

THE BIO-ENVIRONMENT AND EDUCATION

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In recent years people in more and more countries became aware of environmental problems; and they have not got interested in ecology, in the question how the environment influences organisms and how organisms affect the environment. Ecological problems logically deal with the relations between nature and society and the possibilities and consequences of human action and interference in and on the biosphere.

The present biosphere of our planet has existed for nearly a billion years. It has become the basis of present-day organic life, the life of human beings included. The biosphere, now a subject of discussion because of real as well as only presumed dangers, consists of the atmosphere around us, the hydrosphere and the lithosphere.

Nowadays we hear warning voices saying that human beings are robbing their own planet, they poison arable soil and pollute the waters, they change the climate, they "rape" nature and disturb the ecological balance. Ecological problems are very complicated indeed, and we cannot simply get off by proclaiming "warnings".

Nature is for us the source of all material values and of health and joy in life. It is a place of recreation and of satisfying the growing cultural and aesthetic requirements of our citizens.

In my opinion socialist and capitalist countries alike bear the responsibility for good and safe ecological conditions on our planet. Such a responsibility can not be restricted to government representatives and authorities, but must rest with the awareness of the population and with various organisations as well. I speak here as a member of a local branch of the United Nations Association, i.e. as a member of a non-governmental organisation. In our local UNA branch we started working in this field with the organisation of an international seminar on environment protection. When in 1975 the UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP) was proclaimed, we helped to make this programme known among the population. Of great importance then and now are the UNEP and UNESCO materials of the International Conference for Environment Development and Environment Education at Tbilissi in the same year. In this connection I should like to refer to the Medium-Term-Plan for the years 1984-1989 and its position "The Environment and Natural Recourses".

Likewise, I consider the corresponding recommendations of the UNESCO to be very important, because they aim at the protection of natural landscapes and thereby include all genetic materials. The UNESCO programme "MAN AND THE BIO-SPHERE" was in many ways the centre of attention during the International Congress on the Reservations of Biospheres, which took place in Minsk, Byelorussian Soviet Republic in 1983. In Minsk, an action programme was adopted, which comprised the biospheric reservations, their effective exploration and their use for environmental education. At this Reservation Congress, among others, two biospheric reservation areas in the GDR were described, the area of the Steckby-Lodderitze Forest and the Vessertal in the Thuringian Forest. The former has been enlarged by some 12,000 hectares and includes now the whole of the Dessau-Worlitz-Parkland. This is just one example from our country.

Another one is the co-operation of scientists from my country in a long-term research programme on "Ecological, social and economic implications of technological advance in the field of nutrition in developing countries". This research is organised by the Autonomous University of Chapingo in Mexico, and the results and findings will be handed in to UNESCO for further use in developing countries to help and support the ecological qualification of experts in those countries.

Another research programme carried out by experts of the GDR on "Effects of Large Technical Construction on Man and Environment" brought new findings and knowledge in the field of systems of dams, water reservoirs and flood prevention. All this was noted with much interest by experts outside our country. In other cases our scientists could make use of research results in other countries. Wider and urgent research, issues can only be dealt with under the condition of close scientific co-operation. GDR scientists co-operate in common projects of the bio-spheric programme with their colleagues in the CSSR, Poland, the USSR, Vietnam and Mexico. A main item, however is the development of an ecologically beneficial thinking and acting of all citizens. In order to achieve this, a continuous and systematic education and information in this line is considered essential in the GDR.

When in 1981 the UNESCO held a conference on "Ecology in Practice" in Paris, the GDR representatives could report good results in the public relations work. In accordance with UNESCO my country took the task of preparing and organising the publication of a series of UNESCO posters in German. Altogether we published 36 posters on "Protection of Biotopes", "Town Ecology", "Forests in Tropical Countries", "Proper Use of the Soil" and "Modern Trends in Environment Protection". These posters summarise and outline both the findings and issues of the project "MAN AND BIOSPHERE" in many countries of all continents.

As posters are very effective visual means of conveying information in the field of environmental education, I should like to use this platform to propose an international poster competition with the aim of selecting a number of posters for education purpose in many countries. Let me illustrate my suggestion by two posters from the GDR, one drawn by a layman and one by a professional artist. The first one was made by a 12-year-old girl. It shows a plain tree and has one sentence: "Also a tree wants peace to grow and become old". The second poster depicts the structural pattern of genetic molecules and includes the words "Devoted to Life and Health". The author designed this poster in commission of the Medical Committee for the Prevention of a Nuclear War, and I think that this picture very well illustrates that peace-making and peace-keeping closely correlate with ecological attitudes and projects.

Ecological education is of vital importance, and its practical realisation should be based on international co-operation. In my country there has been a lot of discussion about how to teach environmental protection effectively. What should be the central items and which educational materials and which methods should be used? One basic question was: "Should we introduce a new school subject called "ecology" or "environment protection" or should we integrate ecological aspects in various traditional subjects?"

The first way would have had the advantage of a concentrated presentation of the main ecological findings and facts, but would also include a superfluous repetition of teaching items in the traditional subjects. The second method of teaching ecology by integrating it in various subjects will show even better results, will meet the global and universal aspects of ecology and will make the interrelation evident to nearly all pupils and students. Therefore education officers in the GDR have finally decided to follow the second way, that is a method of universally integrated education. It is the integration method which appeals to very many individuals, which will get both young and older people interested in the problem and which will channel individual interests into activities for definite projects. Environmental and ecological education in the GDR means, of course, additional teaching aids and materials in accordance with modern issues and findings and with the realisation of the main educational programmes of the GDR school politics.

All in all, there are at least 5 targets we are aiming at when we mention environmental and ecological education.

1. Environmental education penetrates and comprises not just a few, but nearly all school subjects, and, of course, is to be taught to pupils of all age groups.
2. Environmental education must be based on the latest and most recent findings of the international ecological research work. These findings must be transferred to the younger generation in an adequate way, and it should not be forgotten to also build up an emotional link with environment protection.
3. Environmental education provides the necessary knowledge, but does not stop at this point. It also stimulates and organises practical activities and a readiness for practical work.
4. Environmental education is strongly orientated to the homeland territory, but global interrelation should never be lost sight of.
5. Environmental education must make use of all modern teaching aids such as tapes, slides, posters, excursions, laboratory tests, videos and many others.

Let me finish my contribution on "Ecology and Environment Education" with the remark that all our discussions, intentions, experiences, projects and practical work should be seen in accordance with similar items in the field of peace education. Peace and ecology are two sides of the same problem: How to ensure a harmonious future life on our planet. Wars destroy culture, nature and the environment, whereas peace certainly promotes any valuable cultural development, just as it will establish a creative shaping and a proper usage of the natural environment to the benefit of all people and nations.

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