

fits in. While it is excellent supplementary reading for the undergraduate, there is still a need for a comprehensive text book that explains the various aspects of environmental economics with clarity and continuity which is almost impossible to expect from an edited volume with contributions from various authors. One wonders whether the intent was that this book be supplemented by Kolstad, 1999, another Oxford publication, or some other similar book in which case a lot of the theoretical discussion in this book would appear superfluous.

References

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Runa Sarkar

India's Environmental Policies, Programmes and Stewardship, by O. P. Dwivedi. Macmillan (London). Price : 45 pounds sterling, Pages : 235

Dark skies, acid mist, masked people...these are not images from some Sci-Fi movie but a reality that awaits us round the corner. All is not well with the state of environment today and our natural resources are fast depleting. In such a scenario one of the most important players is the State. The most important tool in the hands of the State is regulation. India has floundered when it comes to regulation, in any field, including environment and natural resources. It is therefore time for us to stop and take a critical look at the present situation and this is what Dwivedi's book tries to do.

Though the essence of Dwivedi's book is directed towards regulations, it also ventures into other esoteric topics like religion. His obsession with Indira Gandhi is a minor irritant that can be forgiven. Overall the book is an easy reading.

In this review, I first look at the structure of the book. Next, I plunge headlong into regulation. I try and gather some key points in this regard. Then I look critically at some of the arguments against the developed nations. Finally, I look at stewardship and religion. I have tried to put in some of my thoughts as to how these affect regulations.

A word of caution is in place here. Though from time and again I have tried to use some parody to criticize some aspects in the book it should not be mistaken as my point of view. I am just trying to demonstrate the kind of thinking that might lead to inapplicability of the suggestion the author makes. It is important that as environmentally conscious people we also try to understand what sort of argument the other side may present. It will only help in refining our arguments.

The book has four parts. The first part is titled "Managing the environment : institutions, policies, programmes and impediments". This part occupies more than half the book and also contains discussion about regulations. The second part is about "India and international environmental issues". This is where most of the arguments against the developed countries come in. The third part talks about "Environmental stewardship". Some very interesting insights into links between environment and religion are provided in this. The fourth chapter is about "Environmental challenges". This section is a sort of summary where the author tries to examine some solutions.

The four sections do appear quite disparate, with the first part being the most relevant. One reason for this structure might be that the author starts of with the micro-level things that affect an individual and the firm. In the second part, he takes up a broader, international level. In the third section, he takes

a semi-philosophical standpoint, a standpoint that some may argue is broader than the universe itself. Finally, the author concludes with his own take on the whole issue.

It is interesting to note that the author has missed out an opportunity to keep institutions as a common thread between the first three parts. Though institutions do keep cropping up time and again, this does not achieve any continuity within the book. In the first part, the author looks at the state and the parastatal institutions. In the second part, he looks at international arrangements, institutional frameworks. In the third, the author tries to outline religion as an institution for bringing change in the mindset. In the fourth there is actually a chapter on "Improving organizational effectiveness and accountability for environmental management". Continuity is something the author does not seem to have given much thought to. Even within the parts, each chapter appears to be independent from one another.

The setting up of the National Committee on Environment Planning and Coordination (NCEPC) in 1972 was probably the beginning of serious efforts towards bringing about an institutional framework for protection of the environment. At that time it was recognized that probably "poverty was the biggest polluter." The aim of NCEPC was basically to provide an overall improvement in the quality of life by improving the environment. NCEPC and many other institutions, regulations and policies have come into existence in India due to some external pressure. This time it was the UN Conference on Human Environment (1972). India had to set up a committee in order to prepare reports on the status of its environment, to be presented at the conference. Pitambar Pant who headed the committee responsible for preparing the report was also the member of the planning committee. The Fourth Planning Commission realized the need to establish NCEPC. Probably, the most significant achievement of NCEPC was to get the article 58A in 1976. According to this amendment, "the state would endeavor to protect and improve the environment to safeguard the forests and wild life of the country". But the significant word in this context is the word 'endeavor'. We all know how a bureaucratic machinery in India tries to "endeavor"!

I have already used the word 'committee' more than any other word, this in a way points to the continuing lacuna in India's policies. A familiar policy response to any negative situation has been to set up a committee. But there were some permanent bodies also in the pipeline. In November 1980, the Department of Environment (DOE) was set up as a response to the recommendations of the Committee for Recommending Legislative Measures and Administrative Machinery for Ensuring Environmental Protection. DOE was made directly accountable to the Prime Minister. In January 1985, the Ministry of Environment and Forests (MEF) was created. The aim was to bring all natural resources into the administrative fold of one ministry.

Dwivedi terms it the 'Green justice', but I can assure you that no other country will turn green with envy if they take a look at our set of laws on environment. They are all *ad hoc* and piece-meal in approach. The set of environmental regulations in India looks more like a collage that makes no sense. Clearly, the regulations themselves have to be 'regulated' in some sense.

Dwivedi points out two flaws in our regulatory process. In the field of environment, science and technology will form the basis of any regulation but equally important is the need for establishing a social context for it. In India, this is missing, along with the fact that implementation and enforcement are very lax.

The first significant act was the Water Act of 1974. This probably was in line with the thinking at that time. The basic human living conditions had to be modified. It is interesting to note here that the main pressure for passing the act, which was introduced five years before in 1969, was the critical level urban pollution had surpassed. It was not essentially a pressure from industrial pollution. Not that industrial pollution existed but was not visible or politically threatening to the lawmakers. Another problem that it faced was with respect to jurisdiction. Water is a 'state subject'. India's federal setup has been a good excuse for passing the buck rather than decentralizing decision-making. It took some years and effort to convince two thirds of the states to sign the act, without which it could not have been passed in the Parliament.

The definition of water pollution is very comprehensive in the Act. It defines water pollution as 'such contamination of water ... or such discharge of any sewage or trade effluent or of any other liquid, gaseous, or solid substance into water (whether directly or indirectly) as may, or is likely to create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to life and health of the animals or plants or of aquatic organisms'. Legalese is not for mere mortals like me. It took me two readings to just make sure that I had copied the whole thing right. It took me three more to understand what it meant. Now we know why it takes such a long time to get justice in Indian courts. Interestingly, they have brought into fore varied uses, domestic, commercial, industrial, agricultural and the rest have been bracketed under legitimate uses. This points to the knowledge that it is not just the direct health risk to human but also other indirect risks can arise.

Central Board of Water Pollution Prevention was formed by this Act. Since water is a state subject the board had two divisions, one for national level and another for the state. Among the mandates given to the national level board were :

- To coordinate the activities of the state boards and resolve disputes among them
- Provide technical assistance and guidance
- Carry out or sponsor research
- Set standards for streams and wells
- Advise central government
- Create environmental awareness

This pretty much indicates the lack of tooth. The board had no role in enforcement. It was more like a conscience keeper, where none existed. For the state level board the mandate was :

- Planning and instituting programmes for prevention, control or abatement of pollution in streams and wells
- Inspection of sewage or industrial effluent, including municipal plants for the treatment of sewage and trade effluents
- Setting standards for discharge of sewage and industrial effluent

In a later chapter, Dwivedi does point out the institutional failures with respect to the pollution control boards (both air and water). But he falls short of using this as a common thread for his arguments. It can be seen that the failure of every act, policy or regulation can be linked with some institutional irregularity. In this case it was like any other board, with the added complexity of two levels.

In India state-capture is very rampant, it was so even in 1974. What is required is a mechanism to minimize this. Dwivedi does hint at one possible solution when he talks about the failures of the Water Act, 'the act failed to establish an independent revenue base for the boards'! One way in which state-capture can be minimized is by linking the performance and the incentives of the board directly to the revenue stream (primarily the fines imposed). An accountability structure where any fine imposed can be traced back to a single authority and it can be challenged in court will be the counter incentive. Also required is a strong vigilance mechanism. The national board can perform this. The essential idea is this, any enforcement agent will have a cost and benefit matrix. On the cost side is the punishment an agent gets when he is found guilty, the monetary loss he incurs by being corrupt and threat to future employment and social status. The benefit is that of easy source of income by being corrupt. If the monetary loss incurred due to corruption is sufficiently increased then being corrupt might just become too costly. In most cases proving that pollution has been caused by an industry is easy. The discharge and its effects will not disappear overnight. So the enforcement agent will not be afraid that his efforts will go in vain.

It is not to deny that Water Act was significant, inspite of its many flaws. A few other very significant acts followed. The Air Act of 1981 (wonder why they took so long to realize that if water has been polluted, so is also air). This Act was similar to the Water Act, with two levels of board et al. It was almost as if they had run 'a replace all' macro in MS word, replacing the occurrence of the word 'Water' with 'Air'. The big difference is that the Air Act has a provision by which government departments and agencies can be prosecuted for offences under the Act. But the flip side is that officials could escape under the excuse of not having personal knowledge of the same or that they had carried out due deligence to prevent the same. Another impediment, which got aggravated when MEF was formed, is the step motherly treatment that the other government ministries and departments were meting out to the environment boards. In such a circumstance, the MEF or these boards will not do anything to further aggravate their situation vis-à-vis the other ministries and departments.

In James Gleick's book *Genius : The Life and Science of Richard Feynman* there is an interesting mention of the Bhopal gas tragedy. Feynman was the head of the committee that investigated the disastrous launch of the space shuttle Challenger. Gleick describes this disaster as the second most horrifying man-made disaster. No points for guessing the first. Hence it comes as no surprise that Dwivedi has often used this example for illustration. Even our policy makers were forced to come up with the Environment Protection Act of 1986 after the Bhopal gas tragedy. But what Dwivedi and our policy makers have equally failed to recognise is that these are one-off incidents caused by human negligence. It is much more important to recognize the basic human need for economic activity that causes pollution. The policies should be sensitive to this and not a knee jerk reaction to disasters.

There are a host of other acts and policies like the Forest Conservation Act of 1980, National Forest Policy of 1988, Wildlife Protection Act, Factories Amendment Act, Central Motor Vehicles Act etc. But as I have mentioned earlier, they all highlight the lack of any clear-cut strategy on the part of successive governments at the Center.

Among all these various Acts that Dwivedi examines and provides his inputs, he has missed out those regulations and Acts that indirectly affect the environment. It can always be argued that a plethora of Acts can have some form of indirect impact on the environment, but what can be instructive is to observe that while a very plausible cause exists for reviewing the environmental impact the Act can cause, it is still not done. It is not in the conscious aim of the policy makers to integrate environmental concerns into the policies.

Dwivedi also fails to make the reading much more interesting by using cases. The only full fledged cases are given in the appendix to chapter 4. There are three cases, viz., The Taj Mahal case, Ganga pollution case and the Oleum gas leak case of Delhi. Especially for the part on regulations, more cases and examples would have been better in illustrating the effect or the lack of it due to the policies.

Arguments about developing countries imposing restrictions related to environment are very familiar in India's recent socio-economic literature. Dwivedi is also not far behind. But as in other arguments about this subject he appears to miss out on some crucial points.

Culturally, we are very bad polluters. Though we may not have become so industrialized to cause harm to the environment to the extent that a developed country has, we still lack the 'Environmental Ethics', so to say. Dwivedi also argues about the 'Environmental Ethics', but he does it in the context of globally agreeable policies. He fails to administer the same dose to our own people. How often do we not see buildings disfigured by graffiti, by posters of movies! A very regular feature in urban areas is that of a man discharging his urine on a compound wall. My argument is that we tend to get into this 'developed countries responsible for everything' argument and miss out on criticizing our own habits. Every so often we see beautiful modern art on the walls of a public building. If some one wonders why they are all in red then the answer is the source, 'pan'! A lot of our historic monuments and even

trees bear testimony to immortal love stories, by the names carved out on them. Defacing and vandalizing come almost instinctively to us.

Another point about the West imposing its standards has been proposed even with respect to other non-trade barriers like child labour. Whatever might be the motivation of the West this actually gives us a great incentive to change ourselves. The pollution and inefficiencies in our industries is more due to the import substitution and lack of enforcement mechanism than due to some ploy by the CIA. Now that the West has started imposing their standards on us we might as well improve. But as Dwivedi argues there might still be need for asking the West in assisting us with respect to technology and some investments.

The Third part entitled "Environmental Stewardship" is an interesting section in the book. Dwivedi quotes the New Testament to define stewardship.

And the Lord said, Who then is that faithful and wise steward, whom his lord shall make ruler over his household...Blessed is that servant, whom his lord when he cometh shall find so doing...For unto whomsoever much is given, of him shall be much required (Luke, 12, 42, 43, 48).

So man is seen as the steward for God's creation called nature. Though I may not subscribe to the view of a God appointing us, I do subscribe to the view of us being the steward. Being more capable and more intellectually mature creature than any others on this planet it is in our own interest to take up the role of a steward.

Dwivedi goes on by giving examples about how the major religions of earth have taught conservation of the environment. He also gives examples of how the Bishnois have protected nature as if it is a goddess. He also gives the example of the chipko movement where deforestation was prevented by people hugging trees. The essence is that Religion has always taught mankind to revere nature and look at it as god's creation, not as a source for its exploitative wants.

All in all, the book makes an interesting reading. Though this write-up highlights many shortcomings it is probably because Dwivedi tries to cover a lot of ground without going into the depth. So we get a bird's eye view of the environmental concerns. The part on regulations is quite informative. The author has dedicated quite a lot of pages to explain the salient features as well as failures of many important regulations and policy matters. As I have consistently argued, the author has given some strong arguments on the institutional breakdown but has failed to use it as a common thread for the book.

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Changing Environmental Scenario of the Indian Sub-continent
by Subhashranjan Basu (Ed.) Kolkata : acb Publications (2002), pp. 469,
Rs. 1050.00

The very first thing that draws the attention of a reader is the title of the book, which the editor Subhashranjan Basu has chosen very successfully. The title motivates not just researchers but policy makers and academicians to have a look at this book, addressing critical environmental issues. As we well know, even in the dawn of twenty-first century, after all possible efforts to tackle the problem of environmental degradation the problems still persist. This unchanging situation has raised a demand mostly among academicians and policy makers to educate the general public about environmental issues so that they can understand them better. Making the government conscious about environmental issues so that it frames laws to prevent further degradation could only be useful if masses were made equally conscious.

The book consists of articles and cases from India in general and West Bengal in particular addressing various broad environmental issues. It highlights the