

The Scope and Target of Education for Sustainable Development

Prabha Panth*

Abstract

This paper focuses on the scope, methods of dissemination and the target of Education for Sustainable Development (ESD). It argues that ESD should not be mere information sharing, but should be aimed at educating those who can fabricate a sustainable future. Since environmental crises are being increasingly felt in every field and sector, it is necessary to concentrate on imparting ESD to those who can bring about environmental improvements immediately.

The role of ESD in the short and the long run is examined with a view to identifying and targeting the group that can best bring about Sustainable Development (SD). The paper points out that while Environmental Education (EE) can be envisaged as formal and informal education, the latter is more relevant to ESD. It also discusses the various difficulties that may be encountered in the course of reaching out to the target audience.

* Osmania University, Hyderabad

p_panth@hotmail.com

Introduction

According to Fein, “Education for Sustainable Development has come to be seen as a process of learning how to make decisions that consider the long-term future of the economy, ecology and social well being of all communities. “Capacity building for such future-oriented thinking is a key task of education” (Fien, J. 2003)

ESD denotes a shift from mere theoretical discussions of environmental problems, to pragmatic solutions that can lead to SD. For this, the task of achieving SD has to be shared by all sections of society—not just the Ministry of Environment, or international environmental bodies. No single unit can take on the tremendous responsibility of achieving SD by itself, for it requires the concerted and urgent efforts of many agents, and a sea change in the type of development (Rao, 2001).

This paper focuses on the scope, methods of dissemination and the target of ESD. ESD is not mere information sharing, but should be aimed at educating those who can fabricate a sustainable future. Since environmental crises are increasingly being felt in every field and sector, it is necessary to concentrate on imparting ESD to those who can bring about environmental improvements immediately. Also, as there is government expenditure involved in imparting ESD, it should be directed at those sections of the population that can make the maximum positive impact on the environment.

The Scope of ESD

Since the objective of ESD is to achieve SD, it is necessary to first of all identify areas where unsustainable methods of development are being practised. This would help to target the key areas where the concerned population should be educated to change their activities, and so achieve SD. Unlike the present policy of merely stopping the production or consumption of environmentally damaging goods, ESD has to educate the public about alternative, safe methods and to direct them to green and sustainable technologies and commodities. Both the environment and the economy have to be taken care of—ESD should show how economic variables such as national income, employment, output, consumption, poverty, etc. can be tackled along with environmental protection.

Therefore the aims of ESD should be

- Educating the public, decision-makers and consumers about the hazards of continuing on the present environmentally dangerous path. For this it is necessary to devise different methods of putting the message of SD across to different sections of society.
- Educating them about the alternatives that they can use, so as to assure a sustainable future for themselves and their children. Policy changes and modifications to create incentives to make green technology and goods cheaper and available to all, must be devised.
- Identifying and promoting SD activities, green technologies and goods, by educating the public about their uses. Economic incentives to publicise such activities should also receive importance under ESD.

ESD should be targeted towards:

- Decision-makers who introduce environmental changes that can bring about SD.
- Administrators who supervise the change-over to SD.
- Participants or those who actually implement the environmental regulations at the ground level—industrialists, farmers, miners, town planners, etc.
- Consumers who through change in their demand patterns influence production shifts to SD.

ESD vs. EE

EE is a slow and hierarchical form of formal education, building the base of environmental knowledge from the school level onwards. In economic terms it can be called a 'lengthwise approach'.

However, EE cannot immediately achieve SD. Environmental crises are imminent, and the time to act is now, through ESD. Emphasis has to be given to the *immediate* spread of education and awareness of environmental impacts of various activities, so that countries and communities can take a detour to a safer world. For this it is necessary to identify those decision-makers who can contribute the most to change, from the education and the information they receive. That is the crux of ESD, and this is how it should differ from conventional EE. ESD should be imparted to those sections of the society where it will generate the maximum impact and stimulus towards initiating SD. Since ESD involves expenditure on the dissemination of environmental knowledge, the returns to it have to justify the expenditure. 'Returns' here means the introduction and continued growth of environmentally friendly and safe activities conducted by the different groups who receive ESD¹.

So, while EE is directed to formal education, ESD is directed to informal education, awareness campaigns, technological education, etc. Let us now look at the differences between the two, and the advantages of ESD in bringing about SD.

Formal

EE is usually assumed to be of the formal type—starting from school and going up to college and university levels. This will certainly help in building entire generations of environmentally savvy youngsters, making them aware of the environmental problems of the world. However, from the point of view of its usefulness in ushering in SD, it will not help in the short run so, formal EE cannot be equated with ESD.

School education

- Formal EE at the school level is a long-term investment, which will bear fruit if and when a child attains a position of authority and is thus able to use his knowledge. With 10 + 5 years of school and college education, and another 20 years before the child can achieve decision-making status, a full 40-45 years would have passed. By then it will be too late to save the environment.

¹ It would be interesting to construct a cost-benefit analysis of EE to find out where its impact will be felt most in achieving sustainable development.

- Another reason why formal EE in schools is not of immediate help for SD is that children are the victims not the saviours of the environment. Therefore, it is necessary to take steps to save them from environmental impacts right away. Educating them about environmental problems is futile, unless they want to know the cause of their asthma or why the beautiful birds and flowers that they had seen in their childhood have become extinct.
- The Ministry of Environment & Forests (MoEF), India claims that it has started about 47,000 Ecoclubs in various schools all over the country, and that the government pays Rs.1000 to each one of them (MoEF *Annual Report 2003-04*, Chapter 8). That amounts to an expenditure of around Rs.47 million per year. It would be interesting to know if this investment is really leading to any benefits in terms of environmental improvements, or rise in environmental awareness, or in introducing SD. Otherwise, it is a dead-end investment, and can instead be put to better use in alternative methods to achieve SD.
- It is naïve to assume that children can control the polluting industries, or stop poachers from killing tigers and other endangered species. Though it is said, “The child is the father of man,” it is naïve to assume that adults will learn from children, or give up environmentally destructive activities at their behest.
- The curriculum in Indian schools is already highly over loaded, and adding more subjects—such as environment, ecology, etc. will impose a greater burden on the children, without fetching corresponding results.

College and University Education

- EE at the college and university levels is an investment that can reap results in the medium term. It can help in building an army of environmentalists, who in the medium term can bring about environmental changes. In this respect, environmental research by doctorate and post-doctorate research scholars can generate data, information and identify interrelationships among different disciplines, and supplement the work of government and international agencies.
- At the college and university level, EE should be multi-disciplinary, and the interrelationship between economic development, technology, political and trade factors, along with studies of ecology, and environmental degradation should be given. Otherwise the study becomes lopsided, and will not provide the students with the full picture. .
- Another problem with college level EE in India is the lack of trained lecturers, professors and research supervisors². But this is a short-term problem, which will disappear in the long run as more trained students can be appointed to teach such courses. In addition, environmental workshops and training programmes for college and university teachers have to be held regularly, to build a core of experts in this field.
- The research in the universities should reach the field of application. Otherwise such

³ For e.g. in the recent Rotterdam Convention on hazardous chemicals, India along with Russia and Canada blocked the inclusion of chrysotile (white asbestos, a well known carcinogen) from the list of banned trade items. The Indian representative was a joint secretary of the Ministry of Chemicals and Fertilisers, who naturally gives preference to chemicals, and not to the environment [*Down to Earth*, Oct 31, 2004].

research is sterile. There should be partnerships between industries, environmental agencies and universities, in order to conduct investigation in key areas of SD.

Informal Education

ESD should be a short-term, result oriented, cross-sectional form of dispersing environmental information, directed towards achieving SD. So, informal education would be more effective in reaching out to the target population. It should comprise of different types of information dispersal, to meet the needs of the diverse groups that it addresses. This could take the form of workshops, training courses, distribution of pamphlets, popularising through the media, advertisements, and interviews.

ESD should be able to point out not only the environmental dangers of various activities, but should also indicate the alternative methods and processes that can achieve SD. Environmentalists are often criticised for being anti-growth, anti-social and anti-establishment. This is a wrong representation, because they do not oppose all growth and development—they oppose only *unsustainable development*, but are *pro SD*. To make it clear to society and the powers that be, ESD should direct its attention to alternative development projects and techniques that are environmentally safe. It should show the diverse sections of society how they can contribute to the achievement of SD.

Types of Informal Environmental Education

Informal EE is the need of the hour, as it can start the process of SD right now. Various types of decision-makers can be identified in different strata of society, who can be instrumental in starting the process of SD. Most of these at present are woefully ignorant about environmental matters, being more concerned about economic development. There are very large numbers of groups that influence the environment. Although it is not possible in this paper to spell out the manner in which ESD can be imparted to all the groups of people, a few of these have been identified here, to give an idea about the type of ESD that needs to be conveyed to them. Also the MoEF, is already training a number of sections of society in its different affiliates, such as the Indira Gandhi National Forest Academy, Dehradun; the EPTRI Hyderabad, etc. But obviously this is not enough, and needs to be diversified to cover a wider circle of decision-makers and operators.

Some of the decision-makers who can be provided with ESD are:

- Ministers

Since ministers are the ultimate decision-makers, they have to be educated about the environmental impacts of their policies. Ministers of Trade, Planning, Industry, Agriculture, Power, Transport, etc. should be aware of the environmental damages caused by their departments. It is unwise to assume that only the Environmental Ministry should take care of environmental matters, and mop up the mess caused by the other Ministries. The responsibility of environmental degradation lies with all of them, and the concerned decision-makers should be aware of the environmental impact that they are causing (Panth, 2004). Inter ministerial transfers are common; a Minister of Environment can be made a Minister of Power and Electricity³, or vice versa. In one role he has to oppose nuclear energy, in the other he will have to permit it! This dichotomy in functions is another reason why the policies of different ministries do not dovetail.

One method by which ESD can be continuously delivered to ministers is to create the post of an environmental officer in each Ministry, whose duty would be to educate the minister about the relevant environmental regulations applying to his ministry.

Administrators

The civil services, departmental heads, staff and other administrators at the central, state, district and taluka and lower levels should be made aware of the environmental dangers of various activities. The MoEF, EPTRI and SPCBs (State Pollution Control Boards) should conduct refresher courses to educate the administrators on SD. Booklets of the international and national environmental regulations should also be made available to them, so that they will know when the rules are being violated, and to enable them to take suitable action. Posts of environmental advisors should be set up in each department. . Industrialists

Although many industrialists, managers and directors of companies are being trained in environmental matters by institutions such as the EPTRI, there still remains a lot to be done under ESD. There have been many such workshops. However, the continued non-compliance of industries shows that they have not been very effective in implementation.

The government's stand at present is to close down the noncompliant industrial units, but such actions affect the economy; and relocating polluting units only relocates the pollution. Therefore industrialists have to be informed about alternative methods of dealing with pollution to ensure that neither the environment nor the economy is affected. Clean production, waste management and recycling methods should be popularised in all industrial belts, and all industrialists should be made to implement them. In this regard, the SPCB should train the industrialists systematically in alternative pollution control methods, and monitor the industries to find out whether they are implementing them or not. They should also be encouraged to undertake research in alternative technology, energy and pollution abatement methods.

Just as at the ministerial level, each industrial unit should also have an environment section, which will take care of environmental matters of the unit. Since SPCBs complain of lack of staff, they could appoint local NGOs who will act as watchdogs to ensure compliance by industrialists.

ESD should be directed towards educating the local people also, about the environmental impacts of industrial units. Although this is mandatory under the EIA rules, it is seldom practiced, with the result that innocent villagers suffer tremendously from industrial pollution. The present policy lets the population suffer from the ill effects of environmental degradation, then forces them to take up expensive litigation, and finally (if at all), penalises the offending units. Instead of taking action against the agitating population, the government should appoint the local people who are affected by industrial pollution and environmental degradation, into supervisory bodies to monitor the environmental compliance of factories.

Agriculture

Most farmers in India have been brainwashed into using chemical pesticides, fertilisers and now genetically modified (GM) seeds. This has led to highly unsustainable agricultural practices, and polluted land, water, and crops, as well as the over use of groundwater, erosion of topsoil, loss of wetlands, etc. It is therefore, necessary to educate farmers about the environmental impacts of these practices, and to draw them

away from them. For this 'eco-friendly' inputs such as green manure, bio-pesticides, drip irrigation, IPM (Integrated pest management) practices, etc. will have to be made available to farmers, with regular supervision to make sure that they use these products. The government should not only provide training, but also provide a continuous supply of safe techniques and inputs in agriculture. Price incentives through subsidies, waiving taxes, and setting up training centres to youth who will then disperse this knowledge to farmers, should also be taken up. The Ministries of Environment and Agriculture have to work in tandem to achieve sustainable agriculture.

Consumers

The consumers play an important part in creating demand and hence influence the market for the final products. When consumers are informed about the health hazards of the products they consume, it will definitely help in deflecting demand towards safer products. For this the following measures are suggested:

Advertisement

Advertisement plays an important role in moulding consumer demand. But along with the product, its environmental impacts should also be highlighted. For example, in the west, many perfumes and aerosols state on their labels that they are ozone-friendly; cosmetics state that they were not tested on animals. Informed consumers would definitely prefer such products, rather than those that harm the environment. 'Green labels' will certainly affect consumption and the demand for environmentally safe goods.

Advertisement does influence consumption, so a continuous tirade against environmentally dangerous products, giving full information and suggesting alternatives, will divert consumption to safer products. In the past, advertisement to promote family planning, to control and prevent AIDs, TB, malaria and other diseases, and also the campaign against tobacco, have helped in changing consumers' preferences. The government should make environmental information mandatory in all advertisements of consumer products.

But sellers are chary about informing consumers about the environmental impacts of their products, and this has led to consumers being fooled into buying dangerous products, that affect their health and the environment. In this regard, the Supreme Court directive forcing the cola giants to display the pesticide content of their drinks is a move towards sustainable consumption (Yadav, Nov. 2004). The Indian Standards Company should similarly examine various consumer products, for their environmental and health impacts. This information should be displayed on the products' labels to help consumers avoid environmentally hazardous goods.

Advertisements of green products and techniques should also be taken up on a war footing. Many consumers are unaware of such goods. Equally appealing methods to woo the consumers towards sustainable consumption have to be undertaken.

● Popular Media

TV, movies, newspapers and magazines should allot slots to educate the consumers about the environmental impacts of their consumption. The environmental safety of green products should also be popularised.

● Alternatives

As stated earlier, merely informing the public about the environmental hazards of their consumption is not enough. Alternatives should be presented, which can help in introducing sustainable consumption. For example, instead of permitting diesel vehicles, the government should provide incentives to gas-driven or battery vehicles. There are many green products in the market, but the high costs affect sales. The government should give subsidies, tax deductions and other incentives to promote environmentally safe consumer goods.

Conclusion

ESD is not for the classroom alone, but is an interactive and result oriented form of EE. For it to succeed, it is necessary to educate those who are in command, so that SD becomes the paradigm for present and future development. ESD, by educating each and every section of society, can involve and coordinate everybody in the task of initiating and monitoring SD.

The success of ESD lies with the government and its commitment to SD. Fiscal policies like taxing environmentally harmful goods and processes, and subsidies to green products, will help in ushering in SD. Many consumers feel that green products such as solar energy are too expensive; if the same type of subsidy is given to it as to conventional energy, it will help in a shift to a more sustainable energy base.

Often present economic profits outweigh the environmental needs of the future. Also a large number of vested interests could tilt the scale away from environmental protection. Counter claims may surface⁴, and anti-environmental lobbies may try to prevent SD, for it will divert the market and the economy away from them.

But ‘knowledge is strength,’ and only by educating the target population continuously and consistently, as well as by the provision of other types of fiscal, planning and monetary support by the government, will it be possible to achieve SD, and foil the attempts of the anti-environmental lobbies.

References

Fien, John. 2003. “Education for a Sustainable Future: Achievements and Lessons from a Decade of Innovation, from Rio to Johannesburg.” *International Review for Environmental Strategies*, Vol.4, No.1

Panth, Prabha. 2004. “Globalisation: Boon or Bane to the Environment” Secunderabad: Osmania University Post Graduate College Secunderabad.

Rao, P. K. 2001. *Sustainable development: Economics and Policy*, Delhi: Blackwell Publishers

Yadav, K.P.S. 2004. “Confess Now”, *Down to Earth*, Nov.15.

Down to Earth [2004], “Yes to asbestos” *Down to Earth*, Oct 31. p.9.

Website

MoEF *Annual Report 2003-04*, Chapter 8.< <http://www.envis.nic.in>> (Oct. 21, 2004)

⁴ For example plastic bags are paraded as being environmentally friendly, they do not deplete forests! Or nuclear energy is being advertised as being “clean” energy, as it does not release toxic gases or fly ash!
