

THE BRUNDTLAND REPORT; A NEW CHALLENGE FOR EDUCATION

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1. Introduction

Since the publication of the World Conservation Strategy (and especially the report of the World Commission on Environment and Development - the Brundtland Commission) the international environmental vocabulary has been enriched with the word "sustainable". Sustainable use, sustainable development, sustainable economic growth, etc. All try to indicate the need for a continuous use of our nature and natural resources.

Though everybody in environmental and economic circles at least seems to understand this terminology, it certainly gives rise to different opinions when it comes down to realise such a situation. For, on the one hand it is the Brundtland Commission itself that believes that sustainable use of our resources can be carried out within the present given economic terms. On the other hand there are those, like many non-governmental organisations in the world, who certainly believe that fundamental changes in all of our thinking is necessary.

Two conclusions are lying at hand:

1. there exists no generally accepted view of what should be sustainable: the economic growth, as a precondition for sustainable use of nature and natural resources, or that use itself
2. the implementation of any solution to sustainability is still far away.

Fortunately most people, whether in political or other spheres, agree that sustainable use of nature and natural resources is necessary. Qualitatively we now know* what all this is dealing with: the simultaneous optimisation of both economic and ecological and social objectives. In order to reach such a situation we need to be aware of the

* See e.g. Barbier, E.B. The Concept of Sustainable Economic Development. Environmental Conservation 14(1987)2.

following notions:

1. Man is part of nature; his actions are, certainly in the long run, subject to nature's laws.
2. Human society cannot exist without economic (and its derived) activities. Therefore, interventions in nature will continuously take place.
3. These activities have to pay due respect to the goals of the World Conservation Strategy and hence accept that nature is a scarce good which a price is to be paid for.

In a nutshell, this is what the report of the Brundtland Commission is about: the realisation of both economic growth, and social justice and ecological care. Can they be combined at the same time?

2. Present solutions

Governments of industrialised countries tend to look for solutions of environmental problems more and more. Their idea is that these should be found within the existing systems of production and consumption and therefore they do not make any attempt to put this issue to discussion.

In fact the debate about the international economic order is not being reopened.

The second characteristic of governmental policy is that the scale along which economic development is measured, usually is the Gross National Product (GNP). This scale, it has been argued by many authors of economic theory, is a very incomplete instrument because environmental parameters are hardly measured by it.

Thirdly, solutions are usually sought after "beyond the border" of the state: development cooperation, multi- and bilateral help etc., are the more common way in which these questions are dealt with. The newest instrument in this sense is the debt-for-nature swaps*.

* The current term for taking over debts of third world countries by foreign or international conservation organisations whereby the interest and discharge to be received by this organisation will be used to undertake or support conservation activities in the country concerned.

Summarising, countries tend to look after the solution of environmental problems within the existing system, just because their welfare indicators (the GNP) tell them that they are on the right track. This is why international measures which hardly influence the own lifestyle, are easily adopted. Of course energy saving, nature conservation and environmental management programmes and policies do affect knowledge, attitude and behaviour, both individually and collectively in the own country. But, whatever environmental goal be set, the show (growth) must go on, with 3-4% per annum, as preaches the Brundtland Commission.

This must be considered the great weakness of the report: that it does not dare or wish to admit that indeed there do exist physical limits on this earth.

3. New policies for sustainability

The World Conservation Strategy proposes a worldwide scheme of ecological measures. Those measures alone, as we have seen, are not sufficient anymore to guarantee a sustainable use of nature and natural resources. They should be supplemented by measures in the social and economic spheres in order to lay the basis for a truly integrated approach. For, ecological measures in fact have usually a curative effect: they try to conduct the results of human acting. Social and economic measures, on the contrary, affect directly peoples' lives and actions. They may have preventive effects.

If especially the industrialised countries take their solidarity in time and place (no unnecessary shifting off of negative side effects on future generations, resp. other parts of the world) serious, they start to reformulate the long term objectives of their lifestyle. This can be shaped along the different sectors of society (economy, agriculture, trade, transportation, energy etc.).

Closely related is the evaluation of growth as defined in GNP-terms. People and institutions know that an endless growth in those terms cannot go on. Therefore all kinds of new parameters to define a more sustainable growth are developed.

Promising is the model which Pestel* presents in his recent "Message to the Club of Rome", where he writes about the characteristics of "organic growth" (translated from Dutch):

- systematic development in mutual dependence: development whereby not any part (subsystem) grows at the expense of the other parts,
- many-sided development which corresponds with the needs and desires of the parts and therefore is necessarily a variegated development,
- harmonic coordination of developmental objectives, so that developments at a worldwide scale can join,
- resilience: the ability of the composing parts [of a system - CMG] to absorb disturbing influences in the course of development,
- emphasis on the quality of development [and not quantity alone - CMG],
- specific time perspective: one should be able to anticipate and to formulate goals which are in conformity with the gravity and complex nature with which mankind is confronted,
- ongoing adjustment and innovation of goals.

In a recent advice to the Dutch government** the Natuurbeschermingsraad (Council for Nature Conservaton) states the following among other things:

1. universities should be enabled to give concrete form to the words "sustainable development" into terms that can be used in industrialised countries,
2. the discussion about changes in the international economic order should be renewed,
3. a new measuring instrument for welfare should be developed, which, more accurate than the GNP does, indicates the increase and decline of environmental goods, natural resources and energy use,
4. it is necessary that ecological/environmental conditions be made to all economic and its derived sectors of society,

* Pestel, E., 1988. Beyond the Limits to Growth.

** Natuurbeschermingsraad, 1988. Natuur en economie in ontwikkeling (Nature and economy in development). Advice about the report "Our Common Future" of the World Commission on Environment and Development. Utrecht.

5. commerce, trade, industry and agriculture should be assisted in their attempts to operate in a more sustainable way than currently,
6. environmental education, in order to bring about changes in human acting should be developed with force.

4. The challenge for environmental education

In educational terms, too, the World Conservation Strategy may have brought about some changes. It taught us that the scale at which educators look at their themes, should be widened, because individual activities have worldwide implications. North* gives tens of examples of global connections between an everyday product in our society and its environmental implications at the other side of the earth, especially in developing countries (see appendix).

The WCS also taught "industrialised" consumers that they should behave carefully in nature, that they should stimulate conservation issues on the political level and that they can act themselves to bring about changes in this field.

What it did not tell, is that choices have also to be made at another level: at that of society's foundations itself.

Nature conservation education has become, like nature conservation, a sectoral interest. Environmental education is more concerned with fostering responsible citizenship and rational thinking, encouraging the use of common sense, eliciting value judgements and equipping people so that they are able to make independent choices. This does not mean to say that environmental education is value-free. The fact that society must base its actions on compelling ecological conditions can in itself be regarded as an interest, a value for everyone, and we must work for its recognition.

* North, R., 1986. The real cost. Chatto and Windus, London.

Complete understanding of complex relationships is a far-off ideal, which no single individual can achieve. This becomes even more of a problem when one also wants to derive strategies for action from insights which have been acquired.

The characteristics which a new way of thinking and living will have to embody, have been discussed elsewhere*. These characteristics include:

- recognition of the existence of and man's subjection to ecological laws;
- cohesion in disciplines; the formation of a cohesive view of the world;
- willingness to analyse and relativise one's own capacities;
- perception of personal actions in a worldwide context;
- allowing moral, ethical and also aesthetic criteria to play a role alongside considerations of utility;
- linked to this: consideration of qualitative approaches, insight into the limitations of causal-quantitative, legal and technical approaches to problems.

These characteristics are far-reaching. They could lead to a new "style of being" for people which sees the individual and collective responsibility for everything around us in broader terms and brings it into closer harmony than the current legally or technically feasible partial solutions.

Environmental education intended to serve this end must therefore occupy itself with the whole of man's being.

The time we live in means inevitably that people's perception of themselves is changing. Environmental education should therefore look at the ways in which people satisfy their needs and at the way in which changes occur in this pattern.

* Hetzel, H.K., 1981. Worldviews and values for a sustainable future. Finite Earth Course, Massachusetts Institute of Technology.

The direction which today's environmental education must take, follows naturally from the foregoing. It must lead to the realisation of the way in which general principles can take concrete shape in everyday life. And, conversely, people must learn to see how everyday things are symptoms of processes which extend worldwide, over the long term and over many (political) issues.

Botkin, Elmandjra and Malitza* speak about "innovative learning". The following quotation in this respect is from their book (p. 10):

"Serious doubt must be raised as to whether conventional human learning processes are still adequate today. Traditionally, societies and individuals have adopted a pattern of continuous maintenance learning interrupted by short periods of innovation stimulated largely by the shock of external events. Maintenance learning is the acquisition of fixed outlooks, methods, and rules for dealing with known and recurring situations. It enhances our problem-solving ability for problems that are given. It is the type of learning designed to maintain an existing system or an established way of life. Maintenance learning is, and will continue to be, indispensable to the functioning and stability of every society.

But for long-term survival, particularly in times of turbulence, change, or discontinuity, another type of learning is even more essential. It is the type of learning that can bring change, renewal, restructuring, and problem reformulation - and which we shall call innovative learning."

Thereby the authors define this type of learning as "the process of preparing to deal with new situations".

* Botkin, J.W., M. Elmandjra and M. Malitza, 1979. No limits to learning. Pergamon Press, Oxford.

5. New ways for environmental education

Environmental education has led in industrialised countries to:

1. a general acceptance that there exist environmental problems, caused by human activities,
2. a certain readiness to take individual action,
3. organisational networks of institutions, both professional and voluntary which continually or incidentally deal with theory and practice of environmental education.

This is utterly insufficient to meet the need of solving environmental problems. To that end much more than an "environmentally literate" public is required. Therefore I would like to come to an analysis what in principle should be done in environmental education to bring about further improvements.

So first we have to discuss what actually we want to change: is it man's behaviour, is it technology or is it society as such? Though all three are important, I would lay stress on the latter. It is our view upon society and on the world as a whole that should be subject of a renewed introspection, leading to a new ethical awareness.

But we have to contend with that each individual has his own norms, values, interests and capacities. If our message does not fit in with his value and experience system as a whole, we can forget about changes. The art of environmental education is not to transmit our ideas to the minds of others, but to make them receptive for those.

Moreover, education does not work as a one way system either; instead, it is a matter of giving and taking, of teaching and learning, on both sides. Therefore, we have to make sure that our education possesses enough openness to give the target groups the feeling we really care about them, too.

Since the development of environmental education we may have paid insufficient attention to several aspects which may be listed as follows:

- full incorporation of societal (say: economic, cultural and social) elements into environmental education,

- specification of target groups and the expectations we have from each of them,
- development of methodologies for environmental education,
- consequences for the network of environmental education.

These points will be shortly discussed in the following paragraphs.

6. Society in education

Earlier paragraphs indicated that the task of environmental education is expanding. While not denying in any way the validity of an interest in nature as a goal in itself, and recognising the educational value of pure nature education, we do need more and more a kind of education that looks beyond its original limits. We have seen that the overall objectives of environmental education in different countries and international organisations have developed. In the Netherlands, for instance, the "care-for-nature" model has evolved into the "well-balanced-decision-making" model, accepted quite in general, within 10 years. The consequences of this development can be seen from the production of educational material which more and more stresses the fact that man's activities are not isolated events anymore. He has become part of systems with influences in all sectors of society, over a long time and on a worldwide level. These scale-factors are the basis for all educational work, though strongly adapted to the target group concerned.

In order to achieve objectives as described above, with different target groups, a number of intermediate steps with specific objectives (instructional goals) are necessary. These are:

1. Interest

Unless an interest in environmental issues is present, no educational process can be built up. This interest may be based on a desire for survival, on a personal experience with nature, on the need for knowledge or on the desire for better insight in for instance ecology.

The stimulating of interest is normally a prerequisite for taking the next steps.

2. Way of thinking

What is meant here is the formation of a cohesive worldview, the ability to see through current ideologies and received ideas.

3. Analysis of society

This is an attempt to distantiate oneself from the conventional wisdom prevailing in society; in this way the target group is enabled to form its own picture of the way of existence which in its view are desirable.

4. Strategies for action

This is what it comes down to in the final analysis: that responsible individuals should shape their own existence on the basis of their involvement and a positive view of the future, with due regard to the limits which the community sets and on the basis of the realisation that every community is a component of worldwide ecological processes.

These part-strategies: development of interest, way of thinking, analysis of society and strategies for action, form the connection between succeeding environmental problems and solutions. They constitute a learning route for the target group.

7. Target groups

For environmental education to achieve the instructional goals that have been set, it is important to distinguish between different target groups. There is nothing new about this: it has been done to a greater or lesser extent for many years now. The selection criteria applied do, however, differ widely and lead to a great variety in the final choices of target groups made by the organisations in question.

Although this variety may be useful, here is a real chance that there may be gaps in the spectrum. The possibilities of arriving at a soundly based choice of target groups can be described in the following way.

Both individually and collectively, people effect changes in their environment, whether deliberately or not. Such changes differ in nature, intensity and range (according to place and time) from person to person. The educator must be aware of these variables if he wishes his work to be relevant to the target group.

The foregoing means that persons - and also groups of persons - should not be characterised on the basis of, for example, their level of development, degree of interest and other specific individual or educational criteria alone but also on the basis of their place in society. The following division (though other divisions are also possible) can thus be made:

- persons as members of social systems (public-oriented),
- persons with an educational task (teaching- and counselling-oriented),
- persons involved in decision-making (policy-oriented).

It cannot be said in general that one target group is more important than another. It is important, however, that environmental education makes an integrated approach to target groups. We have to reach them all, each time again. That has consequences for the matching of the education which the educator has to offer, with the characteristics and possibilities of various groups. It is in particular the handling of the part-strategies mentioned before, which may vary. This does not prejudice the need to make a connection with people's learning requirements and their level of knowledge, awareness and skills at the beginning of a learning situation.

In the next section these target groups are described somewhat more in detail.

Persons as members of social systems

Right from the beginning of environment education there has been intensive concentration on the "general public". There is a constant stream of educational activities directed toward this audience.

Usually this heterogeneity is accepted ("everyone is welcome"). A distinction is increasingly being drawn, however, according to social background, age or individual activity: e.g. schoolchildren, consumers, farmers, people engaged in recreational situations etc. People are part of various social systems, through which a more specific approach is possible with a greater chance of success. The contribution made by nature conservation education to deepening the insight into the structural, societal character of environmental problems is by definition modest. That applies not only to the general public or persons in specific social groupings but also to people who, by their specific knowledge and public work, are precisely in a position to effect the development of that insight and its translation into societal terms. The possibilities of environmental education merit particular attention to the following two target groups.

Persons with an educational task

This description includes, for example, teachers in primary and secondary education, youth leaders, counsellors at counselling institutes, social and other academies, teacher training colleges and agricultural and horticultural colleges. In their work these people can introduce aspects of environmental problems. The voluntary and professional environmental education sector has so far been unable to offer these groups any great structural assistance. Admittedly, in the course of the years various national and regional educational projects have been set up, teaching materials have been produced, experiments have been carried out or are still being developed. There is, however, in general no fixed place for environmental education in the education, training and general supportive structure of these target groups and their institutions at the present time.

Persons involved in decision-making

In all kinds of areas decisions are made which may have repercussions on the quality of the environment. It might even be that this group of persons - both in the public and private sectors - take the most far-

reaching decisions about the quality of nature. Decision-makers and those who prepare their policies are usually approached by pressure groups and not by educators. There is a grain of logic in this attitude but politicians, civil servants, bank managers, industrialists, church leaders, board members of farmers' organisations and so on, are also educated in systems like universities and via inservice training. Certainly, vested interests, financial and economic considerations, dependence on existing structures and political agreements make their margin for changes small. With a few exceptions there is virtually no systematic knowledge about this and even less about the most effective way of approaching these "forgotten" groups.

It is worthwhile to make a strong plea for gaining insight quickly into the educational possibilities for these professional groups.

8. Methodological approach

It is not without reason that a methodology for environmental education has not yet been well developed. In fact, this should be the result of a thorough investigation in the characteristics of several target groups.

Formerly, when people believed environmental education was only the transmitting of knowledge, it was easy and sufficient to rely on the "didactics of experience". Now that it is generally agreed that education is the organisation of learning situations, things have changed drastically. We are now, if we really take our job seriously, subject to the rules of learning psychology and to the "didactics of scientific insight".

Certainly, both individual countries and international organisations have been working on this field within environmental education. Some of them have gained much insight into the methodological aspects of environmental education in the school system.

Indeed, most of the methodological work done refers to the formal school system. It is especially the other target groups but pupils, students and teachers, for which so little has been developed up till

now. Has this to do with the fact that the individual educational activity for some target groups is not being recognized as part of the lifelong learning process? Or is it the factual need of the educator to tell about the beauty of nature and its problems? Or is it simply impossible to develop curricula outside the school because educators are working with their target group during such a relatively short time?

Education still needs to be viewed as a communication system in which the following aspects are of utmost importance:

- the way in which a theme is being offered: as a set of facts or as a way of looking behind the scene (in the sense of the political, ecological, cultural, social and economic perspective of an environmental issue),
- the way in which the educator knows to integrate the interests, learning needs and skills of the educated with his own objectives,
- the need for own activities by the target group: did not we call this formerly "learning by doing"?

It is not the intention now to try to make a model (or models) for curriculum development for specific groups. But it is important to discuss a few elements that may determine in which direction and context such curricula may be formulated.

People sometimes assume that there is a difference between changing individual acting and changing society as a whole. It is argued, in fact, that there exist two approaches: one from above (changing structures) and one from below (changing individuals).

This is a paradox because people form part of those social structures, as we saw above. This implies that they do influence these systems. Research has demonstrated that what people (can) learn depends more on what they already know and are capable of, rather than on their age. Therefore much stress was laid on the position people occupy in society when looking for criteria to indentify target groups. To shortcut the paradox: influencing society works through influencing individuals. We "only" have to select the right persons - and have patience.

The other important aspect deals with the subject matter itself.

People learn about things that interest them. They may gradually build up a personal worldview. Within the context of this worldview people decide whether they wish to incorporate new information into their set of predispositions, or reject it. This is quite a dilemma because it could mean in practice a form of indoctrination if, for instance, another worldview is needed to solve problems on a long term. Curriculum developers may have two solutions: bringing up issues described within the current worldview (this is what mostly happens), or realising that several alternatives of worldviews be placed side by side. No one, neither the educator nor the educated, can escape a final personal choice between right and wrong. The question however, is, at which level do we need to make a pronouncement about this choice: at the lowest possible level (which is that of the solution of a concrete problem), at the highest possible level (which is that of worldviews), or somewhere in between. Ethics as part of environmental education programmes may help to facilitate these choices.

This is in agreement with the view of such authors as Sterling* and Hetzel** who make a strong plea for an organic, coherent worldview. Neglecting these aspects makes environmental education not go beyond the more technically oriented science education.

9. Networking

Apart from external, individual improvements which should be brought about with respect to goal formulation, themes, target groups and methodologies, the foregoing may also give rise to some internal consequences for the field of environmental education as a whole. First there is a need to widen the horizon of environmental educators in a sense that functional working relationships should be sought with

* Sterling, S.A., 1985. Culture, Ethics and the Environment - Towards the new Synthesis. The Environmentalist 5(1985)3.

** Hetzel, N.K., 1981. Worldviews and value change for a sustainable society. Interview in Macroscope (1981)9.

organisations with similar intentions and objectives: development education, human rights education, consumer education, peace education, to mention some. The scope of environmental education should be enlarged*.

Second there exists a great need for developing more cohesion in the organisational network as such, especially between the different working levels (national, regional, local). It should be defined more clearly which kind of activities should be carried out on which level. One could, for instance, distinguish between the executive and the supportive level.

Usually executive educational work is not effective and efficient enough without help from supporting bodies like consultants, working on a regional level**. Development of such functions and structures is an absolute necessity to make the impact of environmental education, as long as it is not structurally embedded in the school systems at all levels, greater.

Third, it is foreseen that the field of environmental education will gradually specialise. The conditions under which target groups of the kind, discussed earlier, work, are often so specific that general knowledge of environmental issues is not sufficient anymore. It can thus be expected that the professional level of environmental educators has to rise. Schooling systems to that end may be needed in which future (and sitting) environmental educators can be trained, preferably in connection with existing studies.

A final point deals with the accessibility of the attainments in environmental education in a specific country. It appears again and again that each individual country (worldwide, but also within the North West European region) nearly completely works on its own, but deals with the same kind of problems. Mechanisms to learn from each other's

* See Greig, S., G. Pike and D. Selby, 1987. Earthrights. Education as if the planet really mattered. World Wildlife Fund and Kogan Page, London.

** In the Netherlands all provinces (12) have an environmental education consultant; a similar structure is known from Norway, as an example.

progress in certain fields of activity, fail to a great extent. Not all issues in the field of environmental education lend themselves to mutual exchange but most of them in this paragraph should be explored further in this way. Exchange of literature (translated where necessary) and staff, the organisation of well defined courses and training events: these are some of the possibilities that should be given shape in the near future.

Epilogue

You cannot teach a man anything.

You can only help him discover it within himself.

Galilei