in the Indian context. It, however, doesn't look into all the nuances of environmental consideration and its sequential consequence on development of a country getting impetus through trade.²

¹ Veena Jha, (ed.), *Trade and Environment Issues and Options for India* (United Nations, 2003).

² Some of the issues rose elaborately in the book, e.g. ISO issues, investment and sustainable developmental concerns, technology transfer and environmental performance are contemporaneous to the extent that questions are raised but solution and policy making mechanism could not be identified. *Ibid.*, p. 38 *et seq.*

The jurisprudence of environment finds a place in the editor's introduction. The acumen of the writer is visible through the issues of equity and equitable consideration in relation to environmental standards. The post-modern trend of environmental jurisprudence wherein inner morality of law propagates through policy identification and realization rather than the 'rights' theory, appears all around the book as an epitome of sustainable development piercing through the veil of trade and development. Herein identification of corporate responsibility in perpetration of environmental standards and its consequence on trade, development and social growth are the features of the book.

However, one may generally feel at places that policy option could have been, at the best localized ones, identified on regional lines because developed, developing and least developed countries can not be equitably treated on the same footing.

Rene Vossenaar³ has vehemently, argued on ISO 14001 certification and standards. He says, that these are standards for environmental management system, s These have^ generated considerable interest in developed, developing as well as least developed countries. According to him trade development could be directly related to environment standards because environmental bottlenecks are so swamped that a certification system removes the barriers to the trade: Empirics provided in his paper are well supportive of his arguments. But ISO certification as wanted (Article 13 para.1 of TBT Agreement⁴ and pursuant Ministerial decisions are *prima facie* not sufficient) is utterly inadequate and may not be acceptable under Sanitary and Phyto-Sanitary Agreement in the absence of a multilateral agreement under WTO. This point has not been thoroughly investigated in his paper though he has achieved the accuracy of raising ISO issues at the global

³ *Supra* note 1 at pp. 38-59.

⁴ Pursuant to Article 13 para 1, see Ministerial Decision on Review of the ISO/IEC information centre publication and decision on proposed understanding on WTO-ISO standards information system.

platform. It could be seen through the paper that in many developing countries in Asia, trade considerations seem to play an important role in the use of ISO 14001. In these countries, governments and companies are concerned largely with the perceived adverse trade implications of not getting certified. ISO 14001 might be looked from the perspective of a barrier to trade for companies that find it difficult or costly to obtain certification. The article also gives the other side of the story wherein companies want to use environmental standards to improve their environmental performance for obtaining economic benefits and also for improving trade or to enhance their corporate image. Notwithstanding the Korean evidence by the author that might boost his argument on different reasons for using ISO 14001, generalization on case-to-case basis does not look sound as far as developing or least developed countries are concerned. The division of reasons for ISO certification into three categories, *firstly*, environmentally sensitive industries (e.g. chemical industry) seeking to improve their environmental image; *secondly*, export-oriented industries (e.g. electronics) preparing to deal with potential trade barriers; and *thirdly*, large firms committed to maintaining high environmental standards and meeting shareholders' expectations, is credit worthy and appreciable

The idea developed in the paper as to ISO and its *de facto* status as a trade barrier may help India to take pre-emptive steps to mitigate the porcupine structure of ISO standards in the long run. Herein the paper suggests that domestic policies could be formulated to take up such issues at ease because national policies play an important role in preventing ISO 14001 from creating barriers to trade. This could be effectively done by formulating priorities based on objective information and analysis so that future problems in relation to ISO could be settled with impunity. Though writer points out on identification of baseline policies for developing infrastructural requirements in the developing countries in case ISO becomes customary international trade standard for export, yet the paper fails to consider the other side of the story that is, why not national standards be taken up by the government for approval of the WTO to act as the sufficient certification standard for exportable commodities. The writer is more emphatic on touching

upon the lopsided area when it is said that potential trade effects tend to be a key factor in determining the appropriate timing and sectoral priorities in implementing national standards and promoting the wider use of EMS (Environmental Measures) in developing countries. Anyway, the apprehension of ISO becoming a non-tariff barrier as seized in the paper has substantial reason and the paper attains its objectivity.

Another study on the implementation of ISO 14000 in India by Pranay Lai⁵ has an added valuable empirical basis on the apprehension raised by Rene Vossenaar. His study, based on interviews and some published data, reveals that the response of firms to ISO 14000 certification in India in comparison to other developing Asian countries has been moderate and mostly certified firms in India are private firms with domestic and captive shareholding and local management.⁶ He observes that by and large, Indian firms of comparable size and investment, generally, exhibit better environmental performance as compared to foreign-based Trans-national Corporations (TNCs) operating in India. He highlights that efforts and energy spent in compliance with ISO standards leaves little room for innovation, product and process stewardship and enhancing environmental and overall performance. This requires policy intervention so that ISO certification procedure must be made industry friendly. Firms in India are aware of the fact that environmental costs of production are high and will increase in the future owing to export regulations and external pressure that falls on the entire industry. But different players are affected differently. So asking the industry as a whole to tackle the environmental issue with ISO certification might amount to a 'bull in china shop'. Looking at the entire gamut of ISO certification and future of Indian industry *vis-a-vis* governmental policy the writer seems to be correct in his observation that quantification of trade benefits owing to ISO certification would be a premature conclusion.

⁵ *Supra* note 1 at p. 60-76.

⁶ According to this survey, most PSUs (14 of the 23) have sought the ISO 14000 series certificate to improve their corporate image in the global market. The other nine Companies reported that ISO 14001 certificate would bring them some regulatory relief. *Ibid*, 62.

Vijay Sharma and Veena Jha in their joint article⁷, highlight the indirect portfolio investment consequences of high concentration of technological leadership in a few developed countries with some regions. Further more a warning on diffusion parenthesis in the light of trade and environment is also forecasted owing to paucity or ill equipped market, inadequate skills and poor infrastructures. However, the projection put forth in the paper in relation to an equitable sharing of the global environmental space and its consequential proportionality with equitable sharing of global economic resources does not hold ground because equity has never been the basis of Multilateral Agreements. The better deal in such situation could be reinforcement of Principle 7 of the Rio Declaration coupling with it a mandatory technology transfer regime administered through Multilateral Environmental Enforcement Agency (MEEA) instead of calling for common but differentiated responsibility under the Rio Principle. However, the authors seem more vigilant on rhetoric of environmental considerations, which increases the challenge of international cooperation in environmental policy making. These authors seem to be too ambitious when they rope in 'principle equity' by way of corporate and social responsibility so as to make Foreign Direct Investment (FDI) work for sustainable development and equitable reward for traditional and indigenous knowledge.

Next in the line is Ghayur Alam's investigative study⁸ that explores the link between Intellectual Property Rights (IPRs) and India's access to environmentally sound technologies. He has looked into international conventions like Convention on Bio-Diversity (CBD), Montreal Protocol, and Convention on Climate Change (CCC) to identify that in most of the cases, the relevant technologies have been developed and are owned by firms in developed countries, and have to be imported from these countries. That is invariably a difficult and costly affair, unless developing countries have been assured of preferential transfer of Environmentally Sustainable Technologies from developed coun-

⁷ Supra note 1 at p. 19-36.

⁸ supra note 1 atp.78-124.

tries. His paper implicitly refers to the cost of Intellectual Property (IP) involved in suitable technology transfer needed for meeting environmental standards.⁹ The writer also creates doubt on the efficient adherence to international commitments in light of Montreal Protocol. He refers to unhappiness of Indian firms in relation to Montreal Fund, which failed to facilitate the transfer of technology on reasonable terms. Alam refers to the Convention on Climate Change and also the constraints on India's developing and importing, energy efficient and environment friendly technologies in industries. He categorically emphasizes on boiler technology, which reveals the limitation of the study in order to develop a generalization on the shortcomings of CCC, although remarks could be envisioned in his paper on other technologies relevant to making the power industry environment friendly. Heavy reliance on India's manufacturing of power plants on foreign technology opens up the pandora box wherein environment friendly technology and IP cost in technology transfer could be more meticulously analysed.

It could be seen through his paper that almost all the new plants built globally during the 1990s incorporate generally environment friendly technology. The concern of developing countries is the high cost of technology transfer and difficulty in pricing. This paper indicates that the role of IPR is predominant in preventing Indian firms from imitating or developing protected technologies and components.

⁹ Referring to Montreal Protocol the study shows that in the case of Hydrocarbons (HFC, 134a), foreign producers contacted by Indian firms showed no interest in transferring technology. The reason for such non-action has been largely protectionism practiced by these firms in order to disallow and prevent the entry of newcomers owing to high intellectual property stakes in development of such technology. He adds up that by reiterating the HFC 134a production technology as process patent the bargaining power of the owners has become very strong. It acts as entry barriers so that the technology owners can have the monopolistic edge. In order to mitigate such situation his reference to a project to develop HFC 134a technology indigenously by the Indian Institute of Chemical Technology (IICT) in 1991 opens up hope and means to counter hardship of intellectual property cost in transfer of environmentally sustainable sound technologies. *Ibid*, pp. 81-85.

His reference to CBD touches upon yet another sensitive and vital area of global concern precisely in relation to developing and least developed countries having particular reference to transgenic plants and biotechnology. Owing to the importance of biotechnology and transgenic plants an apprehension is raised that it is unlikely that firms having the expertise will be prepared to transfer technology to developing countries. He asserts that while some of the leading biotechnology firms have entered India in collaborations with local firms, the arrangement does not normally include transfer of technology. The arrangements merely provide for the marketing of transgenic plants developed by the foreign firms. The reason for such apprehension is that most of the technology owners in these industries are also the producers of plant and equipment and they are likely to be unwilling to transfer technology because of the reason of losing market stake. This could be seen as an aspect of liberalized and open economy, which the writer has not deliberated upon.

The paper, however, fails to lay a policy option on this issue in the wake of multilateral commitments under the WTO. The writer states that in the past, when import of cement and power plants to India was restricted, these firms saw technology transfer as the only way to benefit from the Indian market. It would appear that the writer providing an option of closed market to induce technology transfer indicates a major drawback in appreciating open market and comparative cost strategy of liberalized market regime. Another generalization appears in the paper on the aspect of product patents. The writer asserts that process patents do limit the number of potential technology suppliers and it can be inferred that these patents have added to the difficulties and cost of technology import by Indian firms. But the other side of the story is equally material because such IP regime does not prevent Indian firms from developing technologies indigenously.

The study proposes setting up of a technology development fund that should finance the purchase of intellectual property rights, so that developing countries will be free to develop and use proprietary technologies. But it is also true that a Technology Development Fund cannot entirely meet the requirements of

indigenous technology development efforts. One more option could be to allow growth of competition among the suitable technologies by vigorous liberalization and market development. A competitive market has the potential to bring down cost of cutting edge technology owing to demand and techno-superiority required to sustain in the market. Another suitable option could be to find out necessary policy options through governmental deliberation at the level of Multilateral Agreements on Technology Transfer under the auspices of World Trade Organization.

Another connecting article on *FDI and technology transfer* is by Ashok Kumar Mahopatra¹⁰ who examines joint ventures with public sector companies. Herein he identifies Joint ventures (JVs) as important vehicles for technology transfer and FDI. In comparison to Alam's study this study favours liberalized cooperative economy, which brings easily technology and FDI. This study examines the issue of environmentally sustainable technology transfer through JVs and its possible consequences. This paper touches upon quality issues of technology conception, its distortion and further proliferation, which are based on the capacity of the recipient industry.

It may happen that technology transfer could be blocked for the reason that the recipient industry is not competent to utilize the technology or has no capacity to sustain the user of such technology. The writer identifies such issues to elaborate possibility of environmentally sustainable technology transfer regime. He highlights that the leading global technology holders have not agreed to transfer technology to certain Public Sector Enterprises (PSEs) in the past, even under technical collaboration agreements, until they established their technology-absorption capacity. Furthermore the reason of JVs as identified by the writer is predominantly technology transfer, he puts up the case of public sector companies who seek to form JVs principally for the purpose of getting higher technology, and they seek the best technology-

Supra note 1 at pp. 125-157.

givers. The writer has examined three cases in relation to companies that were technology leaders in their respective fields.¹¹

Looking in contrast to earlier paper¹² this paper harmonizes the need of 'new and cutting edge technology' with the market opening up, in which role of market becomes appreciable in bringing quality technology in JVs without the rigours of intellectual property and allied considerations. The study concludes by providing a sound policy option, which states that the JV favours the technology giver in the transfer of technology and equally meets the need of recipient industry. The Policy option for the government is that the Government adopts policy measures that mandate the JV to transfer technology to local companies. However, it is important to appreciate that in order to get state-of-the-art " technology transferred to a company in a host country, capacity must be built up otherwise the host country may receive garbage and obsolete technologies, which might not be environment friendly.

Under what circumstances investment strengthens environmental standards and when can the issue of environmental standard hamper investment? Answers on such issues are investigated by Veena Jha, editor of the book, in her article¹³ wherein she

¹ The first case deals with a system related technology concerning Plant Performance Improvement (PPI) programme. In the last two decades, the thermal power plants so designed and manufactured with this company's technology forming the backbone of thermal Power generation in India. The domestic partner has a widely acclaimed capability to absorb, modify and innovate on foreign technology. The technology transfer from global technology leaders to this domestic partner was facilitated by its high absorption capacity. In this sector, the foreign firm transferred the latest technology to the JV. The fact that the MNC (Multinational Company) was using the same technology elsewhere proves that the latest available technology is being used by the JV. Subsequently in two further cases the writer has tried to establish the hypotheses he conceptualised in relation to technology transfer and JV. The third case which relates to government collaboration in automobiles reveals that role of the market also becomes important in order to attract environmentally sound technology to fall in the JV. *Ibid*, at pp. 132-135 & 145.

¹² *Supra* note 8.

¹³ *Supra* note 1 at pp. 158-176.

examines the possible link between investment liberalization and environmental performance. The question that is examined by this paper is whether TNCs are spreading environmentally beneficial practices to the local industry and whether their practices are leading to comparable local firms adopting better environmental standards and performance. Although the writer has not followed the econometric analysis to investigate the question but a number of environmental concerns have been voiced about the operations of TNCs. Referring to Civil society's concern she points out that NGOs believe that given the high fiscal deficit as a proportion of total GNP, the government of India would be reluctant to control the operations of TNCs, thus, leading to ecological disasters. However, empirical studies indicated that it is difficult to generalize the environmental behaviour of TNCs.¹⁴

The study concludes that environmental practices of TNCs in India have so far had both negative and positive effects on the environment. TNCs are expected to generate higher standards of performance with respect to environment. The Civil Society such as community groups, grass-root NGOs, voluntary organizations can only work better than Government if they play the watchdog role for TNCs to strictly adhere to environmental compatible technology. It is true that overall environmental performance of TNCs is difficult to judge. This could in part be attributed to the fact that cases of environmental violation generally receive more publicity than positive practices. Environmental performance of TNCs is not uniform across borders, partly because environmental standards are not uniform across borders.

¹⁴ The most striking positive examples are the activities of TNCs in environmental services such as the provision of solar power, waste management and water cleaning projects. TNCs have also been active in testing and certification, including certification for environmental management. There is however, an equal number of, if not more companies which were violators of environment. TNCs have had a much more decisive influence in setting voluntary standards rather than mandatory environmental standards. *Ibid.*, pp. 165-167.

¹⁵ After the inception of the WTO and concerns arisen in *Tuna /United States-Restrictions on Imports of Tuna (Tuna/Dolphin I)*, GATT B.I.S.D. (39th Supp.) at 155 (1993) (unadopted); *United States -Restrictions on Imports of Tuna (Tuna/Dolphin II)*, DS29/R (June 16, 1994) (unadopted); and *Hormones*

The article by J. Bandyopadhyay, R. Sengupta, A. K. Sinha and S. Chaudhuri¹⁶ questions the concept of environment friendly products and its intricate linkage in the market economy. Notwithstanding the commendable consumer trends towards green products, there is a constant apprehension in developing countries that, the emergence of international environmental standards of not only products but also production processes and methods, would mean an imposition of the environmental standards of the North on the South. Besides being costly, this could reduce market access for the export products from the South. An important principle underlying the emerging world trade regime is increasing market access. It is in the background of the emerging and complex relationship between international trade and environment that the discussion on market access and environment friendly products should take place. The study makes a case for promoting the diffusion of biotechnology based environment friendly products, especially in agriculture and food technology, environmental biotechnology and industrial biotechnology. Biotechnology has developed options of using renewable plant materials for obtaining several industrial raw materials, which can replace similar raw materials, like, petroleum derivatives. In terms of pollution intensity, bioprocessing is introducing products or replacing processes, to reduce the pollution intensity index of the existing products. The major contribution of biotechnology is not in developing the final products as such, but in developing eco-friendly processes. The study concludes by stating that faster penetration of market by such eco-friendly biotechnology products and processes may also demand review of IPRs and patentability of genetically engineered life forms.

Yet another connected matter of international trade and growing concern for environment could be seen from the initiation of

(WT/DS26, WT/DS39, WT/DS48 also WT/DS58, WT/DS61; cases, it has been a consideration all around the world to identify a most effective mechanism, which facilitates promotion and proliferation of environmental considerations and sustainability without hurting international trade. ¹⁶ *Supra* note 1 at pp. 175-189.

*Gasoline*¹⁷ case. It is seen now that market access could be denied in the guise of eco non-friendliness. At the level of Multilateral Trade Negotiations, such things have not yet been conclusively crystallized but these might be used as a non-tariff barrier to trade. Such concerns could be identified in the paper written by Atul Kaushik and Mohammed Saquib¹⁸ wherein they argue that developing countries are more vulnerable than the developed countries to the adverse effects of environmental measures on market access and competitiveness. Environmental policies, standards and regulations can have varying impacts on the competitiveness of developing and developed countries. The effects on Small and Medium Enterprises (SMEs) are particularly significant, on account of the significance of the sector in exporting goods.

Studies show that in certain sectors, existing market access is being eroded on account of environmental measures or on apprehension of such measures. The cost of compliance may be high. The study lists a number of factors, which have resulted in market displacements in the fisheries sector. In the case of spices, different quality standards for export and domestic products add to the problems.¹⁹

India needs to face this challenge and improve the environmental safety measures of its exportable goods. One possible way is to tighten control over the export of products not meeting standard, by cracking down on exporters who ship such products. An intensive exercise should be undertaken to study indigenous processes and their effectiveness for product quality, safety and

¹⁷ See generally World Trade Organization: Report of the Panel in United States-Standard for Reformulated and Conventional Gasoline and Like Products of National Origin, WT/DS2/R, Jan. 29, 1996, & World Trade Organization Appellate Body: Report of the Appellate Body in United States-Standards for Reformulated Conventional Gasoline, WT/DS2/AB/R, May 20, 1996.

¹⁸ *Supra* note 1 at pp. 190-294.

¹⁹ For example (Hazard Analysis Critical Control Point) HACCP requirements assume that there is only one standard both for exported and domestic food. It does not contemplate the situation in India, where the standard and regulatory agencies are different for imported and domestic food.

standards . The technology that has been or is now 'imported' for adoption here should be tested so as to be compatible with standards expected. Thereafter, if the exporters face market access problems, 'equivalence' should be negotiated with the trading partner(s) in that market.²¹

In conclusion this study states that HACCP creates virtually prohibitive cost for the small and medium scale sector. Where standards in India differ from standards in the buyers market, equivalence may be attempted, particularly where harmonization is not possible because of domestic constraints or where foreign standards are unsuited to local conditions. Even in the case of exports of environment friendly products, non-tariff barriers may be a major constraint. Quotas (for example, on mushrooms) and price preferences to competitors are relevant issues for the Government to take up with concerned foreign governments for redressal, particularly where the export of environment friendly products could provide India a 'win-win' situation. So the study suggests that there may be several non-tariff barriers for products, which comply with environmental norms, and these need to be redressed too.

Appreciating the book in its present form is not too difficult a task; identification of contemporary issues in the wake of Cancun Ministerial conference and its failure is an attempt to kill two birds with one Stone. At one level the book identifies the rigours of

This is what author suggests; see WTO ministerial decisions on application of environmental standards to get an opinion that unless negotiated under the framework of Multilateral Environmental Agreement it would be hard nut to crack for the National Governments, see also: Decision on Proposed Understanding on WTO-ISO Standards Information System and Decision on Review of the ISO/IEC Information Centre Publication.²¹ Several exporters also point to the fact that these standards may be *de facto* non-tariff barriers to trade. As for example, peanut exporters feel that developed countries put non-tariff barriers on their exports of agricultural products in order to bid down prices of imported products. Exporters may be forced to make distress sales when buyers refuse shipments, based on domestic import standards. Each test costs Rs.6000 or US\$120. The implementation of the European Union (EU) Commission's proposals would endanger the export of peanuts to the EU member countries. *India*, at pp. 217-220.

various environmental related issues and at the other it succeeds in formulating a suggestive pattern of policy options for the policy makers in developing countries more precisely India.

The editor of the book under review in her concluding and recommendatory remarks shows an immaculate editorial capability of a person well versed with the subject. She feels that FDI inflows and sustainable development have a generic linkage with the trade development of any country. She asserts that apparent inconsistencies perpetrate through multilateral trade agreements under WTO unless environmental considerations are symmetrically maintained through technology transfer. The concluding observation has touched upon very hot issues, which might have a relationship with friendly environment and trade development. Although not much has been said in the book relating to traditional and indigenous knowledge acting as species of the genus trade, development and environment, yet issues have been raised.

The book has tried to obtain a synergy through identification of issues and making a claim as to proliferation of policy guideline. But one may find that the essays appearing in the book end up as essays without any fruitful policy outcome which could be tested on regional parameters of development. All in all, the entire book offers deep insights to most of the trade and environment problems of the Indian economy. In view of the importance given to environment in the Doha Development Agenda (DDA) and the post Doha work programme in the light of the failure of Cancun conference at the WTO, this book would be most useful to negotiators, the civil society and to other interested groups including academia and researchers.

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