

ENVIRONMENTAL EDUCATION IN AN URBAN SOCIETY

**Proceedings of the
Ninth Regional Conference of the North-West Europe Committee,
Commission on Education IUCN**

Rotterdam, Netherlands, 30 August-5 September 1971



1948

**International Union
for Conservation of Nature and Natural Resources
Morges, Switzerland
1972**

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**Edited by J. Goudswaard, ing., Secretary, North-West Europe Committee,
Comm. on Education, IUCN and published with the financial assistance of
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The Hague, Netherlands**



**International Union
for Conservation of Nature and Natural Resources
Morges, Switzerland
1972**

The International Union for Conservation of Nature and Natural Resources (IUCN) is an independent international body, formed in 1948, which has its headquarters in Morges, Switzerland. It is a Union of sovereign states, government agencies and non-governmental organizations concerned with the initiation and promotion of scientifically-based action that will ensure perpetuation of the living world - man's natural environment - and the natural resources on which all living things depend, not only for their intrinsic cultural or scientific values but also for the longterm economic and social welfare of mankind.

This objective can be achieved through active conservation programmes for the wise use of natural resources based on scientific principles. IUCN believes that its aims can be achieved most effectively by international effort in cooperation with other international agencies, such as Unesco and FAO.

The World Wildlife Fund (WWF) is an international charitable organization dedicated to saving the world's wildlife and wild places, carrying out the wide variety of programmes and actions that this entails. WWF was established in 1961 under Swiss law, with headquarters also in Morges.

Since 1961, IUCN has enjoyed a symbiotic relationship with its sister organization, the World Wildlife Fund, with which it works closely throughout the world on projects of mutual interest. IUCN and WWF now jointly operate the various projects originated by, or submitted to them.

The projects cover a very wide range from environmental policy and planning, environmental law, education, ecological studies and surveys to the establishment and management of areas as national parks and reserves and emergency programmes for the safeguarding of animal and plant species threatened with extinction as well as support for certain key international conservation bodies.

WWF fund-raising and publicity activities are mainly carried out by National Appeals in a number of countries, and its international governing body is made up of prominent personalities in many fields.

The North-West Europe Committee is one of the regional Committees of IUCN's Commission on Education.

At the Ninth Regional Conference of the Committee the following Officers were appointed:

Chairman:	Drs. J. P. Doets	Netherlands
Vice-Chairman:	P.H. Oswald	Great Britain
Project Officer:	Mrs. A. von Hofsten	Sweden
Secretary:	J. Goudswaard, ing.	Netherlands

Postal address of the North-West Europe Committee:
Jan van Loonslaan 20 A, Rotterdam-3001,
Netherlands.

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NINTH REGIONAL CONFERENCE OF THE NORTH-WEST EUROPE COMMITTEE OF IUCN'S COMMISSION ON EDUCATION

SUMMARY OF THE PROCEEDINGS

The Conference, which was held at De Tempel Conference Centre in Rotterdam, was opened on 30 August 1971 by Prof. O. A. Høeg of Norway (retiring Chairman of the Committee), following which Dr. J. Verhoeve, Director General of Public Education and Outdoor Recreation of the Ministry of Cultural Affairs, Recreation and Social Welfare of the host country, delivered a keynote address. The Agenda of the Conference was then formally adopted (copy annexed).

During the Conference the North-West Europe Committee held a set of business sessions. Some of them concerned basic issues of environmental education and were open to invited guests. At one such session held on 1 September, two notable papers presented by Dutch specialists were discussed: "Changing Requirements in Environmental Education" (by Drs. J.B. Pieters from the Ministry of Cultural Affairs, Recreation and Social Welfare, The Hague), and "Environmental Problems and Participation" (by Dr. N.G.M. Nelissen of the University of Nijmegen). Both speakers made strong pleas for considering the social implications of environmental deterioration, in view of the fact that nature conservation and environmental education are concerned with man and human well-being. This viewpoint was subsequently endorsed in one of the resolutions, which stresses: 1. the importance of the social sciences in environmental education as a necessary corollary to the accepted role of ecology; 2. the value of the techniques of social sciences in promoting environmental awareness; 3. the need to interrelate the teaching of ecology and the social sciences."

Two days of the Conference - 2 and 3 September - were devoted to environmental education seminar for a broader audience, which included over 40 Dutch teachers and others closely concerned with the theory and practice of environmental education.

Mr. John Paull, Advisor on Environmental Education to the Leicestershire County Council (Great Britain) spoke about methods of promoting knowledge of the natural environment in school classes and demonstrated these on conducted excursions in the adjacent park.

Mr. Hans-Jörgen Karlsson, Consultant of the Swedish National Board on Education described the latest developments in environmental curricula and programmes in Swedish schools, supported by interesting films and film-strips.

Mr. Harry Wals, Director of the Municipal School and Children's Gardens in The Hague, gave an interesting account of the International Working Meeting, which he had attended in June 1970 at Carson City, Nevada, on the subject of "Environmental Education in the School Curriculum".

Mrs. Anne von Hofsten of the Swedish Nature Conservation Union explained the special educational programmes on water pollution and conservation recently developed in Sweden.

In the discussions, which followed, some participants strongly emphasised the dependence of the environment upon recycling processes and the need to stress this issue appropriately within all environmental education programmes. The Dutch educators urged the authorities in the Netherlands, and through IUCN recommended other countries.

- "1. To take the necessary measures to acquaint teachers with the relevant concepts, facts and methodology;
2. To increase the attention given to environmental education at all levels in school curricula;
3. To make the necessary financial provision for appropriate facilities within the classroom and in the school grounds, and for specially established field centres and study areas, within easy reach of the conurbations and in the countryside."

They expressed their wish to be kept in close further working contact with IUCN, through its North-West Europe Education Committee in particular, and suggested in this context the need for a regional centre acting as a permanent clearing house.

"Environmental Education in an Urban Society" having been chosen as the main theme of the Conference, participants enjoyed visits to a number of relevant institutions, such as school and children's gardens, children's farms at Rotterdam and connected education centres at Rotterdam-Zoo, combined with demonstrations of practical educational work. They were particularly impressed by the activities of the Service for School and Children's Gardens run by the Municipal Board of The Hague; the Director of the Service, Mr. Harry Wals, took a leading part in the Conference and was responsible for the successful two-days' seminar with the Dutch educationalists.

The North-West Europe Committee discussed its future work at considerable length. It was agreed that Regional Conferences were important and should be continued as the chief overall project of the group.

Attention was drawn, however, to the importance at this stage of developing specific projects and programmes. Several suggestions were made as to projects which should be prepared, launched and executed in the near future and which should concentrate on such urgent items as teacher training and the development of laboratory work school-environment education.

The Committee established a small Project Group, composed of Mrs. Anne von Hofsten (Sweden), Mr. Johannes Goudswaard, ing. (Netherlands) and Dr. Jan Čerovský (IUCN Headquarters). It is proposed that the next 10th Conference of the North-West Europe Committee should be convened in Belgium in 1973.

The Committee expressed its warmest thanks to Prof. O.A. Høeg of Norway, for all the work he had done during his chairmanship, from which he resigned at the beginning of the Conference. Drs. Jan Piet Doets (Ministry of Cultural Affairs, Recreation and Social Welfare of the Netherlands) was elected as the new Chairman and will have the support of a small Executive group, as listed in the present volume opposite the table of Contents.

NINTH REGIONAL CONFERENCE OF THE NORTH-WEST EUROPE COMMITTEE

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AGENDA ITEM I:

OPENING OF THE CONFERENCE

by Prof. O.A. Høeg, Chairman of the North-West Europe Committee,
on 30 August 1971

Dr. Verhoeve, Mr. van der Pols, Ladies and gentlemen.

I have the pleasure and honour to open the 9th Regional Conference of the North-West Europe Committee.

The committee, as is probably known to all those present, is part of the Commission on Education within the I. U. C. N.

Several members have, unfortunately, been prevented from attending. We shall miss them. May I be allowed to mention only one name, that of Mr. David Ruting, who is ill.

I am glad, however, to be able to welcome those members who have found it possible to come from Belgium, Denmark, Finland, Great Britain, the Netherlands, Norway, Sweden and also the Executive Officer of the c Commission on Education Dr. Jan Čeřovský.

I am sure that his presence, even though only for some days, will be useful. Mr. Theophile Vethaak is here as representative of the International Youth Federation.

We are grateful that the Director-General of Public Education and Recreation, Dr. J. Verhoeve, in spite of heavy commitments, has found it possible and worthwhile to be present here today and has declared himself willing to address us at this opening meeting.

It is an encouragement for us.

We are also happy that so many other authorities have accepted the invitation of the organizing committee to be present here, among Mr. van der Pols, one of the aldermen of Rotterdam; and, not least, we welcome the Press. All of this is again an encouragement for us. However, I, for one, feel also that it adds to our responsibility.

It is all very well to come together and agree that something has to be done. Enough has been talked about it. But it is our duty to see to it that something is done within the sphere where we may, at best, have some chance of doing useful work - if we put our will to it. Conservation education is something which ranges from kindergarten to post-graduate studies and doctorate work as well as adult education. And it deals with everything from the nearest environment to, e.g., the pollution of the atmosphere, its effect on the ozone shield and repercussions on the mutation rate in the living organisms, or the effect of air pollution on temperature and consequently on the growth or melting of land ice on Greenland and the Antarctic, followed by changes in the ocean level.

Before finishing I feel it a pleasant duty, on behalf of our group, to express our gratitude to our Dutch hosts; to our two old members and friends, Mr. Doets and Mr. Goudswaard, who have taken upon themselves all practical arrangements (which do look promising); and last but not least to the Ministerie van Cultuur, Recreatie en Maatschappelijke Werk for the financial and other support so liberally granted to make this Conference possible.

AGENDA ITEM 2:

KEYNOTE ADDRESS

by Dr. J. Verhoeve, Director-General of Public Education and Outdoor Recreation, Ministry of Cultural Affairs, Recreation and Social Welfare, The Hague, Netherlands.

It was with great pleasure, that I accepted your invitation to open the ninth North-West European Conference of the Commission on Education of the IUCN. A pleasure, because I am very pleased to be able to meet experts, who try to solve the nature conservation and environmental problems in a very particular way, the way of education and attitude change.

I am convinced that conservation education is the very basis for the solution of what is sometimes called "the environmental crisis". In my opinion nature conservation and environmental health policy will only be successful, if accompanied by penetrative and rapid change in human attitudes and behaviour with regard to the natural environment.

Such a change is the aim of modern conservation education, which refers to the whole natural environment, including plants and animals, as well as water, soil and air.

Like nature-conservationists, who have understood their task with regard to the human well-being, conservation educators also are able to contribute to this well-being or perhaps even to man's survival.

As the Committee of Ministers of the Council of Europe formulated it in their resolution 71/14 of 30 June 1971.

"Ecology is the scientific basis of a new attitude towards nature and of a rational management of its resources. It is for this reason that ecology, together with its practical applications, grouped under the title 'nature conservation', must appear in teaching programmes at all levels".

However in my opinion we should not restrict conservation or environmental education to formal education or school education.

Out-of-school education or "permanent education", directed to youth and adults as well, is of equal importance for establishing a new environmental attitude.

Moreover participation in environmental policy might be regarded as an educational means, because participation seems to promote a rapid identification with environmental problems and a preparedness to solve them. Therefore one might ask whether ad hoc action-groups, which try to realize participation or influence in the environmental policy, should not fall within the scope of modern conservation education, which should utilize all adequate means anyway.

The conservation educator should be aware of the situation that many people seem to be alienated from the natural environment and that as a result they are difficult to approach and to convince.

Assuming that a sound and balanced natural environment is a condition for

the individual and social well-being of man, it is an important task for the conservation educator to convert ordinary people. The social sciences and the humanities can be of significant help, because these can give insight into certain attitudes, patterns of behaviour and determinants.

May I conclude, Mr. Chairman, ladies and gentlemen, by wishing you a fruitful conference. I am looking forward to the proceedings of your discussions, which I expect to be not only of great value for the environmental education policy in my country, but for all the countries you represent.

AGENDA ITEM 4:

PROCEEDINGS OF THE EIGHTH REGIONAL CONFERENCE NORTH-WEST EUROPE COMMITTEE, COPENHAGEN - DENMARK. - 27 AUGUST TO 2 SEPTEMBER 1970.

1. Introductory remarks by the Chairman

Professor Høeg welcomed those present and expressed regret that a number of members had found it impossible to attend. In particular, the Vice-Chairman, Mr. Doets, had hoped to be present for the first half of the Conference but an important meeting on 29th August had made even that impossible, and Dr. Pritchard, who was to have been a main speaker at the seminar on 30th August, had been unable to obtain travel funds. Unfortunately Belgium, Iceland, Ireland and the Federal Republic of Germany were again unrepresented; Mr. Fergus O'Gorman, the new member from Ireland, had been prevented from attending at the last moment. Dr. Lohmeyer had written on 5th August to say that he and Professor Pflug felt that they should stand down in favour of other people from the Federal Republic of Germany; after consultation with Mr. Burhenne, he had suggested Dr. Wolfgang Erz and Mr. Henry Makowski, the latter of whom he thought might be able to come to Copenhagen from Hamburg; finally he had said how happy he and his wife had always felt in the friendly atmosphere of the Committee and had sent their best wishes to all concerned.

Next, Professor Høeg referred to the suggestion made by certain members of the Committee that the Conference should be postponed till 1971 owing to other commitments during European Conservation Year and apologised for any difficulties caused to members by the decision to keep to the original plan. It was now the middle of ECY, a crucial moment for conservationists in Europe. The Committee might have waited till it could look back on the Year as a whole, but participation in it was also important; he looked forward to hearing from Mr. Boote on this subject.

Finally, Professor Høeg expressed the Committee's warm thanks to its Danish hosts, above all to Mr. Frede Lauritzen, one of its founders and now organiser of its second Conference in his country, but also to Professor Böcher, who would be present for the first few days of the Conference and would lead the first excursion, and to the Danish Government and other official institutions which were assisting the arrangements.

2 Adoption of the agenda

The provisional agenda were adopted, subject to changes in the order of the items and the addition of two more: Discussion of the seminar to be held on 30th August and Possible additional membership of the Committee.

3 Keynote address by Mr. Lauritzen

Mr. Lauritzen described the present situation in Denmark as a period of conflict between what people now knew ought to be done and what could actually be achieved. On the one hand, knowledge of conservation had spread dramatically, especially through the mass media, and new legislation had been enacted; but, on the other, pollution was still increasing. As an example, Denmark wanted to prohibit so-called 'disposable' containers such as plastic bottles, but this proposal had brought protests from other countries which imported them to Denmark.

He argued that international communication and understanding were more necessary than ever. The Committee itself had a burden of responsibility here. It had held one 'round' of Conferences and was now back in Denmark where it had started.

It should try to be even more effective during its second 'round': members must communicate better with the responsible Ministries in their own countries and with each other, both by attending Conferences regularly and between Conferences.

He proposed that the membership should be more representative; three members from each country could represent the Ministry of Education, the official nature conservation organisation and the voluntary bodies, one at least of them being a practising teacher.

4. Discussion of the seminar to be held on 30th August

Mr. Lauritzen presented the programme of the seminar for some 32 teachers, to be held at the Denmarks Laererhojskole (Danish College of Education) from 10 a.m. till 4 p.m. on Sunday, 30th August. After an introduction from Professor Høeg, Mr. Oswald and Mrs. von Hofsten would be asked to speak about ECY activities in schools in Britain and Sweden. Laerer Birgit Darr would then give an account of the situation in Danish schools. After lunch, Mr. Boote would speak about the aims of European activities during 1970, Lektor Hans Greve, the new Inspector of Biology, about the opportunities within biology curricula in Danish schools, and Professor Anders Munk about didactic problems. There would be a short period for questions and discussion after each talk. Professor Høeg would sum up. After the seminar there would be an excursion, with the teachers, to Utterslev Mose, a wetland area of ornithological interest on the outskirts of Copenhagen where pollution has been a problem.

Mr. Goudswaard commented that the programme, which members had not seen in advance, was quite different from that followed at Otaniemi in Finland, when there had been separate discussion groups, with

Finnish leaders, as well as general discussion sessions. Professor Høeg pointed out that on this occasion all the teachers would be of the same level. It was agreed that it was necessary to experiment with different kinds of seminars and to discuss and assess the results afterwards.

Professor Høeg suggested that Mr. Boote should chair the morning session and Mr. Oswald the afternoon one. (In the event Mr. David Clayre, an Englishman teaching in Denmark, chaired the latter.)

5. Report from the Commission on Education

Mr. Goudswaard explained that he had been asked to represent Dr. Shaposhnikov, who apologised for being unable to attend the Conference. He presented a duplicated statement on the work of the Commission on Education and commented on the proposals listed at the end. In particular, he emphasised the importance of the Committee's assisting the Commission to achieve its objectives.

In the ensuing discussion, Mrs. von Hofsten stressed the need for the Commission to consult its Committees about its programmes. Professor Böcher drew attention to the absence of any mention of southern Europe, where he found people pessimistic about conservation; he suggested that the time had come to help these countries. Mr. Goudswaard said that several attempts to set up a South Europe Committee of the Commission had failed, owing to a lack of suitable contacts in the countries concerned. Professor Söyrinki wondered whether regional committees covering the whole field of conservation might have more authority than subject-based ones. Professor Böcher suggested that suitable people from southern Europe should be invited to meetings of the Committee, but Mr. Lauritzen said that this would raise language problems, that the problems of northern and southern Europe were different, and that more people at meetings would mean less results. Professor Høeg referred to the growing interest in environmental matters in France, and Professor Böcher commented that, with the growth of tourism, southern Europe was now "part of our environment". Mr. Boote said that Professor Böcher had rightly drawn attention to the variation in progress in environmental awareness in different parts of the world, but argued that even more fundamental was the need everywhere to demonstrate the relevance of wildlife conservation *sensu stricto* to wider environmental problems; to too many people now 'environment' was virtually synonymous with 'pollution'. He raised the question of what the Commission's - and thus the Committee's - unique role should be; there was always a risk of duplicating work carried out by other organizations. This, he suggested, should be to put across the educational aspects of nature conservation *sensu stricto*.

8. The future of the North-West Europe Committee

Professor Høeg referred to his circular letter of 30th May, 1970, and to the incredible number of international organisations involved in environmental education, as revealed by Dr. Budowski's letter to him of 13th May. He also mentioned Mr. Kesteloot's letter to him of 4th August, in which he argued for the continued existence of the North-West Europe Committee, as "the best context where new ideas can be put forward, tested

and developed", and Dr. Pritchard's letter of 27th August, in which he expressed similar sentiments.

There followed a general discussion on the value of the past work of the Committee, its relationship to other international committees and its possible future role, with special reference to the danger of overlap with other bodies. Mr. Goudswaard stressed the need for national authorities to learn quickly of successful developments in other countries to enable them to support similar projects in their own. Mr. Esping echoed Mr. Lauritzen's plea for national committees on environmental education: reorganization must start at home. He also argued for a broadening of the scope of the Committee's work to do justice to levels of education other than the school level, and the Secretary said that he knew that Mr. Doets strongly supported this idea. In connection with IUCN's relationship to the Council of Europe, Mr. Boote pointed out that the role of voluntary bodies is primarily to pioneer, that of governmental bodies to universalize and implement. Professor Söyriinki spoke of the influence of the teachers' seminar in Otaniemi in 1968 and the unique role of IUCN in international conservation matters. He urged the Committee to give more attention to pollution problems: young people in Finland regarded there as more relevant than talk of birds and bees!

It was agreed to ask IUCN to ensure it has full discussions with other international organizations about "who does what" and to make its own intentions clear; to press again for the establishment of national committees on environmental education, both through official channels and by personal initiative; and to appoint a working party of three members (the Secretary, Mrs. von Hofsten and Mr. Ruting) to make proposals for the future work programme of the Committee and to consult with members from the host country about the planning and programme of the next Regional Conference.

Mr. Goudswaard expressed the confidence of the Dutch Ministry of Culture, Recreation and Social Welfare in the Committee and formally invited it to hold its next Regional Conference in the Netherlands in 1971. This invitation was accepted, and Professor Høeg thanked Mr. Goudswaard sincerely on behalf of the whole Committee.

There was then a discussion about future seminars. Mr. Lauritzen felt that the secret for success in these lay in finding the right blend of national and international sponsorship. It was agreed that the Committee must not appear as prophets", supposing it had all the answers to local problems, but that it could spread the results of successful experiments and arrange for demonstrations by specialists from other countries. Mr. Boote stressed the importance of a full coverage of topics and of assessing and recording the aims, methods and results of every project. Mr. Oswald suggested that there was no necessity to link seminars with full conferences; the Committee could arrange for foreign specialists to assist in national seminars between Regional Conferences. He mentioned that Mr. O'Gorman had written (26/11/69) to suggest that the Committee could fulfil a valuable role here.

Other suggestions for future work by the Committee included Mrs. von Hofsten's of collecting, translating and distributing educational material of international significance and Mr. Goudswaard's of

stimulating the appropriate authorities to run more environmental courses for teachers. Mrs. von Hofsten recommended that members should be given clear instructions about what is expected of them on their return home after meetings and that, in particular, they should increase their efforts to secure publicity for the Committee and for IUCN as a whole through the mass-media. Finally, a drafting committee was appointed, under Mr. Lauritzen's chairmanship, to prepare a draft of the Conclusions of the Eighth Regional Conference for consideration by the Committee at a later session.

7. Possible additional membership of the Committee

Mr. Lauritzen's proposals for rationalising the Committee's membership (see Item 3) and for admitting additional observers from the countries represented were discussed at length.

Professor Høeg's suggestion that the present members should be prepared, if necessary, to stand down was approved. It was agreed also that future membership should be related to the establishment of national committees (see Item 6), though it was felt that the precise mechanism for selecting members might vary from country to country. It was also agreed that it would be premature to elect any new members at this stage, for example from the Federal Republic of Germany to replace Dr. Lohmeyer and Professor Pflug (see also Conclusions annexed, item 6).

8. Adoption of the Proceedings of the Seventh Regional Conference

The Proceedings were adopted, subject to the substitution of the name of Mr. Kari Mustanoja for that of Mr. Annti Haapanen in Acknowledgements.

9. Conclusions of the Eighth Regional Conference

The drafting committee's report was discussed and its contents approved, but the Secretary was instructed to rearrange the order of the items in it and to alter some of the wording; a revised draft would be distributed by post to those present at the Eighth Regional Conference, for their final approval (see Annex).

10. Plans for the Ninth Regional Conference

Mr. Goudswaard suggested that the Conference would best be held at the beginning of September, 1971, when the Dutch schools would have reopened. Practical demonstrations could be built into the programme, which could also include two one-day teachers' seminars, one for teachers of primary school children and at teacher training colleges and one for secondary school teachers, both incorporating practical fieldwork. Mrs. von Hofsten and Mr. Ruting referred to conversations that they had with Mr. Martinsen before he had left; it was hoped that he might be able to visit the Netherlands in advance of the Conference to prepare for the fieldwork that was felt to be so essential for these seminars.

Professor Høeg suggested that the difficult question of fieldwork in urban areas should be tackled, and this idea met with general approval. Mr. Oswald mentioned the name of Mr. John Paull as a possible British specialist experienced in this kind of work with primary school children and currently working in the field of curriculum development in the USA for a year.

The working party (see Item 6) was charged to pursue these suggestions further with Mr. Goudswaard and Mr. Doets.

11. Discussion of reports by members of developments in their own countries

Duplicated copies of reports had been supplied by Mr. Lauritzen for Denmark, Mr. Oswald for Great Britain, Professor Høeg for Norway and Mrs. von Hofsten for Sweden. Professor Söyrinki provided a single copy of his report for Finland. Mr. Goudswaard apologized that no report had been produced for the Netherlands. The Secretary said that he had received no reports for the unrepresented countries, despite the Committee's decision, at its Seventh Regional Conference, that duplicated reports should be submitted before each conference, whether or not members were able to attend (see Proceedings, Item 5).

Members enlarged on their reports and Mr. Goudswaard spoke briefly about developments in the Netherlands. Mr. Lauritzen referred to the problem of school excursions in Denmark being confined to Saturdays and Sundays and to the translation into Danish of the BSCS Blue Version, and Mr. Goudswaard to the successful use of the mass-media, especially television, in the Netherlands during European Conservation Year; the opening of the Strasbourg Conference, for example, had been broadcast live on school radio and subsequently for the general public on television.

12. Election of Chairman

Professor Høeg agreed to the request of those present that he should remain Chairman until the beginning of the Ninth Regional Conference.

13. Vote of thanks

Mr. Boote proposed a vote of heartfelt thanks to Frede and Eli Lauritzen, and to their Danish colleagues and friends who had assisted them in the conference arrangements. He said that the seminar had confirmed the value of the Committee's programme of practical projects, the excursions had proved that its members could both learn from and help young people striving to conserve the environment, and the discussions had reaffirmed the special qualities of voluntary bodies such as Friluftsradet and IUCN itself. Copenhagen was indeed "wonderful Copenhagen", because of its wonderful people!

The Committee warmly supported Mr. Boote's tribute. Mr. Lauritzen thanked members in turn for their participation in the Eighth Regional Conference in Denmark and for the inspiration they had given to the young people whom they had met.

ANNEX: CONCLUSIONS OF THE EIGHTH REGIONAL CONFERENCE

1. After ten years' work, the Committee has reviewed its functions and composition. It has taken note of:
 - a. the valuable exchange of information and ideas in the field of environmental education achieved through its past activities;
 - b. the pattern set for the establishment and activities of other regional groups within the IUCN;
 - c. the increase in activities in the environmental field in general, and in environmental education in particular, by a wide range of organizations, both national and international;
 - d. the rapid evolution of environmental education;
 - e. the increased support for and strength of the IUCN; and
 - f. the expectation of further demands for environmental education and information arising out of European Conservation Year 1970.
2. The Committee urges the establishment of a national committee on environmental education in every country represented on it, in accordance with the recommendation of the UNESCO Biosphere Conference of September 1968. The patterns set by the Netherlands State Committee on Conservation Education, the British Council for Environmental Education and the Scottish Committee on Education and the Countryside should be studied in this connection.
3. The Committee, conscious of the grave dangers of overlap in the functions and activities of the many international organizations concerned with environmental education, requests the IUCN Executive Board to ensure that it has the fullest possible discussions with the other bodies involved, to find a rational division of responsibilities, and that it clearly and publicly states its own intentions.
4. The Committee reiterates its belief in the special role of voluntary bodies such as the IUCN:
 - a. in pioneering new ideas, which official bodies can universalize and implement; and
 - b. as a catalyst, promoting liaison between official bodies and persuading them to adopt particular lines of action.
5. The future work of the Committee will be based on and will develop its past activities, but it proposes that from now on it should concentrate on the pedagogic aspects of environmental education, with emphasis on methods of practical application. In particular:

- a. it should broaden its scope to do justice to levels of education other than the school level;
 - b. it should seek to use the experience gained from successful developments in one country to fill gaps elsewhere;
 - c. the frequency, length, location and type of its meetings should be determined by needs identified by the Committee or a Working Party set up for the purpose, rather than follow a fixed pattern; in particular, the projects undertaken need not be linked to full conferences;
 - d. the Committee should seek to ensure that its projects cover the whole field of education, level by level and topic by topic, and that an adequate assessment of each project is produced and published, indicating its aim, how it was prepared and executed, and what its achievements have been;
and
 - e. projects should be carefully planned and publicized as joint projects between the Committee itself and the relevant national committees.
6. The Committee recommends that its future membership should consist of persons drawn from official and voluntary bodies concerned with conservation and from the formal education system, up to a maximum of three from each country, at least one of whom should be a practising teacher. Members should serve for a period of three years in the first instance but be eligible for selection for further service on an annual basis. Up to two additional persons from each country could attend meetings as observers. The present members of the Committee should be prepared to stand down.
7. The Committee requests the Commission on Education to ensure that the members of the Committee are not only fully informed of its activities but also participate in its deliberations and contribute to its work, so that the Commission and the Committee can each benefit from the experience of the other in framing their policies and programmes.
8. The Committee calls upon its present members:
- a. to draw the attention of the relevant authorities in their own countries to the recommendation of the UNESCO Biosphere Conference that "each country should have a council, centre or similar institution for environmental education and these activities should be co-ordinated also on an international scale";
 - b. to inform the Secretary which organizations should receive a formal letter from IUCN to support their action;
 - c. to notify the Secretary of the criteria to be adopted in each country for the selection of members of the national and North-West Europe Committees and of the names of those selected to serve;
and
 - d. to increase their efforts to secure publicity for the Committee and for the IUCN through the mass-media.

9. The Committee has appointed a Working Party of three members (The Secretary, Mr. P. H. Oswald of Great Britain; Mrs. A. von Hofsten of Sweden; and Mr. D. Ruting of the Netherlands);
 - a. to make proposals for the future work programme of the Committee; and
 - b. to consult with the members from the host country for the next Regional Conference about its planning and programme.

AGENDA ITEM 8:

REPORT ON DEVELOPMENTS IN BELGIUM

Introduction

Nature conservation started quite recently in Belgium, but during the last years there has been a very strong and rapid evolution, especially as result of the European Conservation Year. Up to now there is no central administrative structure dealing with nature conservation problems. One service in the Royal Institute of Natural Sciences is dealing more specifically with ecological and educational problems, and another one in the Department of Forests in the Ministry of Agriculture is dealing with nature reserves and legislation on flora and fauna protection.

On the other hand voluntary associations have made considerable efforts both to influence public opinions and to realise new nature reserves. All voluntary associations are now associated in an overlapping body called "Entente pour la Conservation de la Nature".

1. Nature Conservation Education Centre

This centre, comprising Flemish and French section, operates as a committee of the "Entente de la Conservation de la Nature".

- The centre organized a very successful course for nature guides. About 100 certificates are delivered each year. The guides organize field trips and lectures in nature reserves, both state reserves and private ones, for the benefit of different associations, but also for tourist organizations.
- The centre also produces brochures, leaflets and other educational material.
- There is a close collaboration between the similar Dutch organization and the Flemish section of the centre.

2. Field centres

- In the neighbourhood of Ghent a demonstration nature area called "Bourgogne marshes" is planned by the State University of Ghent, especially devoted to field work for schools and nature associations but also for research work.
- Secondly, the Royal Institute of Natural Sciences is organizing at strategic spots (Buzenol, Sivry, Genk, Koksijde), all areas of great natural interest, a network of field centres, with field laboratories, libraries and other basic accommodations.
- A private centre called "Popular University De Blankaart" situated in a very valuable nature reserve is organizing fieldwork for schools and organizations, but also for conferences, seminars and week-ends on different nature conservation topics.

3. Local Conservation Committees

Mostly as a result of ECY a number of local or regional committees has been set up. They take care of environmental problems in their own communities in close collaboration with the local authorities, especially the schools.

4. Conservation education

- a. New special lectures in ecology are provided at the universities of Ghent (general ecology), Brussels (general and human ecology), Liège and at the Agronomical Institute of Gembloux for agronomists, landscape-architects, planners, geographers, sociologists etc.
- b. School curricula (secondary level) in biology are now to be reorganized, but the prospects do not seem to be very hopeful for introducing nature conservation due to the trend to reduce rather than expand the programme.

5. European Nature Conservation Year

- a. This campaign has been very successful specially to rouse public opinion and awareness for the environment. All the mass-media, radio, television and the press have been collaborating very actively and more than ever before.
- b. The main theme of ECY in Belgium has been a three planting campaign: more than 1,000,000 trees were planted during the year.
- c. A travelling exhibition on conservation problems, meetings and conferences have been organised in more than 50 localities all over Belgium during ECY.
- d. A special handbook for the use of visitors to the nature reserves has been edited.
- e. During the year a new law on conservation of nature, fauna and landscapes has been prepared. It will probably be put before Parliament during the autumn of 1971.

Existing laws on conservation of natural resources, air and water have been reinforced.

6. Prospects

There is a strong pressure to improve the administrative structure dealing with environmental problems. Up to now no decision has been taken, but following upon the recent achievements in the United Kingdom, Sweden, France, the Netherlands and other countries in setting-up new ministries, projects have been put forward to realise also in Belgium a central body dealing with conservation and management of the environment. It may be either a ministry or a specialised department under the Prime Minister.

AGENDA ITEM 8: (continued):

REPORT ON DEVELOPMENTS IN FINLAND

Schools

European Conservation Year 1970 gave a fresh and vigorous impetus to activities in the various fields of nature conservation. Reforms in environmental instruction and conservation education, which had been planned before, but the final stimulus for which had been given by Conservation Year, are being carried out in a great measure at our schools. These reforms are at the same time connected with the change in our school system, which is in the process of going over to the comprehensive system.

The teaching of biology is undergoing a decisive change at our schools. Beginning from this autumn botany and zoology are no longer taught separately, but united under the heading biology. The instruction is mainly concentrated on the observation of ecosystems, i.e. the cooperation of plants and animals in ecosystems. Detailed scrutiny of morphological structural relations is getting less attention than before.

Classes are held out of doors whenever possible. The pupils are asked to collect observation material themselves in lakes, forests, peat-bogs and other ecosystems for laboratory teaching. The instruction presupposes considerable supplements in the teaching aids at schools. So far the facilities available are rather inadequate for the needs of teaching biology. Proper equipment is needed when fundamentals of ecology are taught. At the earlier stages of the basic course mostly questions related to the ecosystems of forests are treated. This is understandable, because forest is the virgin ecosystem in Finland whose importance economically is very great.

Investigation into productivity of waters is closely connected with teaching and research in this field. This is much concerned not only with nutrients, oxygen, light and other growth factors, but also with various injurious and unnatural pollutants. The latter disturb the balance which exists in virgin waters between different living organisms, such as fish, bottom fauna, animal and plant plankton and the higher plants. In the interests of water conservation it is necessary to observe possible disturbances in time, before the pollution has proceeded so far that it has become dangerous and has caused damage to the environment.

When teaching and examining these problems one mostly has to resort to chemical methods. The purification of waste water is also dealt with in this connection.

In order to make biology teachers acquainted with the new course of study and the methodology needed, different kinds of field and summer courses together with laboratory practice have been arranged. Certain teachers of the lowest grades of comprehensive schools, namely the so-called grade teachers, who have no degree in biological subjects, have been offered the possibility voluntarily to complete appr obatur stage studies in biology. The studies comprise among other things a four-week field course and 30 hours of lectures on nature conservation.

Thanks to the change over to a five-day school week this autumn the school year began on 23rd August when it used to start on 1st September. The fact that the summer vacation is now one week shorter than before gives better possibilities for outdoor teaching. Teachers generally believe that if more teaching could be done out of doors and if pupils could be made to gather material in the field for themselves, it would arouse in them greater interest in biology.

Universities

Conservation education has been increased and in general intensified at all universities and colleges in various disciplines.

Plans for its further development are continuously being made. In the Faculty of Agriculture and Forestry of the University of Helsinki, in which conservation was introduced as a subject in 1968, a professor's chair for conservation studies was established at the beginning of the year 1971.

The University of Jyväskylä, Faculty of Science, has also got a chair in this field. The curriculum of the professor at the University of Helsinki is annexed.

Among other events may be mentioned The International Conference on Environmental Future held at the University of Jyväskylä in summer 1971, to which scientists and sociologists from different parts of the world were invited as lecturers, including Prof. N. Polunin, as the chief organizer, and Prof. J.G. Baer, Dr. G. Budowski, Prof. S.A. Cain, Sir F. Fraser Darling, Prof. J. Dorst, Dr. F.R. Fosberg, Dr. A. Nyberg, Prof. S. L. Udall and Dr. E.B. Worthington, among the participants.

ANNEX: CONSERVATION OF NATURE AND NATURAL RESOURCES AS A SUBJECT IN THE UNIVERSITY OF HELSINKI BY PROF. NIILU SÖYRINKI

The conservation of nature and natural resources was introduced as an independent subject into the curriculum of the University of Helsinki in 1968. The purpose of instruction is to attempt to form a complete picture of the reinvigoration of organic natural resources, their conservation and sensible and appropriate use, keeping in mind the material and intellectual wants of mankind. Teaching takes place in the Faculty of Agriculture and Forestry of the University. Since the conservation and economic utilization of different natural resources, such as soil, forests and waters, are taught in connection with several separate subjects in the Faculty, the teaching of conservation of nature and natural resources, on its part, aims at a synthesis and concentrates especially on the protection and conservation of natural resources in order to satisfy social and cultural needs (so-called classical and social conservation).

Main attention in the instruction is directed to the nature and natural resources of Finland, but universal problems concerning the utilization and conservation of natural resources are also treated. Thus the subject can be recommended to those who are preparing themselves for work in developing countries or in international organizations.

The basis of the protection and conservation of nature lies in the knowledge

of the different components of nature and especially of ecology. That is why particular attention is paid to these matters in teaching. Thus the aim is to lay the foundation for an understanding of the various changes brought about by man's activity in the environment, which changes often have a decisive influence both on his own existence and the life of natural organisms.

According to the usage prevailing at Finnish universities, studies in a subject are divided into different stages called 1) *approbatur*, 2) *cum laude probatur* and 3) *laudatur*, each of which corresponds to a certain level of studies in the subject concerned, *approbatur* being the lowest and *laudatur* the highest. A higher level examination presupposes that the lower level requirements have already been completed.

The following are the general outlines of the scope of study required at the different levels in Conservation of Nature and Natural Resources:

1. Approbatur

Studies are started by studying the fundamentals of botany and chemistry, which takes the whole of the first year. A general course (about 60 lecture hours) on the protection and conservation of nature and a three weeks' field course, which is held at the forestry training station of the University in summer, are also included in the programme. By the aid of text books and special lectures acquaintance is made with the main characteristics of Finnish nature, forestry, game protection and water conservation, as well as with the legislation dealing with conservation of nature and natural resources.

2. Cum laude probatur

To increase the basic knowledge of science and especially of Finnish nature, more special books, lectures and laboratory courses (e.g. in geography, geology, limnology, knowledge of peatlands, and climatology) are required. In the same way knowledge of the common Finnish types of habitat (= plant communities, vegetation units), plant species, and the commonly cultivated trees and bushes, is required. A knowledge of the common vertebrate animal species of Finland is also demanded.

Lectures (totalling about 60 hours) cover, for example, environmental ecology and the various uses of natural resources. Seminar courses, at which each student in turn presents the subject to be discussed, take one term. Besides Finnish text books, books such as S.W. Allen & J.W. Leonard: Conserving natural resources and L. Bauer & H. Weinitschke: Landschaftspflege und Naturschutz are included in the requirements.

3. Laudatur

For this grade the student is required to have completed his *approbatur* grade in botany. A basic course in statistics is also required.

The new lecture courses cover the economics of land utilization, conservation of waters and landscape planning. The textbooks still deal with

ecology (Stålfeldt: Växtekologi or Daubenmire: Plants and Environment), nature conservation (e. g. Thomas (ed): Man's role in changing the face of the earth), and urban and regional planning. Special works to be read are decided individually.

Laudatur requirements also comprise two months' practical training, which is performed under the direction of a nature conservation administration or in some related field, e. g. in the service of the League for Regional Planning. The training can also be undertaken abroad.

Those who choose conservation of nature and natural resources as their main subject in their candidature for the Agriculture and Forestry degree have to write four essays and the so-called pro gradu treatise. The pro gradu paper is a piece of research work on a given subject and, as a rule, the material for it has to be gathered by the student himself. The treatise must be approved by the faculty. If conservation of nature and natural resources is not the student's main subject, but a subsidiary laudatur will be taken in it, the essays need not be written, but a laudatur paper corresponding to the pro gradu treatise has to be made. The plans for the pro gradu and laudatur papers will be reviewed and discussed in seminars, which also comprise lectures on the methods of the study.

The chances of finding work are, for the time being, rather limited for people who have specialized in the conservation of nature and natural resources in Finland. It can, however, be expected that as conservation administration develops, opportunities for new jobs will arise. Specialists needed e.g. for water conservation and combating air pollution are given special training in these fields.

AGENDA ITEM 8 (continued)

REPORT ON DEVELOPMENTS IN GREAT BRITAIN

Introduction

This report can maintain the optimism of the report submitted by Philip Oswald last year. Growth of public awareness of conservation issues continues. Study of the environment and the many issues involved is developing and expanding at all levels in our educational system.

Governmental action

The new Conservative Government has created the Department of the Environment, with a Secretary of State at its head. This marks a considerable step forward in the organization of environmental matters. The Prime Minister has announced that the new Secretary of State is to seek an agreement to a series of regional strategies within which proper protection can be given to the countryside. The Secretary of State will have powers to prepare policies for water resources, for the prevention and containment of pollution, and for all major services in the field of housing, new town development and road planning.

The Countryside Commission, which grew out of the National Parks Commission but was given enlarged functions by the Countryside Act of 1968, is now responsible to the new Secretary of State. The Nature Conservancy, however, remains a component body of the Natural Environment Research Council, responsible to the Secretary of State for Education and Science.

A new Department of Trade and Industry has now been established, with responsibility for industrial development. This Department will work in close touch with the Department of the Environment, both on policies and on specific decisions. The Prime Minister has declared: "The protection of our countryside and the prevention of our countryside and the prevention of pollution are among the highest priorities of the Seventies and are essential for any decent sort of living."

The Countryside in 1970 Conference

The Third Conference of "The Countryside in 1970" was held in London in October 1970 under the presidency of the Duke of Edinburgh. The Duke and Prince Charles both contributed speeches and attended many of the Conference's deliberations. It marked the culmination of seven years of active concern for the environment. The first conference had been held in 1963, when there was growing uneasiness about the prospects for conserving our countryside. Despite planning control many encroachments were taking place and damage was being inflicted by pollution of air, water and soil. The wide variety of organizations and interests represented at the first two conferences of "The Countryside in 1970" undertook a striking range of conservation activities.

Nearly twenty formal reports and a number of special contributions on the problems involved and the results achieved were presented to the Third Conference, showing that the seven years had been both active and fruitful. *) Other reports dealt with the themes of Agriculture and Forestry, Urbanisation, Industry, Social Issues, Leisure, and Responsibilities for the Environment. There were also national reports from Scotland, Wales and Northern Ireland.

Some 335 bodies concerned with one aspect or another of the environment were represented. There was unanimous support for the resolution with which the Conference concluded: "That this Conference notes with satisfaction the increased interest shown in the environment by public opinion, recognises the critical situations and problems which yet remain to be resolved, and therefore welcomes the inclusion by two successive Prime Ministers of a Minister in their Cabinets specially responsible for the environment. It supports the activities developing from European Conservation Year"

Formal education

Progress at all levels received added impetus from a wide range of activities and projects arising from European Conservation Year. There is every indication that this progress is being maintained. The Schools Council has commissioned two projects concerned with the environment. The number of schools submitting candidates for the Certificate of Secondary Education and Ordinary Level General Certificate of Education examinations in Environmental Studies is increasing, and progress has been made in the formulation of Advanced Level syllabuses, with the co-operation of the Examining Boards and the full support of many University Departments.

Colleges of Education are increasingly aware of the need to provide courses in Environmental Studies, both for their academic content and also to introduce intending teachers to the techniques of field work. Many Universities are now offering full-time undergraduate courses leading to first degrees in one aspect or another of the environment.

Eleven Universities offer full one-year post-graduate courses leading to a Master's Degree, e.g. in Ecology, Conservation, Biology of Water Management or Environmental Resources.

Two University Extra-Mural Departments offer 3-year part-time certificate courses in Environmental Science (Southampton) or Ecology and Conservation (London) and a number more run relevant courses of lectures.

* Report 9, by the Council for Environmental Education, (copies of which were circulated at the meeting) has been published in 'The Proceedings of the Third Countryside in 1970' Conference, October 1970, by the Royal Society of Arts, London. Reprints of the Report are available gratis on request to Mr. P. H. Oswald, Vice-Chairman, North-West Europe Committee.

The Council for Environmental Education

In our last report reference was made to the establishment of this Council and the appointment of a small permanent Secretariat. Through its Committees on Schools, Higher Education and Resources the Council has had an active year, fostering the development of environmental education in a variety of ways. It has submitted evidence to the James Committee of Enquiry into the training of teachers and has recommended:

1. That environmental education be included in the curriculum courses followed by every teacher in training. No teacher should neglect the locality of his particular school in the preparation of his syllabus and in the presentation of his subject. This implies his initiation in the techniques of local study and first hand investigation with children.
2. An increase in the provision of main subject courses in the field of environmental education. This will meet the growth of interest in environmental education as well as providing teachers specifically trained to teach the subject to examination level - C. S. E. , 'O' and 'A' level G. C. E.
3. The provision on an appreciable scale of in-service courses for experienced teachers to meet the immediate needs for the development of environmental education.

Conclusion

It is justifiable therefore to conclude that the year 1970/71 has seen real progress in environmental education, together with a growing realisation that a great deal more has still to be done.

AGENDA ITEM 8 (continued):

REPORT ON DEVELOPMENTS IN THE NETHERLANDS

Introduction. The Netherlands State Committee on Conservation Education was set up by the State Secretary for Education, Arts and Sciences in 1951 in response to a decision taken at the General Assembly of the International Union for Conservation of Nature held in Brussels in 1950. At that meeting the Union had requested national governments to establish commissions in each country to study, in close cooperation with the Union, the possibilities for nature conservation education and all the problems concerning it. The Committee has a special task as an advisory Council of the Ministry of Culture, Recreation and Social Welfare, for all matters concerning environmental education. The members of the Committee are selected in such a way that all levels of education and institutions that take an active part in conservation education are represented. There is a good contact with the Information Centre of the Council of Europe. The Director of its Dutch National Agency always attends the meetings of the State Committee as an observer.

European Conservation Year 1970, popularized as N 70 in the Netherlands, was divided into two topics: nature conservation management in densely populated countries, with a special emphasis on wetland bird protection, and a nationwide conservation education programme, with highlights for all institutions of education, starting with infant schools and following elementary and secondary education to finish with information for the general public. A special N 70 committee was established, but all the education activities were directed to the Netherlands State Committee which acts officially as a subcommittee of the N 70 Committee. The chairman of the Netherlands State Committee was a vice-chairman of the N 70 committee. As in other countries much time was devoted to Conservation Year and it was the first time in history that all infant and primary schools received materials from the Ministry.

Primary and secondary schools. No spectacular changes have taken place in the primary and secondary schools with regard to teaching relating to the environment. There is, however, a growing understanding of the importance of ecology in the widest sense. This requires more teachers better trained in ecology and field techniques. This training can be given to the teachers and other educators at post-graduate courses of the University in the role of ecology and creative conservation. In view of the broad interdisciplinary character of environmental science, the education of such teachers has to embrace not only biology and earth sciences but also chemistry and physics, mathematics, history etc. In the Netherlands we are fully aware that one of the principal necessary features of this united approach must be a concentration on overcoming the existing discrepancy between science and technology, between "naturalists" and "engineers".

Concrete action. The pupils themselves, like all young people these days, wish to be involved in concrete action, which, while improving their knowledge, at the same time makes them useful in service to mankind. They themselves wish, even at their age, to be able to take their share in

the general responsibility for human environment and not to be instructed in what to them seems to be a rather abstract and theoretical way about the environment.

Some activities of I. V. N., the Institute for Nature Conservation Education in the year just ended:

The 10 courses held in the 1969 and 1970 seasons are concluded and the successful participants have been awarded their diploma. On January 1st, 1168 "Graduates" have been awarded their diploma. The nature guides are active in the Netherlands in many ways, especially in connection with nature walks, in youth organizations and for schools.

Nature walks. The number of participants in nature walks gives cause for satisfaction. Comparison with the figures for previous years shows a growing number of participants, now about 10,000 people yearly. At the end of the walk the participants receive a special booklet. 15,000 of these booklets are printed yearly. Investigations have shown that 75% of the participants have not had any contact with natural history societies before. Nature Conservation working camps. Interest is high, and the participants enjoy a delightful week's holiday while at the same time doing useful work and receiving more information about environmental problems in the evenings. Every year these camps are held. In 1970 we had 17 camps with 450 participants. 1 Camp was held in connection with military service, 2 special camps for technical schools. Every year the demand has exceeded the number of places available and a number of boys and girls have had to be disappointed.

Out-of-school education by other institutions. The kind of people these reach may be different, but the object is the same: to enrich people's knowledge and to stimulate their feeling of responsibility to nature. Institutions working in such a way are for example the University Extension Classes, with regular courses during 1 week.

From several social-scientific surveys it appears that the percentage of the Netherlands population that seeks its outdoor recreation in a natural environment is relatively small. An inquiry into the needs in this respect in one of the Dutch provinces brought to light the fact that 62% of the interviewers above the age of sixteen had never followed a nature walk. Other investigations showed that the percentage of those who prefer a natural environment for their recreational needs is composed of persons with a higher educational level *casu quo* a higher professional level. In fact there is over-representation of this group in comparison to the whole population. A deduction can lead to the conclusion from the above mentioned investigations that the natural environment for a rather large part of the population means less than is often thought by conservationists.

Radio and television often have programma about environmental education. In practically every newspaper articles appear about environmental problems. Many of the subjects and the news-coverage have a fear-arousing appeal. Such an appeal is in general a bestseller, but in the Netherlands we are aware that the 'kicks' from fear-arousing appeals will not lastlong and can have a negative result when not used wisely.

Public opinion poll on the knowledge and involvement with regard to the problems in the human environment field. Within the framework of European Conservation Year 1970, a public opinion poll was carried out

among a group of people considered representative of the Netherlands population. The purpose of this poll was to acquire insight into the way in which people are conscious of and personally involved in the present environmental problems. The survey provides information about the extent and nature of the environmental awareness of the public, as a result of which one might conclude that certain educational programmes should be adjusted accordingly. The results of the inquiry were given wide circulation. Some tables of the opinion poll are summarized in the annex to this report.

ANNEX (A): PUBLIC OPINION RESEARCH IN THE NETHERLANDS

Selected tables.

1. Opinions about nature conservation in contrast with other interests (expressed as a percentage of the total number of replies - 1118)	
A. virgin natural areas must be preserved, whatever the circumstances	31 %
B. virgin natural areas must be preserved, unless interests of major importance are at stake	35 %
C. virgin natural areas should be preserved as much as possible, but employment and production are of equal importance	20 %
D. sacrifice of employment and production in favour of the preservation of virgin natural areas is exaggerated	3 %
E. talking about the preservation of virgin natural areas sounds well; however employment and production are of major importance	3 %
F. it is quite unnecessary to impede employment and production in favour of the preservation of virgin natural areas	2 %
no answer	6 %
	100 %

2. Use and necessity of nature conservation

	Strongly agreed agreed	not agreed	not agreed at all
(percentages of the total number of replies)			
a. nature gives opportunity for recreation	63 %	34 %	3 %
b. nature purifies polluted air	42 %	40 %	15 %
c. nature is beautiful	69 %	29 %	2 %
d. man needs nature	72 %	27 %	1 %
e. if nature is destroyed, man is in danger	56 %	35 %	8 %
f. it is healthy to be in free nature	74 %	25 %	1 %
g. it is necessary to protect rare fauna and flora species from extinction	65 %	33 %	2 %

3. Anxiety about environmental deterioration

feeling of anxiety:

to a very high degree	19 %
to a high degree	23 %
to a moderate degree	27 %
to a low degree	21 %
not at all	10 %
	100 %

4. Causes of environmental deterioration

Percentage of the total number of replies (1118)

industrial effluents	78 %
industrial gases	70 %
cars	58 %
"diesel"-vehicles	58 %
shipping (incl. oil-tankers)	37 %

4. Causes of environmental deterioration (continued)

garbage	24 %
detergents	23 %
car-wrecks, old refrigerators etc.	17 %
too many dogs and cats	16 %
local shipping	14 %
effluents and garbage of shops	11 %
heating of hothouses	10 %
heating of houses	8 %

N.B. The total response is more than 100 %, because many respondents considered that several factors are responsible.

5. Views on the fight against environmental pollution.

Action against environmental pollution is:

1	too little	84 %
	enough	13 %
	too much	1 %
	don't know	2 %
<hr/>		100 %

6. Preparedness to make a financial contribution to a "healthy" environment

A.	prepared	66 %
	not prepared	34 %
<hr/>		100 %

B.	amount to be contributed	
	less than hfl. 10.--	29 %
	hfl. 10.-- to hfl. 25.--	25 %
	hfl. 25.-- to hfl. 50.--	7 %
	hfl. 50.-- to hfl.100,--	3 %
	more than hfl.100,--	2 %
<hr/>		66 %

7. Miscellaneous opinions

		Expressed as a sliding scale				
		Agreed				Not agreed
a.	It would influence my political preference if a party would pay more attention to nature conservation and the protection of the environment	30 %	18 %	20 %	8 %	24 %
b.	We are not sufficiently informed about environmental affairs	41 %	21 %	15 %	8 %	14 %
c.	Schools should pay more attention to nature conservation and environmental pollution	70 %	17 %	8 %	2 %	3 %

ANNEX (B): ENVIRONMENTAL MANIFESTOS FOR THE NETHERLANDS

On the occasion of European Conservation Year three Dutch biologists, Dr. A.J. Cavé, Dr. A. C. Perdeck and Dr. C.W. Stortenbeker, drew up a so-called "Milieu-Manifest" (Environmental Manifesto), which was given a wide circulation.

This manifesto is intended to inform and mobilize the public opinion and to stimulate individual and organized action.

Besides a comprehensive introduction, which explains the environmental problems, the manifesto is composed of a number of "recommendations for action". These recommendations run as follows:

1. POPULATION

The Netherlands population already numbers over 13 million people. This number will be doubled within 54 years if we do nothing about it. There will come a time when this growth will have to stop. Therefore better at this moment, now that the conservation of our environment is still possible.

Government:

Pursue a population-policy which aims at stabilizing the population level; propagate the small family and give proper information to follow suit.

Religious leaders and physicians:

Remove the obstacles still impeding birth-control.

Citizens:

You, too, have to determine the environment of your children. Restrict, in their interest, the number you bring forth, preferably to not more than two.

2. ECONOMIC GROWTH

Rising production of goods and services now results in the scarcity of goods hitherto almost freely available, such as: pure air, pure water, natural scenery and quiet. A price will have to be calculated for the use of these scarce commodities so that the current sacrifice without paying for these commodities is made impossible.

Government:

Not every rise in production is economic growth. When, as a result of a rise in production, some commodities are becoming scarce, e.g. pure air, this will have to be calculated and deducted from economic growth. Production for the compensation of this new scarcity, e. g. purification installations, should not be included in the growth. Such calculation of growth should be made compulsory by legislation.

Citizens:

See whether there are superfluous things in your way of living or consumption.

3. POLLUTION AND NOISE

More people with more affluence produce more refuse, more stench, more noise. Industry, agriculture, road users, consumers contribute to the problem. To combat activities affecting the environment, the community should demand that those who cause pollution should pay for it.

Government:

Restrict activities affecting the environment by strict regulations. Increase the tax on these activities and use the revenues to finance and stimulate alternative solutions.

Promote measures for the use of waste-products by means of the so-called "cycle economy". Ensure that new techniques and substances are carefully examined for their possible hazards to man and environment before and after they are used.

Industry:

You are often called the major polluter.

Counter this criticism by giving extra care to the environment. Examine whether new businesses do not pollute the environment. Produce as cleanly and quietly as possible and manufacture your products with a minimal waste component after use.

Citizens:

Do all you can to prevent environmental pollution yourselves.

Do not leave your car-engines idling in cases where this is not necessary.

Do not throw your refuse into water or woods. Reduce noise as much as possible.

4. NATURAL SCENERY

The formation of natural scenery is, in many cases, an age-long process. In practice, therefore, "once gone is gone forever".

Government:

Regard the relicts of natural areas in the Netherlands as irreplaceable and treat them accordingly. Promote the restoration of natural scenery by laying out forests and parks with indigenous plants, not omitting urban areas.

Citizens:

Support organizations concerned with the conservation of natural scenery and landscape. They are also your concern and property.

5. URBAN AND RURAL AREAS

In decisions on the management of our limited space our living-environment should be a deciding factor. The wishes of the individual are insufficiently known, owing to the fact that he is not sufficiently involved in planning matters and, therefore, often finds himself in the position of facing a "fait accompli".

Government:

The location of industries and harbours, town-expansion, roads and the like ought to be based on a survey in which, besides the technical and economic, also the medical, ecological and social sciences are represented. Plans ought to be revealed and explained at an early stage. Plans ought be presented in such a way that democratic decision-making is possible.

Citizens:

Set up groups which take a critical look at planning programmes of your municipality, province and central government and which will act as spokesmen for what the public wants. Take action, *inter alia*, by petitions. Provide alternatives.

6. TRAFFIC

The rapid growth of the number of cars, road systems and air traffic makes city and country life less congenial, and, as such, constitutes a threat to our living space and health.

Government:

Prevent further wastage of land and spoiling of the landscape by desisting from any further expansion of road networks.

Increase the capacity of existing roadways by introducing technical innovations, such as, provision of fly-overs above existing roads and railway lines. Environmental pollution and noise nuisances caused by motorized traffic should be minimized by legal means (for instance, "clean" and noise-free motor engines are now a technical possibility).

Keep cars as far as possible out of the heart of the city and residential areas, but provide at the same time for efficient and cheap means of public transport as well as adequate parking facilities.

Citizens:

Strive, for the sake of your own health, towards a more restricted use of your car and undertake action aimed at curbing traffic congestion.

7. ORGANIZATION

The various activities in the field of environmental control are too often hampered on account of the diffuse structures of governmental and non-governmental organizations.

Government:

An Advisory Council for Environmental Control need to be established immediately, wherein experts not concerned with policymaking are also included, which would advise the government, even if not asked to do so, on all matters pertaining to governmental action in the field of environment. Since environmental control is an issue which concerns almost all ministries, an inter-ministerial consultative body should be set up to co-ordinate decision-making with regard to the human environment.

Citizens:

Support the efforts of the numerous organizations and actiongroups to form a general non-governmental organization at the national level for environmental control.

8. RESEARCH

Very little research has been done so far in the field of environment with the result that there is lack of co-operation between the various disciplines.

Government:

Promote research activities in the field of environment.

Provide adequate resources to institutions engaged in this field.

Scientists:

Give, and also ask for, time for undertaking special study and research on environment in addition to your normal work. Set up interdisciplinary working groups to concentrate on specific problems. Promote wide publicity of the data collected.

9. EDUCATION AND INFORMATION

Very few people are aware of the dangers of environmental deterioration because they know very little about it.

Young people should be made acquainted with knowledge about their environment, right from the very rudimentary start of their education.

Government:

Promote environmental-oriented education (in-school and out-of-school) for all sections of the population.

Propagate a sense of civic responsibility towards the environment.

Disseminate public information regarding the negative effects to the environ-

ment through the use of certain kinds of goods and services, such as: excessive use of fertilizers and pesticides, the use of fossil fuels, petrol-powered motor engines, plastic waste-products).

Educators:

Allocate the problems of man and his environment a central place in your curricula.

Publicity media:

Be aware of your important function with regard to informing the general public and, in doing so, give environmental issues the attention they deserve in order to arouse public consciousness.

10. POLITICS

The maintenance of a congenial environment is a social issue of the first order. This is especially so because those with lower incomes are the most susceptible to the hazards of environmental deterioration. In politics, however, this problem has hardly figured as a major issue.

Political parties:

Make environmental control one of the keynotes of your party-objectives. Propagate measures which render pollution of our environment an economically unattractive proposition. Be critical of those plans which under the garb of economic necessity play upon the insignificant position which the environment occupies to-day.

Be bold enough to include measures necessary for these goals in your party-programmes, even if they may not be very popular.

Citizens:

Let the environmental issue play an important role in your choice of political party.

AGENDA ITEM 8 (continued):

REPORT ON DEVELOPMENT IN NORWAY

Norway does not yet have a National Committee on nature conservation. After the Copenhagen conference in August/September 1970, I wrote, in September 1970, to the Ministry of Communal Affairs and Public Works, which also is in charge of Nature Conservation, and asked, with reference to the recommendations concerning this matter, that such a committee should be set up. The letter has been passed on to the Ministry of Education, but no action has as yet been taken. It is expected that a new Ministry of Conservation of Nature and Natural Resources will be created from the beginning of the year 1972, and the decision about such a committee may have been postponed until that time.

In the universities the students of bio- and geosciences and various other fields are evidently to an increasing degree attracted by ecology, conservation, planning, etc.

The natural history museums, whether belonging to universities or not, are intensifying their educational activities: to quote only one example the Geological Museum of the University of Oslo is cooperating closely with the schools and offers assistance to visiting school classes (and their teachers!). For young girls and boys, Head Curator Johannes A. Dons has founded a "Stone Club", which has now been in existence for several years and is very popular. There are meetings, competitions, excursions, and field camps. For the general public there are excursions in and around the city, and nature trails have been arranged. Mr. Dons is the chairman of a standing committee nominated by the Science Faculty to deal with the protection of natural areas of importance to teaching and research. The committee consists of botanists, geographers, geologists and zoologists. In cooperation with the planning authorities of the municipality it has produced a map, which will be for sale, showing what areas, in Oslo and vicinity, are used or suitable for teaching and research purposes. The committee has also excellent rapport with the administration of the extensive municipal forests and has been met with sympathy and understanding by private forest owners. Also outside the boundaries of Oslo the committee has been active. In much of this work the School Service of the Natural History Museums of the Oslo University has taken part (the school service and its leader, Mr. A.W. Martinsen, are well known to the IUCN, North West Europe Committee on Education).

At the Norges Landbrukskole (Institute of Agriculture, Horticulture, Forestry, etc.) and associated institutions research and teaching are to a very large extent concerned not only with, the utilisation, but also the preservation and protection of nature and natural resources. In addition to the permanent staff, research scholars and students are engaged in projects ranging from primary plant production and geological mapping to landscape architecture and planning. In various ways this constitutes the most important education in nature conservation in the country.

In the teacher training colleges conservation problems are integrated in the courses on biology, sociology and other subjects.

Seminars and research projects are often devoted to problems connected with nature conservation as well as protection and improvement of the human environment.

The camp schools, most of which are in the mountains, are developing satisfactorily, but in spite of sympathy from the government and local authorities they need more economic support.

European Conservation Year had a considerable effect on the public, but the lasting results have scarcely been evaluated so far.

A new type of schools has recently been set up in Norway. They are called "District High Schools" and correspond closely to American colleges. They are very flexible, and the subjects offered vary from one school to another. One of them has started a two-year course in Nature Conservation as well as a one-year course suitable for students who have already completed their professional education, for instance as teachers or civil engineers.

Trondheim University last year nominated an ad hoc committee for coordination and further development of the existing studies environmental and nature conservation at the university. The report of the committee was released in July, 1971. It recommends a general course of one year, various advanced courses, and special courses for those who have already completed their studies in other faculties.

Some of these activities are already in existence, the rest will follow. This is of particular interest because the Trondheim University is the only one in Norway comprising faculties in engineering, architecture, teaching, biology, chemistry and the humanities.

The Institute of Pedagogic Research, University of Oslo, has started a project on "Environment Teaching in the Primary School". Planning started in 1968, the first teaching/learning units were ready for testing in some schools in spring, 1971, and the first report was published in June 1971. The project is planned to terminate in the autumn 1976.

Instigator and leader is Prof. B. Bjørndal. In a working committee he has beside him Mr. A.W. Martinsen and a secretary. There is also a council consisting of specialists from various fields of teaching and research. The project is financed through various research councils.

The scope of the project is to find new ways of teaching about environment and nature in the primary school, in order to give the children a better understanding of our bio-physical environment and awareness of problems connected with it. The necessity of protecting the values of nature should have a central place in this teaching, which is intended to be based on the "inquiry/discovery" principle. The group will produce a series of teaching/learning units for the various school grades. They will be tried out in schools and the results evaluated.

AGENDA ITEM 8 (continued):

REPORT ON DEVELOPMENTS IN SWEDEN

National Committee. A national committee was formed at the beginning of 1971 and is integrated with the Board of the Swedish Society for the Conservation of Nature. In the course of the Spring the Committee held three meetings, the subjects for discussion being the training of technical experts in environmental conservation, the working tasks and future of the North West Europe Committee, and the cooperation with allied organizations in Sweden. A special report will give a further, more detailed account of the Committee.

Primary and Secondary Schools. In the revised 1969 curriculum for the 9-year compulsory school period more emphasis was placed on nature conservation. An appreciation of the imminent dangers implicit in the current situation and of the need for protective countermeasures is rapidly becoming more widespread. A Project Week was held in the period August 31st to September 4th 1970, and seems to have been a great success in most places. The most important long-term effects will probably prove to be a marked development of tuition in experimental environmental conservation (laboratory experiments), a stronger emphasis on ecology and better collaboration between the scientific and sociological viewpoint on questions pertaining to environmental conservation. For the moment, however, it has been possible to observe a certain supersaturation with nature conservation after the intensive work done in 1970. A detailed presentation of the Project Week was given during the Teachers' Conference held in Copenhagen in that year.

In 1970 the new syllabus for the integrated upper secondary schools was drawn up. These schools now comprise administratively both the earlier 3-4 year upper secondary school and the vocational school, in all about 20 lines. From the point of view of environmental conservation one may note, inter alia, that general science has been introduced in the 2-year social line on which the training of class teachers is based!

'General science' is well suited for integrated treatment of questions pertaining to environmental conservation; in more than half of the "projects" in the subject these questions are taken up.

In several of the new syllabuses for the vocational lines, too, environmental conservation is now stressed; examples of this are provided by the agricultural line, the nursing-profession line and the food technological line.

The special investigation (SMIL) that under the aegis of the National Board of Education has been working on the subject of tuition in environmental conservation, has continued its activities up to July 1971 and published, inter alia, a number of teachers handbooks. In addition to the earlier published Läromedel i miljövård (Teaching aids in environmental conservation), Temavecka om miljövård (Project week on environmental conservation) and Laborationer i miljövård (Laboratory experiments in environmental conservation), in 1971 Exkursioner (excursions) and Miljövårdsundervisning på tekniska

gymnasielinjer (Tuition in environmental conservation in technical secondary school lines) will be published. The investigating commission will also publish courses of study in environmental conservation with target designations for all school levels and subjects concerned.

Special courses of study for the teaching of environmental conservation in the primary and secondary schools are being prepared.

A new syllabus revision for certain secondary school lines is planned for 1973. It is hoped that also students following technical lines will get times for tuition in ecology. For these students biology has hitherto been only an optional subject outside the frame of the regular tuition.

The National Board of Education has written to all the municipalities in Sweden requesting them to take into account, when drawing up building plans etc., the school's need for suitable areas for field-studies within a reasonable distance from the school. Some (relatively few) municipalities have taken up the question for positive treatment.

Post-secondary-school training. Special 1-year courses have been arranged by the National Labour Market Board for the training of engineers as so-called environmental conservation technologists.

Also 20-week courses are being prepared for this category. Up to the present a very large number of courses in environmental conservation of varying length and quality have been arranged -in the first place by the educational associations. An overhaul and reorganization of the very many and varied courses at present open to students is a definite desideratum.

Popular education. A growing number of study-circles in various fields touching upon environmental conservation have been organized and the interest shown is very great. A special guide to studies in environmental conservation has been produced by the Swedish Society for the Conservation of Nature to meet this need.

Further, the educational associations have regionally appointed special contact-men to keep in touch with the Society for the Conservation of Nature.

Training of teachers. The training of biology teachers is still a serious problem. The standard of the training has sunk appreciably since the introduction of the new university regulations.

During the whole period of training only a few hours are devoted to the methods used in environmental conservation. The Swedish Association of Biology Teachers requires an obligatory 10-week course in environmental conservation for future teachers. The advanced training of teachers is arranged mainly in the form of summer courses. This year about ten courses have touched upon ecology or environmental conservation. Two of these courses, for example, deal with experimental tuition in environmental conservation. One of the courses has been traditionally arranged by the Swedish Society for the Conservation of Nature, the rest by the Board of Education. Great interest is shown in these courses and as they were fully booked many applicants had to be turned down.

University training. At one of the universities a 40-week (1-year) course in environmental conservation is offered as an alternative to the course in biology. The greatest interest, however, seems at present to refer to a 20-week course in environmental conservation at the universities

which is open to all university and technical college students. Ten-week courses in environmental conservation for journalists and persons with very restricted and specialized tasks in environmental conservation who nevertheless need a general survey of the whole field are also now being arranged.

At the National Social Welfare Board an enquiry - from the point of view of, inter alia, environmental conservation - is being made into the training of public health officers.

Information, general. Radio and TV show great interest in questions pertaining to environmental conservation. Both informative programs and debates have been arranged. The press also shows a strong involvement. A growing number of books dealing with different aspects of the subject are being published and several of these are intended to provoke debate. There has been a very extensive production of films and cartoon strips.

All the political parties have included environmental conservation in their program. A great number of special action-groups - often young people - have been formed at the local level to deal with special, very local, questions.

SUBMISSION ON BEHALF OF THE INTERNATIONAL YOUTH FEDERATION FOR ENVIRONMENTAL STUDIES AND CONSERVATION

by Theophile Vethaak

During its 16th General Assembly, which took place from 1-15 August in Filzmoos, Austria, the I. Y. F. organized a three-day Symposium on Youth Strategy in Environmental Conservation.

This Symposium was regional, European meeting of youth organizations at present involved in environmental issues. It aimed to define a strategy to promote environmental conservation to be carried out principally by I. Y. F. Member Organizations in Europe.

The outcome was a series of proposals for direct and indirect action of different types and at different levels, drawn up by working groups on economics and natural resources, population growth, education and information, pollution, and voluntary service and conservation. These proposals were also used as a contribution to the 1971 International Youth Conference on the Human Environment, held in Canada from 20 - 30 August and co-sponsored by I. Y. F. (They have since been published by I. Y. F.'s International Youth Centre for Environmental Studies in Youth and Environment, Amsterdam, 1972. A preliminary synopsis was tabled by Mr. Vethaak at the meeting. -- Ed.)

I would like to ask the participants in this meeting to give full support to our Member Organizations in their countries when they try to give effect to these proposals.

I have also tabled for your information copies of the Declaration of the International Youth Forum for European Conservation Year. *) The Forum was convened by I. Y. F., in consultation with the Council of Europe, at Inzmühlen in the Lüneburger Heide from 13 to 25 July 1970. Section 9 of the Declaration requested that Environmental Education should be sufficiently included within required programmes of all levels of education and, in particular, called for better teacher-training in this field and the improvement of teaching methods and textbooks on these methods.

*) Published in the I. Y. F. European Bulletin, Vol. 6 no. 1, in September 1970, and in "Tavaxacum", Vol 9, no. 1, p. 3 - 5.

AGENDA ITEM 9:

ESTABLISHMENT OF NATIONAL COMMITTEES ON ENVIRONMENTAL EDUCATION

The Swedish National Committee on Environmental Education

There are a lot of different committees working with nature conservation education at different levels. Despite this we have been recommended to form a national committee on environmental education in Sweden out of the present committee on education belonging to the Board of the Swedish Society for the Conservation of Nature. As the Society is an independent, voluntary body, we think it is the right basis for a pressure group on education. The Society has good contacts with authorities and different specialists.

Resolutions and recommendations can obtain the right weight through the Board of the Society. Our experience shows that ideas and proposals can sometimes be put forward more independently by a voluntary body and that especially the school authorities seem to be more prepared to listen.

On the committee are representatives of universities (zoologists, geographers and botanists), teacher training colleges, schools (at different levels), the Museum of Natural History and the Board of Education, as well as the National Environment Protection Board, the press and the adult education movement, in all 18 persons.

The committee has until now had three meetings. At the first, future tasks for the committee were discussed, as well as the different projects proposed by IUCN. Details of the meeting have been sent to some members in a letter of 1 March 1971. Another meeting was concerned with teacher training and our relations to other societies with nature conservation, environmental conservation or biology in their programmes. A third meeting was concerned with the training of technical experts in environmental conservation.

Mrs. Anne von Hofsten

AGENDA ITEM 10:

CHANGING REQUIREMENTS IN ENVIRONMENTAL EDUCATION

by Drs. J.B. Pieters

The problems relating to the deterioration of the natural environment are now perceptible to almost everyone in the developed world. It can be said that those problems constitute the "environmental crisis", a crisis of a proportion man never faced before. Besides the original destruction of animals and plants, nowadays man's very survival is at stake.

This crisis can be regarded as the climax of what has been called the 'dysfunction' of structural changes in the society.

I assume I need not describe developments in population growth, in urbanization, in the industrial sector, in agriculture and in transport and communications. However, the dysfunctions of the changes in these fields need some attention, for the simple reason that sometimes they are a neglected or taboo subject.

Dysfunction of the structural developments can be summarized as follows: Due to cultural, political and social obstacles the population-growth is in general not considered as one of world's major problems, nor is it related to the environmental crisis.

Nevertheless the alarming food-situation in the world is rooted in the growth of population - The low increase of the national income in several countries might be, according to several economists, owing to the unbridled population growth.

The relation between overpopulation and aggression has been proved in a convincing way by Russell and Russell. Therefore one might ask whether appeals for peace are convincing if adequate birth-control is condemned at the same time.

Some primary needs of man are satisfied by means of the natural environment. This environment supplies food and raw materials for his energy-needs, his houses, consumer goods etc. It supplies the natural stimuli necessary to satisfy the emotional needs of man.

Of course the multiplication of the population causes a multiplication of needs. The satisfaction of these needs exceeds the carrying capacity of the natural environment. Moreover one is faced with a lack of space, by which it is no longer possible to realize adequate physical planning. The latter results in an undifferentiated environment, in which monocultures dominate, monocultures not only in a natural or agricultural sense, but also in the sense of town and road building.

This brings us to urbanization, which shows a development resulting in negative processes with regard to social structures and the human mind. The present town-building is a subject of increasing criticism, in regard not only to architecture, but also to functional design. The latter is still dominated by the conclusions of the Charter of Athens, which separated the living, working and recreational functions. This separation has made it necessary to expand the facilities for traffic movements, which mostly constitute barriers for the satisfaction of the social, cultural and psychological needs of the town-dweller, especially the child.

In many cases urban life might be called synonymous with "mass society", the latter being characterized by depersonalized social relations, loss of identity and alienation from the decision making bodies. Living in "anthropothèques" prevents any form of privacy; the evident biological need for marking out one's territory is hard to fulfil.

The dysfunction of industrialization in the western world give rise to profound anxiety, as these are perceptible to everyone. Air and water pollution, noise and possible calamities such as explosions threaten man, plants and animals extensively. Only a happy few are able to avoid exposure to the results of environmental deterioration.

Monocultures in agricultural areas force men to use toxic controls; increase of production forces the use of artificial fertilizers. Soil-pollution and disturbance of the natural balance may be the result, as nowadays nearly everybody is well aware.

From an esthetical point of view natural areas and attractive countryside are damaged, often in a irreversible way, as a result of necessary infrastructural activities.

The development of the means of transport have resulted in air and water pollution and noise. In particular, the number of private car is increasing; tremendously and is therefore an important source of air-pollution. Moreover the necessary expansion of the network of roads results in extended claims on open space. Especially in urbanized regions the car does not seem to be an adequate means of transport any longer, also taking into consideration the still increasing number of accidents.

The promotion of public transport is no doubt an alternative. However one should not overlook the fact that the private car is not only a simple means of transport, but also an emotionally loaded property, a status-symbol, which will not be given up at once.

Some structural developments, without being influenced by cultural, social and other variables, lead to dysfunctions.

Especially population-growth should be mentioned, which, necessarily, leads to demands on the environment and on natural resources and, strengthened by certain consumer needs, finally results in premature exhaustion.

Moreover certain structural developments may influence or reinforce each-other. Again population-growth has to be mentioned, which to a certain degree forces -

- a. industrialization, to ensure employment;
- b. increase of agricultural production, to safeguard the supply of food;
- c. expansion of infrastructural facilities, as a response to the increasing needs of transport.

Nevertheless I am of the opinion that a great number of the dysfunctions mentioned are not inherent in structural changes, but appear as a result of determining social, cultural and psychological factors, such as the social relations, the economic structure, the education system, the administration, the pattern of culture and certain socio-psychological attitudes.

To discuss these factors briefly, the present social systems are still characterized by an unequal distribution of power. This results, together with an increasing complexity of social structures and social relations, in feelings

of apathy, discontent and distrust among ordinary people. In spite of several so-called democratic ideologies, only a few people are in the position to make the decisions, affecting all others.

With regard to environmental problems people seem to have got the impression that these lie beyond the sphere of individual influence, that they are problems wherein man is the victim of processes and structures of an autonomous nature. Such feelings may have consequences conducive to a state of fatalism and a lack of idealism. Moreover, as a result of being frustrated in the non-materialistic field, I think people become inclined to attach more value to materialistic aspects of life.

The important role of materialistic values in the environmental deterioration process will be discussed later in my speech. In short, present social systems result in apathy towards environmental problems, and give the opportunity to a minority to monopolize the environment.

In the present world in general there are two opposing economic systems, the modern-capitalistic system and the socialistic system. In the context of my speech I do not consider it useful to discuss the advantages and disadvantages of each system. It is enough to note that both are confronted with the same environmental problems. In spite of the theories of economists like Mishan and Boulding, existing economic systems are still characterized by their limited industrial-economic approach, in which social welfare and environmental elements are not given due to consideration.

Boulding characterizes our economic systems as "cowboy-economies", in which both production and consumption are regarded with great favour, economies associated with reckless, exploitative, romantic and violent behaviour.

Indeed the emphasis lies upon the supply of consumer goods; but the removal of the scarcity of consumer goods leads to scarcity of others such as natural areas, wildlife, clean air and pure water. Moreover a dysfunction of the present economic policy is the ever growing amount of material needs: each satisfied need raises new material needs. The satisfaction of all these needs mostly does not contribute to man's well-being or health, and causes damage to the environment.

In general, formal educational institutions are still stressing the achievements of the individual. The pupil has to compete with his fellow-pupils and being the best or better than others seems to be a desirable reward. As a result the child is likely to become an egocentric, who can hardly perceive himself to be a small part of a wide system, whether social or natural. Yet in my opinion it is just that kind of what might be called ecological perception that is essential to the solution of environmental problems. Moreover, the present education system doesn't contribute to the proper utilization of the available skills and talents necessary for the self-esteem of the individual as well as for the solution of the problems that society is faced with. In my opinion too much emphasis is laid upon intelligence.

The intelligent child is still favoured in the sense that teaching is adapted to his level of intelligence. Seemingly less gifted children are too often regarded as retarding the teaching programmes, with the result that they receive less attention instead of more. They probably leave school as frustrated people with undeveloped talents, possessing too little knowledge to understand problems of modern society, such as those of the environment, and therefore unable to tackle them.

Finally, the present education system, as a result of its emphasis on obedience and order, doesn't create critical people, who can evaluate developments in the society rapidly.

Another determining factor is the administrative system, including the bureaucratic system. It can be said that a general characteristic of this is its inability to adapt rapidly to social and structural changes and to neutralize the dysfunctions of these changes in time. This situation is of course partly due to the ever increasing amount and complexity of social changes. Treatment of these rapidly arising changes demands profound expertise, which mostly cannot be mobilized immediately. Moreover the administrative bureaucracy shows certain features that retard the decision-making process.

There is however one point to which I would call attention, namely the role of pressure and special interest groups in the policy and decisionmaking process.

These groups gain more and more influence on an administration composed of parliament, government and bureaucracy. The best organized or most noisy groups seem to be very successful. Promotion of their group interests becomes part of the governmental policy, group interests mostly presented as public interests.

As a result really serious problems or true public interests do not always become a matter of concern to government, particularly if such interests are not backed by powerful pressure groups. Policy measures, for example affecting the natural environment, can even be retarded or prevented by existing pressure groups. In spite of my dislike of this power game, I believe that an important way in which conservationists can influence the administration is to form pressure groups as well.

Alienation of the citizen from the administration and lack of interest in political affairs have become a subject of grave concern to all policy-makers and politicians. The administration is perceived as an autonomous power, politicians as persons who promise "castles in Spain"; feelings of impotence and apathy with regard to social and political processes are becoming ever more manifest.

Many citizens no longer consider parliamentary democracy as an adequate means of expressing man's interests.

Participation in the decision-making process as well as in the execution of policy measures would probably reduce this alienation. Moreover it would promote more knowledge on and identification with the environmental problems. Therefore administrative participation can be said to be a means of establishing environmental awareness.

Finally it is a way of utilizing intellectual potentialities that might otherwise be overlooked.

Adequate administrative participation largely depends on the extent to which the policy-making process has been decentralized, that is the degree to which lower and local authorities are allowed to decide and execute certain policies independently. This decentralization is of importance for reducing the distance between government and the citizen.

The so-called pattern of culture in a society is of significant importance. This pattern consists of norms, values, goals and expectations in a specific combination. Cultural elements determine many aspects of a man's life: his thoughts, his convictions, what he strives for, his social relations, his economic goals and even his sexual behaviour. They influence human attitudes and behaviour towards the environment as well. It can be said that certain attitudes and ways of behaviour increasingly result in negative effects on the environment. Attitude-change and change in behaviour should therefore be an important aim of any environmental policy or even constitute the very basis of such a policy.

Before I discuss the contribution of the social and human sciences to environmental education, I would like to go back in history for a while, to get a better understanding of some present day cultural elements.

During this socio-cultural evolution man evolved from collector to hunter, from hunter to farmer and, in some parts of the world, to town-dweller and industrial worker.

Along with this evolution a process set in which was characterized by a continuous change and adaptation of the human attitude to nature and natural resources in a negative direction.

Increasingly man perceived himself outside or over nature, considering the natural environment as enemy territory, in which he could only maintain himself through wasteful exploitation. The fight against the forces of nature was even given a heroic character.

During the stage of collecting and hunting the gap between man and his surrounding natural environment is relatively small.

He is completely dependent on this environment and its resources and is able to maintain himself only by means of a profound knowledge of nature and natural cycles. His religious convictions, of an animistic character, are rooted in nature. Many rites and taboos can be said to have a latent nature conservation function.

Monotheistic religions, characterized by rationalism, develop later, and place man the individual in the forefront; the antithesis between man and nature is stressed explicitly. Nature is regarded as subservient to man, successful subjection of it as a proof of the benign disposition of a metaphysical power. Finally, since the industrial revolution, an "appropriation-temper" arises, first in the western world, next in all other parts of the world.

A present human behaviour is still dominated and determined by a materialistic/consumptive oriented culture pattern, which possibly has its roots in the original Calvinistic ethics. The relation, described by the German sociologist Max Weber, between the rise of capitalism and Calvinistic ethics, might be relevant to the present attitude, which is characterized by a striving for individual prosperity.

In general one might say that the environmental attitude of modern man is characterized by emotional and intellectual alienation from the natural environment, resulting in behaviour that promotes an irrational use of the natural resources and disturbs the natural cycles. Moreover this behaviour seems to be connected with the optimistic faith that man is able to counter all arising difficulties, especially those of a natural character.

Knowledge of the role and position of the human being as part of the natural environment is more and more lacking among ordinary people. In addition, emotional ties with this environment are getting increasingly lost, in spite of man's emotional needs, which can or even must be satisfied by means of contact with nature or "green belts". In this connection, developments in ethology and environmental psychology deserve attention; the latter is searching for the principles governing the psychological needs of man in relation to his environment, especially his perceptive ones. One might say that these needs have become latent or even repressed.

The alienation, mentioned earlier, can be deduced from some sociological inquiries out in the Netherlands. An inquiry into outdoor recreation needs found that in one of the Northern provinces of the Netherlands about 62% of those questioned over 16 years in age never took a walk in natural areas.

Other inquiries point to the fact that the sections of the population which do avail themselves of recreational facilities are composed of persons with high levels of training (academic) and belonging to the higher ranks of the professions. This implies an over-representation of this group in relation to the total population.

I hope I have made it clear that the deterioration of the environment is associated with several social, cultural and psychological factors, which, to make the matter even more complicated, are themselves interrelated. The solution of the environmental crisis depends largely on modification of the determining factors, for one should not expect that the structural changes I have mentioned, can be halted immediately. I believe that no single organisation or institution is able to alter the determining factors independently. Each must, however, operate on the basis of its expertise. Thus environmental educators have to focus on and change attitudes and behaviour, while remaining conscious of other factors and the relationships of the latter with human attitudes. Moreover, conservation education organizations should not be afraid of cooperation with other groups centred, for example, in social, economic, administrative and formal educational fields.

During this conference something has already been said about the difficulties of educating people on a broad scale. The man in the street still seems to be alienated from nature; he still seems unconvinced of the necessity for a drastic environmental policy, which in some way will restrict his personal freedom. It is true that public opinion polls have shown some environmental awareness, which, however, seems rather superficial and rooted in a sense of fear only.

Moreover, it is especially the higher ranks and classes of society that show the greatest awareness and involvement.

The problem of the non-involvement of the greater part of the population is directly connected with the effects of former and present environmental education activities.

I consider it a remarkable fact that obviously many environmental educators have made little attempt at a profound evaluation of the effect of these activities or a real effort to measure them.

By neglecting to do this, the institutions or organisations concerned are unable to work out an adequate policy, based on continuous feed-back and utilization of all the methods or means available or to be created.

I believe that it is here that the social and human sciences come into the picture. In the solution of the environmental problems much emphasis has been laid upon the interdisciplinary approach or cooperation between the social and natural sciences. However, as far I can see such cooperation does not seem to be very successful. It is difficult and perhaps serves no useful propose to try to find out which group of sciences is guilty. The fact remains that there is still a considerable lack of interest and even esteem for eachother's work.

I have to admit that, in general, social scientists do not show much professional interest in environmental problems, which even they tend to characterize as problems of a 'natural scientific' kind. Fortunately, Dr. Nelissen is still stressing the importance of environmental problems for the social sciences as well and the fact, moreover, that proved ecological concepts are of great value to sociological theory.

Nevertheless it is the social sciences that can explain the determinants of the present environmental deterioration and can make wide circles of society aware of them. In short, here in environmental education is one field in which social scientists can make a most useful contribution, provided that two problems can be solved. The first is the problem of getting social scientists interested and involved in environmental affairs.

The second is the problem of discovering the extent to which present techniques of the social and human sciences are useful for environmental education or need to be adapted and modified.

The first problem can, in my opinion, be solved very easily. Existing environmental education bodies, advisory as well as executive, should contact social scientists and invite them to join forthwith. With regard to the second problem I am also optimistic. The theories and techniques, which have been developed, on planned social change, human communications, manipulation of collectivities and groups, motivation and applied child-psychology, might all be applied fruitfully.

For example, social psychology has developed many theories and techniques on attitude measurement and attitude change. The term attitude refers to certain regularities in an individual's feelings, thoughts and predispositions towards some aspect of the environment.

An attitude is usually thought of as a hypothetical structure, not directly open to observation but inferred from verbal expression or overt behaviour. An individual's entire personality structure and hence his behaviour may be thought of as organized around a central value system composed of many related attitudes.

Attitude measurement is a highly technical process, which is mostly performed by means of the attitude-scale technique. The creation of attitude-scales with regard to the natural environment and environmental policy is very urgent, because until now environmental educators have been unable to measure the results of their activities.

Attitude-change techniques, which are of a very technical character too, are not yet adapted to environmental problems. During discussions, I have had with social-psychologists on this matter, they showed much enthusiasm and were of the opinion that they could play a role in environmental education. A problem, however, is constituted by the interrelationship of attitudes, the resulting complex making it difficult to modify certain very particular attitudes on a special subject.

I am happy to inform you that my ministry intends to undertake a broad attitude-research programme on natural environment and environmental policy. The results of this research will certainly be of an international significance and will be made available to all who are concerned. Moreover, contacts with social-scientific research-institutes on environmental education topics will be intensified.

Conclusion and summary

I have given an outline of the environmental crisis, suggesting that it is composed of dysfunctions of some structural changes. These dysfunctions do not appear independently, but as a result of determining social, cultural and psychological factors. Among these, I mentioned the social-economic system, the educational system, the administrative system, norms, values, goals and expectations in society, and certain social-psychological attitudes. To solve environmental problems, modification of all the determinants and also one major structural change, the halting of population growth, are necessary. In my opinion modern environmental education can play an important role in this solution, if it meets the following requirements:

1. Environmental education should refer to the natural environment as a whole, water, soil and air as well as plants and animals.
2. Ecology and ecological thinking should be the very basis of environmental education; a restricted clinical or medical approach has to be avoided, because such an approach will not lead to consciousness of the complexity of the natural environment and of the role and position of man within this environment.
3. Environmental education serves man's well-being and should be defined accordingly; it should be adapted to the intellectual, social and cultural background of its objectives; special attention should be given to the so-called non-converted people, mostly belonging to the lower levels of society; therefore adult or public education should be of equal importance as formal education.
4. Environmental education should pay more attention to the emotional development of the child; therefore the kindergarten should be of primary concern; the emotional ties with the natural environment can be said to be the basis on which environmental awareness and involvement rests.
5. Environmental education should utilize all possible means to achieve its goals; one should not be afraid to cooperate with action-groups and other politically oriented bodies, which can even be regarded as having an important function towards environmental education; moreover environmental education should cooperate, if possible, with existing influential social institutions, like churches and trade-unions, utilizing new communication-channels.
6. Environmental education is not concerned with biology only, but also with chemistry, the landlinked and earth sciences, history and philosophy, as well as with the social sciences.
7. Environmental education should utilize the theories and techniques of social and human sciences; social scientists should join and reinforce environmental education bodies as soon as possible; environmental education oriented social and psychological research should be carried out.
8. Environmental education organisations should consist of professional staff, supported financially by the government.

I have several times used the term "environmental crisis". Yesterday I read in the newspaper that computers of the Massachusetts Institute of Technology have constructed simulated society-models. The computers were fed

information on the present society, including data on environmental deterioration. It was predicted that, without radical changes in policy, within a few decades man will be faced with a worldwide disaster.

It was Herbert George Wells who said: "Human history more and more becomes a race between education and catastrophe".

May we all belong to the winning team.

AGENDA ITEM 11:

ENVIRONMENTAL PROBLEMS AND PARTICIPATION

by Dr. N.J.M. Nelissen

During the sixties of our century man has been confronted with many problems concerning the fitness of his environment. Structural changes in society, such as the growth of population, urbanization, industrialization, mechanization in agriculture have resulted in society as we know it today. We refer to it as modern society, the affluent society.

But the structural changes in society did not only bring about a growth of welfare, but had at the same time results which were not intended and which have had a great negative influence on the mental and physical wellbeing of man. Such unintended phenomena are called, in sociological terminology, latent dysfunctions. Examples of such latent dysfunctions are the destruction of plants and animals, the pollution of water, air and soil and the noise of traffic.

The question is to what degree can we accept these dysfunctions. Does the moment arrive when we have to say that the total amount of dysfunctions is so large that it is not worth urbanizing or industrializing at all?

In answering this question one has to realize that man is part of nature or, as the ecologists say, of an eco-system and that for the survival of man, the environment must have certain qualities. These qualities are called: functional prerequisites. As examples of functional prerequisites we can mention air, water, temperature and food, which must provide the energy for life to be lived at all.

A continuous concern of modern societies is to produce and protect the necessary elements for survival of man in his eco-system. In this connection it is worth mentioning that man himself has created technologies which can be seen as destroying elements in the conservation of functional prerequisites. Many measures have been taken or are being taken in many societies at this very moment to protect man and nature. In Holland for example laws have been made to protect man and society against the pollution of water, air and soil. Many persons have argued that only a good system of international measures, laid down by law, can help man and society in this age of environmental crises. Sociologists, however, are sometimes strange people, who do not believe in the intrinsic value of laws. They often look for more than mere laws and for things which lie behind or deeper than laws. It is my opinion, for example, that laws by themselves do not bring about a situation in which is effectively conserved or the pollution of the environment is halted. Other things need to be done to protect man against destructive processes. I want to emphasize that only a fundamental change in attitude towards nature will help us to survive. Social scientists have long drawn attention to the importance of values and norms which lie beyond the action of individuals. In Western societies the attitude towards nature has been one of attack nature, aimed at forcing nature to serve man. It is difficult to assert that such an attitude is the causal factor in our environmental crises, but without doubt one can argue that this factor is not without importance in the understanding and solution of environmental problems.

One of the tasks of social scientists now and in the future is to influence basic attitudes towards the environment and to make man aware of his niche in the eco-system. One of the problems in this connection is whether the attempt to influence attitudes at all is desirable or permissible. I am aware

of the major philosophical and ethical questions involved in the process. However, generally speaking, the exercise of influence is central and inherent in human communication. If we want to eliminate influence, we have to prohibit all forms of communication. But I believe that this is not the true problem; the problem lies in the degree, to which influence is exercised and the plausibility of the message we try to put across.

Let us turn, therefore, to the techniques for attitude and behaviour. Of course, there are many methods of influencing human attitudes. Some like indoctrination or mental and physical pressure are not desirable and are impermissible in democratic societies.

In Western societies we have to use methods which are on the one side effective and on the other side democratic.

But what do we mean by effective and democratic? In their studies of communication some social scientists have discovered that there are several degrees in the effect of information on a subject. Some messages only have the effect of a confrontation, whilst others influence a person's behaviour. I would distinguish four degrees in the exercise of influence:

- the degree of confrontation
- the degree of perception
- the degree of attitude
- the degree of behaviour.

By democratic we mean forms of communication and action in which people themselves plan and make the decisions for their action.

In many western societies systems exist which are indirectly democratic, in the sense that a parliament chosen by the electorate makes the decisions about common affairs. The opposite of democratic system is a manipulative, elitist and paternalistic system, although this, of course, a highly summarized description of the social system concerned:

For the purpose of combining the two aspects, of an effective and of an approach, I would suggest that four different matters of influencing attitudes to the environment are involved:

- information
- education
- dialogue
- participation.

1. First, in making use of the method of information, the accent lies on the person or institution that provides the information. There are, of course, certain situations in which the information method tends to be quite adequate on its own. Its effectiveness, as is well known, depends on factors such as the degree of people's orientation to the media and their message, the degree of consonance between the expected and real content of the message, and the recipient's identification with the subject matter. However, not only are such aspects of the information-recipient relationship relevant, but questions about the form and content of the message are very important for the success of any influence that the message can exert. The great advantage of information is that it can be imported to a very large public with only a little effort. On the other hand, it has often been shown by empirical research that the information method may not have much more effect than introducing a sort of confrontation with the subject matter. Only if it is institutionalized is it likely to influence the perception and attitudes of people.

2. Secondly, in contrast with information, education tends to be a more serious and planned form of exerting influence. Its success depends, however, on how attractively and persuasively the educator can put his message over. It is widely recognised that there is a need for more formal environmental education in schools at different levels and for several years past, teachers of primary and secondary schools have discussed the problems of environmental education.

During a conference in Nevada in 1970, a working group worked out a plan to give environmental education an adequate place. The group made a distinction between three phases in the educational process, namely:

- Phase 1, in which the pupil has to learn concepts and skills which provide consciousness of variation in nature.
 - Phase 2, in which the pupil has to understand the complexity of the ecological setting of man. In this phase special attention should be given to case studies in which problems concerning the relation of human being to environment are illustrated.
 - Phase 3, in which the pupil has to learn about the big changes that are taking place in nature and society. The intention of this third phase must primarily be one of developing environmental ethics.
3. Thirdly, in contrast again with both information and education, the dialogue method obviously involves two-sided communication. In many countries dialogue is effected through the parliamentary system. At the national level the dialogue is between the national government and the parliament, at the local level between for example, the local government and the community council. Many difficult questions are involved in setting up an effective dialogue. For example, who exactly is to participate in the dialogue? What is the power of decisionmaking is to be vested in the institutions in which the dialogue takes place? What should be the scope of the dialogue and so on. In practice problems may arise between the desire for rapid decisions and the long time that discussions and dialogue tend to require. Problems may even arise because of the elitist character of the dialogue. It should also be emphasized that dialogue should not be confined solely to parliament, but can also be held by other groups in society. The effect of dialogue on environmental outlook could, however, often be greater and deeper than that of the information and education methods.
 4. Fourthly the method of participation may at first glance and seems a rather facile one, but on further analysis turns out to be a phenomenon of infinite complexity and subtle dimension. Truly the more one explores the endless ramifications of participation, the more one appreciates the old adage of "having a tiger by the tail". Every effort to reduce its substance to a definable systematic and comprehensible body of thought is resisted by inherent dilemmas - contradictions between myth and reality. A scientific approach to citizen participation is extraordinarily difficult, suffused as it is with subjective judgements, value-laden preconceptions, lack of objective criteria and standards of measurement, and a host of differentiated perspectives from which anyone can draw just about whatever meanings his predilections desire. If one concludes, for example, that participation is by nature good and desirable, it is not so difficult to

give examples of its positive aspects; conversely, if one has reservations about the efficacy of the process, it is not at all difficult to uncover situations which substantiate such doubts.

The enumeration of these four methods exerting a positive influence on outlook towards nature does not mean that in every situation education is better than information, dialogue better than education and participation better than dialogue. Generally, the choice of method depends on the structural situation of the society. But let us now return to participation and, in the first place, discuss some of the arguments for and against it as a method.

Arguments for participation

For many people participation is a dilemma, not only in ideological sense, but even in practical sense.

Edgar and Jean Cahn (Cahn, E.S. en J. C. Cahn, Citizen participation. In: Spiegel, H.B. C., Citizen participation in urban development, Washington, 1968) have emphasized some fundamental rationales for participation, namely:

1. the value of its acknowledgement and promotion of dignity and self-sufficiency;
2. the value of its by-product in the utilization of untapped man-power resources;
3. the value of the knowledge it affords: the criticism, corrective insight, and continuing validation of efforts which are at best informed hunches on how best to give content to broad national goals which can be attained only through the perilous process of trial and error, experimentation and assessment.
4. Citizen participation is advocated by many as a practical answer to the problem of facilitating change. One may call this the "argument from social necessity". The acceptance of the idea is promoted by the expectation that the help of the residents will be needed in the realisation of plans.
5. Citizen support is needed to gain any chance of the plan being taken up by politicians and administration.

These arguments are practical reasons for advocating citizen participation. Another argument may be called: "the argument for democracy". By this argument participation is not a means to an end, but is considered to be nothing less than democratic procedure and hence self-justifying (Goldblatt, H. Arguments for and against citizen participation in urban renewal. In: Spiegel, H. B. C., Citizen participation in urban development. Washington, 1968).

Arguments against participation

1. The mainly negative function of participation is the problem of resources.

The resources allotted to all programmes are finite. And within the limitation of fiscal appropriations, priorities must be set, choices made, and desirable projects sacrificed. In practice therefore, there may be contradictions between what is needed for participation and the limitations of resources.

2. Participation seems to be a self-defeating mobilization of antagonistic sentiment. It is said that the ideas put forward in participation, are fantasy, negative and suspicious rather than constructive.
3. Participation provides a lobby for egocentric vested interest or special privilege.
4. Participants are only a proportion, sometimes even a small proportion, of society.
5. Participation is essentially without authority and has little influence on official decisions.

Frances F. Piven. (Piven, F.F. Participation of residents in neighbourhood community-action programs. In: Spiegel, H.B.C., Citizen participation in urban development, Washington, 1968) says that two sets of questions need to be answered in realizing participation:

- a. Who should participate? In what actions should they participate? Where should this participation be located in the organizational structure? What conditions should govern this action?
- b. How can participation by the specified groups, and in the prescribed forms, be elected and maintained; i. e. what are the effectuating mechanisms for the forms of participation prescribed by the answers to the first set of questions above ?

In the light of these arguments, for and against participation, and of certain other important questions that need to be asked - namely: How should one act as a professional in a situation of participation? Has one to play a leading role? Has one to take part in discussions only as a member of the group? - we can now consider the application of the participation method of the problem of influencing environmental outlook. Research has often shown that for the purpose of promoting participation certain initiatives are necessary. Thus the professional, who understands the problem, plays a significant role in stimulating ideas and actions. Of course, people themselves can take initiatives and sometimes think or argue that the role of the professional is unimportant. However in reality, he can play a very effective role.

I think there are at least two ways of acting as a professional in the system of participation, which are not only effective, but are satisfactory for the professional at the same time, namely the method of what be called: environmental community organization and, secondly, the method of environmental community self-survey

Environmental community organization

This means a form of stimulating and coordinating people's activities in connection with their environment. I want to emphasize that community organization is not only a method, it is a sort of approach, a way of looking at society. It starts from the point of view that a society has the power of self-help, that in every society there are potential forces which can be actualized in situations in which those forces are needed. Specifically this means that within a society people themselves are able to meet the problems with which they are confronted.

However in many situations a stimulus from a person is necessary.

The role of this individual is principally one of catalyst, a cooperative and collaborative force between groups in a society aimed at developing the capacity to solve the problems which may arise in that society.

There are some conditions for this approach, such as:

1. contact between the environmental agent and all groups in the society;
2. knowledge of the specific environmental problems in the community;

3. a positive outlook on man, nature and society;
4. a "congruent" relationship to the groups in which he is participating; and
5. a sort of awareness of the conditions of his environmental community-organization work.

The activities of the agent can be summarized under the following headings:

- a. contact with persons who need help or advice in environmental affairs;
- b. orientation in the problem-fields;
- c. diagnoses of the problems;
- d. planning action in the short and long term;
- e. initiation of desirable changes;
- f. stabilization and generalization of the changes;
- g. evaluation of the on-going process of change.

Although every environmental item is in principle capable of consideration by the environmental community organization, those items that have most relation to people's every day life are most appropriate for example, siting of industry, reconstruction of a neighbourhood, pollution of air and water.

Environmental community self-survey

Basically, this means that people themselves collect and analyse data and use this research directly to guide resulting actions. The idea was launched several years ago and aimed at getting people to work more closely in common and in matters of direct interest to them. This should make them more concerned about their life in society and inclined to think, plan and act for its future well-being in such a context things like the degradation of nature, the continuous pollution of air, water and soil cease to be the concern of bureaucratic hyperstructures and become the direct concern of man himself. This means that he not only becomes aware of the on-going problems, but is also likely to help and to act in accordance with the ideas formulated in the group. It would be best if the ideas about studying environmental problems stemmed from the minds of people themselves, but in every day life one can see that initiatives by certain persons are necessary. Up till now we have not got much experience with this method, but that does not mean that it is not capable of success. It needs more trial.

In situations in which action has been promoted by people, the professional has to think about the way he should act. Often his task is one of distributor of information in the active group and of suggesting what further data may be required.

Even within the technique of environmental community self-survey there are many gradations in relation to relative emphasis on practical and political actions.

The function of self-survey of environmental problems is that it leads to the awareness of the problem, to knowledge of its intensity, to a positive way of looking at the problem and to consideration of possible methods of attacking the problem. It often discloses the things that need to be done and in many situations it is the community self-survey that demands action on programmes and planning.

Conclusion

Of course there are persons who are afraid of these methods, because they have not had experience of them. Although the general success of the methods of environmental community organization and environmental community self-survey cannot of course be guaranteed, I feel sure that it is well worth experimenting with them.

Finally. Three points maybe emphasized:

1. First, a real attack on the degradation of nature will only have success if one is able to change the common attitude of "man against nature".
2. Secondly, of the several methods for influencing men's outlook on environmental problems, perhaps the most effective under certain circumstances is participation.
3. Thirdly, much more experimental work needs to be done with two concrete forms of participation, namely environmental community organization and environmental community self-survey.

ANNEX: SUMMARY OF THE DISCUSSION OF THE TWO PREVIOUS PAPERS

Chairman (mr. E.J. Kesteloot, Belgium):

Two very important and interesting contributions have been by Drs. Pieters and Dr. Nelissen. They were complementary, both emphasizing the importance of a more sociological approach to the environmental problem as such. Most of us are active in the field of nature conservation, so perhaps we sometimes tend to lose sight of the importance of man.

Mr. Lauritzen (Denmark):

I want to express my deep gratitude to the two speakers for their brilliant survey of environmental problems. They showed us new approaches and we found that we were in company with people who understand our problems and are interested in our problems.

I feel strongly that we have missed until now a very important link with the sociologists. We have learned so many other languages that we must be able to learn this language too. I think that we should concentrate a good deal on cooperating with sociologists in the future and make a strong plea to get sociologists "on board" our commission and to have a very intense and close cooperation with them.

Dr. Nelissen (Netherlands):

I would like to add a few words about the way in which one can operate with dialogue and participation. One main difficulty is that the literature concerning the practical problems involved is not overabundant. Only a few documents exist in which the actual techniques are discussed.

However, there are some general aspects of the techniques of dialogue and participation which are both two-sided ways of communication in contradiction to the techniques of information and education. In practice one can see that people combine different methods. Especially in education one tries to get some experience with the method of participation. In my opinion the starting point of the techniques of dialogue and participation is society itself. In response to certain developments or situations in society, people can become motivated to act. This results in a mobilization of potential forces which are already present in society. Environmental educators should not overlook these forces and should be ready to utilize them and turn them into participation and dialogue. The question is, however: How should the professional act in a situation of dialogue and participation? I want to emphasize his role of coordination.

I have some practical experience of citizen-participation (concerning city renewal) and I think there are many difficulties in practising participation. There are many situations in which one has to say: Does it have any value to continue citizen-participation activity? Is it achieving any results?

Prof. Söyrinki (Finland):

May I stress that to get close to people is a very difficult task. There are always people who do not want to participate. Nevertheless they are in general very interested in nature one way or another. They are mostly very keen on audiovisual aids in learning about nature. On the other hand we should not overlook the dangers of too much affection, which can be the source of damage. I have seen in the neighbourhood of Helsinki - always in the spring - the impact of too many young people on nature. The right kind of participation, however, can show very hopeful results.

Chairman:

Of course, I fully agree that it is destructive to have too many young people running loose in natural areas, picking flowers and so on. But I think that, if we are talking about participation, we are thinking of management and of involving people in this management. I think that participation in that sense promotes a dialogue between the policy-makers and "consumers" of the environment.

Dr. Nelissen (Netherlands):

I did also want to emphasize that the four methods of information, dialogue, education and participation must be seen as complementary' methods. The use of one of the methods (or a combination or selection) depends on the situation in society. For example, when there is much unemployment, you can try to promote participation in environmental policy, but you can be sure no one will join you. People plead for work, industry etc. even if it causes pollution of air or water. So there are some structural situations in society which to some degree determine what methods are most adequate in a given situation. I should like to know therefore of any experiences people have with the dialogue and participation methods.

Mr. Zweeres (Netherlands):

I have no real personal experience in this field, but I know that at the moment in the village of Uithoorn, which is outside Amsterdam, a very interesting experiment is taking place. It also raises another problem which has been emphasized by Mr. Pieters. In this village a group of intellectuals, architects, biologists and other professional men have got together to study the possibilities of making their village more enjoyable and attractive. I must say that they have been successful so far. They have been approaching the local government, which sometimes accepted their demands. I think this is very interesting and encouraging, but it raises the problem that Mr. Pieters mentioned.

The people concerned are of a higher level of education, but we want especially to reach those who seem to be less interested, the so-called non-converted. On other hand, of course, a local government will listen more carefully to more or less experienced residents than to groups with less expertise.

I think experience is very important. Regularly we are confronted with complaints showing only a minor interest in the administration as such; we must

promote more interest in playing an active role in governing village or town, especially with regard to environmental problems. I share the opinion that the so-called action-groups can and will help to foster such an interest.

Drs. Pieters (Netherlands):

I would like to emphasize that action groups have two functions. First, they can contribute to environmental policy by formulating alternatives, but secondly they are a way of establishing environmental awareness. With regard to the second function, it is not so very important whether people contribute to the environmental policy as such, but it is important that they can identify themselves with environmental problems, gather information and get rid of impression that these problems lie beyond the sphere of individual influence.

Mr. Oswald (United Kingdom):

We have to realize that there is the very great problem, which Drs. Pieters mentioned, that participation at the moment will only be by an elite. I would also like to suggest that it is dangerous to draw too great a distinction between education, by which some of us may perhaps mean instruction, and this plea for greater participation. I believe that we should bring up our children to be adults who are already used to this involvement, who have experienced this participation from an early age. Nevertheless, I do recognize that it will be too late if we have to wait for a new generation, specially trained in this way; so we must make a start on the older generation. But I would like to make a plea for something of a breakdown of the old distinction between formal education and the new methods of direct involvement.

Mr. Mellowes (United Kingdom):

I think that we would claim in Great Britain that education and teaching all within our institutions is based on dialogue. A lesson at any level is regarded as successful only if there is some feed-back from pupil to teacher, and I suppose this approach reaches its peak at seminars in all forms of higher education. Dialogue is therefore a part of successful education at all levels in our country: the student is not just a recipient, he is active in the total process. Participation can be a total process at the thought level, but also at the action level, involving the community in contributing not only to the planning, but also to the actual execution, the carrying out of projects. This is done very successfully in some parts of Great Britain by young people, who are in various ways volunteers.

Mr. Wals (Netherlands):

I see some difficulties. I know and I recognize the problems which have been discussed by Mr. Pieters and Mr. Nelissen. I fully agree that we must be aware of environmental problems. At the same time we must find the tools to make people more convinced that the environment is in danger. However, I am afraid that if we do not have the proper facilities e. g. in towns and in

the neighbourhood of towns, we cannot operationalize our efforts. Therefore it might be of use of stress in one of our resolutions the necessity of establishing these facilities.

It is clear that we are confronted with all kinds of "dysfunctions" and changes, but I think it might be of value for us to talk more about how to act upon this information, because we must always try to be as practical as possible.

Drs. Pieters (Netherlands):

In answer to Mr. Wals' intervention, I would like first to say that my lecture was meant especially to make you aware of the social, cultural and psychological determinants of the environmental problem. You cannot consider this problem as a problem of, let us say, a biological nature only. Therefore environmental education cannot restrict itself to a merely biological approach and so I made a plea for a sociological and psychological approach as well. Secondly, the big problem is indeed now to operationalise the latter approaches. In general the social sciences do not seem immediately equipped to play a role in environmental education. However, I think that a step forward will be the involvement of social scientists in your programmes.

Dr. Nelissen (Netherlands):

As sociologists, we have at our disposal a lot of techniques, but it depends on the situation which technique is most suitable at a given place and moment. The problem you mentioned was: How do we engage people in environmental problems? I emphasized the method of community self-survey. One of the functions of the community self-survey is the growth of awareness and of a positive outlook towards nature. Because people collect data about the environment, work with data, analyse data, are collating data and adopting some sort of attitude towards the data, these activities have a positive influence on their involvement in environmental problems.

Chairman:

I do hope that one day we shall have the chance to have a symposium on this subject, where we can exchange and develop the necessary techniques. Up to now we have been working in our own field of interest, without actually knowing what is going on in the domain of the social sciences.

Mr. Wals (Netherlands):

Let us not expect too much of the techniques of the experts. We have to do here with an actual situation and I think, after hearing these lectures, that we all are convinced of the value of working together. How do we get our interests and disciplines together? How can we cooperate? How do we bridge the gap between theory and practice? Let us remember that in so many countries the educational systems vary considerably. This is not only our concern but also that of many international organizations.

Chairman:

To make the point perhaps a bit clearer we know of course what we have to do with our information and our educational mission; we know more or less the results we can anticipate. But I do not know exactly what we can gain with dialogue and participation. What is the follow-up? What are the possible results of those techniques? Do you also change attitudes or do you want some more practical, concrete approaches?

Dr. Nelissen (Netherlands):

In general, I can say that the methods I have mentioned do influence to different degrees man's outlook. I made a distinction between the four degrees of confrontation, perception, attitude and behaviour. Some methods only result in effects at the confrontation or perception level; others affect attitude and behaviour. One of my theses was that different methods have different effects at different levels. For instance information in many situations has no more effect than a sort of confrontation. Education has a deeper effect and does not only result in confrontation with the problem but also results in perception of the problem. The method of dialogue can cause people not only think about the problem but also to formulate an attitude towards the subject matter. Finally, the method of participation has most effect in influencing behaviour.

Mr. Oswald (United Kingdom):

I would like to repeat my questions.

Wat are the chances of introducing these methods at an early stage in the life cycle of human beings, during the period of formal education?

Mr. Paull (United Kingdom):

The biggest problem, I think, is not changing the attitudes of children but changing the attitudes of our teachers, particularly primary school teachers. I have to work with 1500 teachers, primary school teachers, and I am responsible for encouraging environmental education in primary schools. Most of us are concerned basically with the traditional contents of education: reading, arithmetic, writing, and so on. The biggest problems are how to convince teachers that environmental questions are worthy of attention and how to give them an opportunity to create some kind of learning situation which will get across to their children. More and more we have to look for the kind of experts who can help our teachers, not just by giving lessons but also by working with children.

Mr. Lauritzen (Denmark):

I am struck by Drs. Pieters' approach to the so-called non-converted people as well as the suggestion of participation at the lowest level of possible interest, the kindergarten.

Perhaps beginning at that level is one of the most valuable initiatives.

It is the first seed which you put into the ground and, if very young children get the right feeling for a subject, a very important step is achieved.

Mr. Wals (Netherlands):

May I draw the conclusion from our discussion that one of the main points is that we would like to work in close cooperation with sociologists. Secondly, a point I would like to stress is that we have to begin on this work at an early stage. I know for instance - and I am referring again to the Nevada conference - that several delegates have drafted resolutions to that effect. Another important point is that facilities ought to be established in the neighbourhood of towns where people do not have any opportunities to come into close contact with nature, to enable them to do so.

Chairman:

I only want to add how indebted we all are to the organizers of this meeting. I thank you all for your contributions.

AGENDA ITEM 12:

THE COMMISSION OF EDUCATION OF IUCN, WITH SPECIAL EMPHASIS ON
PROJECTS AND THE ROLE OF THE NORTH-WEST EUROPE COMMITTEE

a report by Dr. Jan Čeřovský

I. BASIC OBJECTIVES

1. The Commission on Education as a permanent body of the International Union for Conservation of Nature and Natural Resources encourages in the various countries of the world and in the international organizations the promotion and stimulation of the ever-growing importance of careful and constructive attitudes of man toward his environment, in the first place, to its natural component; of the aims and methods of the rational and complex use of natural resources taking into consideration many-sided needs of human society in these resources.
According to this general task, the Commission encourages introduction of a continuous and sustained programme of environmental conservation education aiming at implementation in practice of the scientifically-based environmental conservation principles.
2. The Commission considers as main components of such programmes of environmental conservation education:
 - a. Appropriate education at pre-school level;
 - b. Teaching environmental conservation in schools of all levels and types;
 - c. Adequate training of teachers and other educators, both pre-service and in-service;
 - d. Teaching and training specialists in environmental conservation and management as well as other professionals in high schools and at the university level (including post-graduate and in-service teaching and training);
 - e. Out-of-school education of children, youth and adults, preferably as education through activities;
 - f. Dissemination of environmental conservation ideas and principles to the broad public, using mass-media particularly, and also some special forms (nature trails, sports centers, etc.).
3. In order to undertake its objectives, the Commission encourages the countries of the world to implement the resolutions and recommendations concerned with environmental conservation education adopted by General Assemblies of IUCN and other relevant meetings, and assists the interested and involved authorities, organizations and schools and universities in and by.
 - a. preparations of curricula, text-books and teaching aids;
 - b. organization of conferences, working meetings, seminars and courses on a broad international or regional level;
 - c. publication of special works, methods and reference manuals and information bulletins;
 - d. advice to authorities, organizations and schools and universities and missions of specialists to various countries of the world at their request.

4. The Commission cooperates currently with other IUCN Commissions and implements the results of their activities as well and follows their recommendations in the development of environmental conservation education.
5. Through the IUCN and its Secretariat in particular, the Commission keeps close contacts with the U. N., UNESCO, ECOSOC, FAO, and other international organizations interested and involved in activities related with environmental conservation education and participates in coordination of these activities.

The working definition of environmental education accepted by the Commission reads as follows: "Environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness of man, his culture and his biophysical surroundings. Environmental education also entails practice in decisionmaking and self-formulation of a code of behavior about issues concerning environmental quality".

II. PAST ACTIVITY

7. The IUCN's Commission on Education has been established since 1949. For two decades it has been developing its activities without any professional staff, using enthusiastic specialists working on a voluntary basis, with some small financial help within the IUCN's budget, but with considerable support from the organizations (and the governments) of the countries of the voluntary officers. The Commission is deeply indebted to its Chairmen, and particularly to Mr. Johannes Goudswaard, ing., who served more than twenty years as Commission's Secretary. In one of his studies, existing in mimeographed form, Mr. Goudswaard gave an interesting description of the early years of the early years of the Commission's history.
8. For a long time, the principle forms of the Commission's work have been conferences, meetings, seminars and workshops. Besides numerous sessions of the Commission and its Executive Group to determine the philosophy and policy in the given field, there have been meetings and workshops organized at broader level, mostly in connection with IUCN General Assemblies, Technical Meetings and important Conferences. The papers, records of working discussions and resolutions and recommendations of those meetings were published, and constitute important milestones in environmental education on a world-wide basis. As the most outstanding one, perhaps the proceedings of the 1966 (Lucerne) Symposium on education at the university level should be mentioned.
9. The Commission on Education gradually (since 1960, when it became apparent that better ways of communicating and of applying methods could be channelled this way) developed a series of regional structures. Among them, the North-West Europe Committee (established in 1960) and the East-Europe Committee (established in 1967) have been very successful, particularly in gathering the specialists together, in enabling

the exchange of experience, promoting and stimulating the environmental conservation education in the countries covered by their activities on both national and regional level; launching action both in research and in practical educational work, such as the (unfortunately unpublished) study of environmental education in North-West Europe, edited by the Commission's Vice-Chairman, Dr. Tom Prischard, and the East-European International Conservation Posters Competition for Children and Young People; publishing results of their work mainly in the form of proceedings of conferences and meetings; and in a large number of different papers and articles.

But it is at the same time necessary to recall the words of Dr. Gerardo Budowski, IUCN Director-General, in his paper delivered at the 30th Commission Session held in Sofia, Bulgaria, last October (1970), - "At the same time, however, we have found that there are some limitations, and I do hope that . . . we will be able to devise ways of increasing the efficiency of these regional groups".

10. In spite of limited possibilities, the Commission has been trying to execute some specific projects, such as lists of publications and other similar documentation.

A particularly important document was the "General Programme for a Course of Studies for Higher Schools on 'Conservation of Nature' ", compiled by the Commission's Chairman, Dr. L.K. Shaposhnikov and published in March 1962. At that time environmental conservation teaching and training at this level still was not widely recognized and a substantial majority of universities absolutely lacked programmes in the contemporarily emerging efforts "to get on the bandwagon".

11. Concluding these pages of our Commission's history, history fusing into the present as well as into the future, let me quote again from Dr.

Budowski: "As to IUCN, it can rightly claim to have carried out a number of activities, such as seminars, workshops, participation in meetings, and particularly to have published a series of papers, which bring environmental education into a world-wide perspective.

This is, of course, exactly where it belongs and where we should keep it, enhance its importance and have this view adopted by all countries of the world".

12. In September 1968, the IUCN and particularly its Commission on Education played an important role in the work of the Biosphere Conference held under the auspices of UNESCO in Paris. At this Conference, where the Vice-Chairman of the IUCN's Commission on Education, Dr. J.

Čeřovský was elected to chair the Education Commission, perhaps for the first time world awareness of environmental education was fully evidenced. The necessary programmes were comprehensively outlined in clear and straightforward resolutions, which have already been picked up by several countries and serve as basis for the long-term, interdisciplinary intergovernmental programme on "Man and the Biosphere", endorsed by the UNESCO General Conference in 1970 and to be launched in 1972.

13. In the year 1969 the IUCN appointed a permanent Education Executive Officer on its staff to work in the Secretariat at Morges. This has given an intensified drive to the IUCN's educational activities and reflects the

support given to the Commission by the IUCN Secretariat, particularly during the period 1966-1969, due to the keen interest of Mr. E. J.H. B Berwick, then Secretary General of IUCN.

14. Two important meetings were organized by the Commission on Education in connection with the last IUCN General Assembly and Technical Meetings in India, in November, 1969. The Working Meeting on "Environmental Conservation Education Problems in India" was held at Dehra Dun prior to the General Assembly; the Education Workshop of IUCN took place during the 5th Session of the 11th Technical Meeting of IUCN in New Delhi. It is a pleasure to state that many members of the North-West Europe Committee participated actively in both meetings and contributed in an important way to their success. The proceedings of both meetings were published and are available from the IUCN Secretariat.
As a result of the work done in India, an Indian Committee of IUCN Commission on Education started its work and was formally established in January 1971, under the Chairmanship of Dr. S. Doraiswami. The main obstacle in the development of its activity is lack of funds.
15. In its efforts to extend constructive action oriented at important specific projects, the IUCN Commission on Education assisted in June-July, 1970, at Carson City, Nevada, USA, the International Working Meeting on "Environmental Education in the School Curriculum".
This seminar, organized in close cooperation with UNESCO as a part of UNESCO's "International Educational Year", was possible only because the most generous financial and organizational support was awarded by an IUCN member organization, the Foresta Institute for Ocean and Mountain Studies, particularly thanks to its Director, Prof. Richard Gordon Miller, member of IUCN's Commission on Education. It assembled representatives of fourteen countries of four continents. Significant was a strong participation from developing countries (especially from Africa - 6 participants). The region of North-West Europe was represented in an excellent way by Mr. Harry Wals from the Netherlands; a Swedish student attended as observer. The conclusions reflecting the seminar's basic philosophy, policy and strategy, met with enormous interest.
The Final Report, published by IUCN in English, has to be reprinted since its first edition is exhausted. It has been distributed to more than 1,000 organizations and individuals.
In some cases, it has been used as background material for the work of important conferences, such as the Hertfordshire Conference on "A Level Environmental Studies" (U.K.). The Venezuelan representative, Ricardo Amengual Gondelles, ing., compiled and enlarged a Spanish version which, published by the "Consejo de Bienestar Rural" in Caracas, already in three editions, is being widely distributed and used in more and more countries of Latin America. The conclusions of the meeting are being further elaborated in a whole set of projects, regional meetings, seminars, courses and methodological publications.
16. A very good list would be obtained if we ennumerated all the international and national conferences and meetings in which our Commission's representatives have taken an active part. Special thanks must be given to all voluntary members and collaborators of the Commission who have agreed to represent the IUCN at many important meetings and done excellent work. Such contacts were maintained with UNESCO, I. C. C. , Council of Europe

and many other organizations. The efficiency of such contacts could be proved by many examples, such as the following.

In July, 1970, the IUCN was represented at the International Conference on "Child's Education as related to the Contemporary Progress of Science and Technology" in Bucarest, Rumania, by Mrs. Maria Lexová, ing., Secretary of the Commission's East-Europe Committee, who delivered a paper on environmental education.

Her presentation met with a great response which resulted in further action undertaken by other organizations represented at the Conference. One of them, the biggest French youth federation "Les Francs et Franches Camarades" organized in July 1971, an international seminar on "Education and Nature" in Port-Mort, France. IUCN agreed to sponsor the working meeting and submitted a keynote paper, while IUCN's representatives took an active part in the work of the Seminar which assembled representatives of 40 organizations from 20 countries of Europe and Africa and outlined programmes for future action.

17. The Commission on Education Newsletter has been published since 1969 and serves as an important information bulletin. It has been requested by countries all over the world and distributed in some 600 copies. Following an inquiry made early this year with a very positive result, IUCN this year begins the publication of a Special Press Service for educational periodicals.
18. A considerable part of IUCN educational activities is devoted to the out-of-school education and activities of children and young people which are an important component of environmental education programmes and are contemporarily greatly facilitated through spontaneous and emotional interest of young people themselves to get actively involved in environmental issues. In 1956, the IUCN Commission on Education was the instrument for establishing a special international youth organization. This association, now called 'International Youth Federation for Environmental Studies and Conservation' is developing its activities under the sponsorship of IUCN. This consists mainly of moral "backing", consultation and support. We can be proud to have acted as intermediaries to obtain very important financial contributions to the IYF through our influence in UNESCO and also with the World Wildlife Fund. The IYF, because of its 15 years' experience, played an important role in recent efforts of many youth NGOs to start environmental action. IUCN is advising it and facilitating important contacts. Both IUCN and IYF, together with the Environic Foundation International, UNESCO and UN 1972 Conference Secretariat, sponsored the very recent 1971 International Youth Conference on the Human Environment held at Hamilton, Canada, August 20-30, and officially closely linked with the UN Stockholm Conference.
19. Good working contacts have been developed with some other youth organizations. Some have been mentioned above in section 16. Cooperation has been started with the Boy Scouts World Bureau: Prof. Mario Pavan of Italy, member of the Commission on Education, was appointed by IUCN to address on its behalf the World Conference of Boy Scouts in Tokyo, Japan, on 14 August 1971. An important general Conference resolution on the Boy Scouts' involvement in the environmental conser-

vation movement will be used as basis for development of a joint project and programmes by the Boy Scouts World Bureau and IUCN; this action is to begin this autumn.

20. Great importance is ascribed to contacts recently developed with Central and East Africa, Zambia and Kenya in particular. Both countries are very interesting cases, where conservation education is on the move and we hope that their example will be followed by other developing countries. We expect to increase those contacts in years to come in close cooperation with UNESCO and its special African programmes. Our Commission member, Prof. Denys Morgan, is doing a splendid job in this field at the University of Zambia in Lusaka, and we enjoy the keen cooperation of some UNESCO specialists, both in the African Field Science Office in Nairobi and also UNESCO Headquarters in Paris.
21. The World Wildlife Fund, with which IUCN cooperates actively, established last autumn an International Committee on Education with Mr. Peter Scott as Chairman and Dr. Paul Géroutet of Switzerland as Executive Officer.
Close liaison and cooperation is being maintained through regular weekly conferences of both Executive Officers.
We expect increased support of WWF in educational projects, which actually already has found concrete expression by the WWF participation in the 1971 European Working Conference on Environmental Conservation Education.
22. Also in the field of environmental education, the IUCN is intensively involved in preparations for the 1972 UN ("Stockholm") Conference on the Human Environment.
Besides the specific international youth action mentioned in section 18, this found a much broader expression in the appointment of the IUCN Education Executive Officer as Consultant on environmental education to the UN Conference Secretariat. In this capacity, he has prepared Proposals for Action in Environmental Education.
23. Approximately one year ago, IUCN reoriented all its activities on a project basis. Twenty educational projects have been prepared already, an annotated list is given in an annex to this report. New ones are in preparation. Most of the projects have already been launched. Some of them have been concluded (International Conservation Posters Competition for Children and Young People; International Youth Conference on the Human Environment), some are being executed (Special Press Service for Educational Periodicals) or as a fairly advanced stage of execution. The most important among the latter is undoubtedly the "Environmental Conservation Glossary of Terms", the publication of which has been virtually assured for the next spring, in advance of the Stockholm Conference. Projects form the "backbone" of the whole working programme of the IUCN Secretariat.

III. ORGANIZATION AND STRUCTURES

24. The Commission on Education is a clearing-house for educational aspects of IUCN's work. It is a permanent body consisting of specialists from

various countries of the world serving on a voluntary basis. Its chief task is to provide advice in education matters so that the IUCN can get the best ideas for programming in this field. The Commission members participate in determining the basic objectives of the Commission's activities and are responsible for the execution of special tasks assigned to them, to assist the working groups of the Commission in their work, explain and promote in various countries of the world¹ the aims and tasks of the Commission, and promote active Commission programmes. They make proposals for action, particularly for that type of action which could have world-wide repercussions. With the advice of the Commission, the IUCN Secretariat and its Education Office, in particular, are executing the work with the assistance of working groups established permanently or temporarily within the Commission's structure.

- 25. The Commission structure is developing permanently and continuously. It is clear that in the field of education it is particularly necessary to adapt general global tasks and programmes to regional or even national patterns, not only because of different types of environments, but also because of different traditional, cultural and socio-economic backgrounds. The whole complex of environmental education and the interdisciplinary nature of environmental issues include so many components and so many different sectors of educational activities that co-operation in the sense of active involvement of many specialists with various professional backgrounds is needed. This requires organization of a whole set of working groups within the Commission's structure, which need to be established gradually but in pace with rapidly accelerating developments, and oriented to specific topics and concrete projects. These specific topics and projects can be dealt with on a world-wide basis, but there are many problems, which undoubtedly can best be solved on a regional basis.
- 26. The North-West Europe Committee has done excellent work since its establishment, which is greatly appreciated by the Commission on Education and by IUCN as a whole. Its Regional Conferences convened almost every year in various countries of North-West Europe have become significant clearing-house of environmental education to which good part of the action in that region has to be ascribed, as well as an indirect, but nonetheless significant impact on developments in other parts of the world.

As these Regional Conferences have proved so effective, they should no doubt be further continued on a regular basis. The opinion of IUCN is that the North-West Regional Conferences on Environmental Education should be institutionalized and the North-West European Committee in its further activities should continue as a standing steering committee to plan and organize these Conferences, the basic objective of which will be, apart from exchanging experience and clarifying concepts, the coordination of environmental education programmes and projects in North-West Europe.

The Conference will propose programmes and projects and appoint groups, teams and task-forces to carry them out. We must, of course, be careful to see that we can execute all that we start. This requires the assembling of excellent task forces, and funding problems always have to be kept in mind. We think, however, that the Committee has already attracted many

prominent and keen specialists to active cooperation and is in a position to support elaborate activities and structures.

27. The East-Europe Committee has a slightly different position because in spite of its main emphasis on environmental education it became a regional environmental conservation clearing-house in a broader sense, being the only independent non-governmental international conservation body acting in East-European Socialist countries. It has been the first among the Commission's Committees to formulate its future programme on a project-basis (one of the projects launched in the last year has indeed already been finished with an encouraging success). The above mentioned specific position of this particular Committee resulted in one project outside the framework of our Commission's competence which will therefore be executed under the sponsorship of the IUCN Commission on Environmental Policy, Law and Administration ("Environmental Conservation Legislation, Organization and Structures in Socialist Countries of East-Europe"); this work is a direct continuation of the job done by compiling the first two issues of East-Europe Committee's Bulletin. This Bulletin of proceedings of regional meetings and numerous papers and magazine-articles published in languages generally understood in East-Europe, has stimulated in all the region a considerable interest in environmental education the international conservation movement and the IUCN itself.
28. There is an urgent need for special programmes in the Southern part of Europe, especially countries in the Mediterranean region where there is a great lack in appropriate environmental education, and where the approaches must be rather different from those used in North-West and Central Europe. It is still an open question as to how to proceed in this task, and we expect that the coming European Working Conference on Environmental Conservation Education may suggest some action, including the establishment of relevant working group(s) within our Commission's structures as the first necessary prerequisite for launching it.
29. Talking about the Commission on Education's organizational structures, only the situation in Europe has been emphasized by concrete examples. There is, perhaps, little point at this meeting of referring to problems in developing countries where the Commission has started intensified activities only recently. But may we make one plea for help, to you as representatives of rich developed countries. Whenever you see a possibility to encourage educational programmes in the so-called developing world, not only morally, but especially financially, such support would be greatly appreciated.

In the developed world we have another Committee - in North America. This faces a need for rapid reorganization. Some sensible structuring in the direction of a few selected specific topics is very necessary. Under present conditions it really seems very unrealistic to have one small group practically without any professional staff which would claim to be in the position of coordinating or even conducting all environmental education activities in the U.S.A. and Canada.

Generally, our recent policy has been to create working groups according to actual needs related to most important topics. This, of course, does not require any strictly unified patterns in the structure they compose.

As the preservation of diversity is one of the main objectives of environmental conservation, we do not mind useful diversity in the way of solutions to environmental problems.

IV. WORKING PROGRAMME

30. Environmental education is developing at an extremely rapid rate, particularly in some highly developed countries where the pressure of environmental problems has been recognized, such as in U. S. A. , U. K. , U.S.S.R., the Netherlands, Poland, etc. This, of course, multiplies the demands for IUCN work. We can be satisfied with our past activities, but at the same time need a large increase both in their quantity and even more quality, if the IUCN and its Commission on Education really want to be able to maintain and develop their pioneering role in the field of environmental education.
31. Everybody seems to agree now with the importance of environmental education. "But try to make projects out of it and you immediately run into trouble", said Dr. Gerardo Budowski, citing one very widespread opinion, to which he correctly ascribes a lot of truth. But what we badly need in this stage of development are constructive programmes and projects. We have achieved a general recognition of the importance of environmental education; we have arrived at the second stage of development, now, where we definitely have to say how, and have to say it with both up-to-date scientific knowledge of environmental problems and their solutions, and also on a solid pedagogical basis. This means urging a particularly important trend: we must get the educators involved actively, at three levels: educational decision-making; educational research and methodology; implementation in practice.
32. For our Commission, its Committees and other working groups this means, obviously, launching action. It is not within our reach nor power, however, to contact every single educator or every single consumer. Working on a rather wide international scope, we must reach the top people: senior officers of education ministries and departments at the first level; leading scientists and methodologists at the second level; professionals in charge of educator training at the third level. These are "our people" who are in the position, if converted to our cause, to convey and spread further our message in a most constructive form, having elaborated and adapted it to the given national or even local conditions.
33. IUCN expects that the North-West European Committee will launch a series of projects. As relevant to all the past and present Committee's work we would like to suggest a few topics, the elaboration of which certainly would be of a considerable use and not only to the countries of North-West Europe. We are recommending them to your particular attention at this Conference.
 - a. Curricular reform and innovation aiming at introduction of effective integrated environmental education at primary and secondary school level in European countries with not strictly prescribed and centralized school curricula;

- b. Programmes for teacher training in environmental conservation and relevant education - i) pre-service, ii) in-service; both by elaboration of general outlines as well as by organizing courses, seminars, training camps, etc., on an international level (not necessarily limited to countries involved in the work of North-West Europe Committee);
 - c. Environmental education in laboratory work in secondary and high schools: opportunities, place in school curriculum, methodology;
 - d. Out-of-doors study areas for school children and students in the conditions of highly industrialized and densely populated European countries; their role in environmental education programmes;
 - e. Role of environmental education in zoos, museums, visitors centres, field-study-centres and other outside educational establishments;
 - f. Effective coordination of environmental education on national level (based on the experience of the already existing national bodies in some of the countries covered by the activities of the North-West Europe Committee).
34. This coming December, the IUCN, through its Commission on Education, is organizing an all-European "clearinghouse" of environmental education: the 1971 European Working Conference on Environmental Conservation Education. This must be a really working meeting. While the plenary sessions will have to provide some general philosophy and strategy (clarifying the concepts, surveying the recent situation, formulating the necessary future trends of development), the smaller working sections will have to work out suggestions for constructive steps to achieve the endorsed goals. We consider it extremely important and helpful to have the working sections able to draft some model programmes.

The North-West Europe Committee is expected to contribute to the European Conference to a significant extent. The 9th Regional Conference would help us immensely in discussing and elaborating the following items:

- a. To suggest topics (according to the programme given in the relevant Project-Outline) on which working sections should be established at the Conference;
- b. To consider what model-programmes (or other constructive suggestions) could be elaborated by working sections of the European Conference;
- c. To draft some proposals for the working sections, which they might use as background material for their working discussions - the proposals can probably be related to the specific topics pointed out above.

ANNEX (A)

ANNOTATED LIST OF IUCN EDUCATIONAL PROJECTS
(As at 1 August 1971)

No.	Title	Scope	Status
1-3	International Youth Conference on the Future Environment	IUCN participation (co-sponsorship) in a conference to be held in August 1971 as the focal point of a broad programme of involvement of young people and youth organizations in environmental issues	Active
1-4	Multilingual Glossary of Environmental Conservation Terms	The preparation of a multi-lingual conservation and environmental terminology, giving the important special terms used in these fields in English, French, Russian, German, and Spanish, together with short definitions	Active
33-1	Textbook, for Universal Use, on the Functioning and Conservation of the Biosphere	The preparation of an illustrated textbook for secondary education describing the functioning of the biosphere in a way which would be comprehensible to all people, regardless of their nationality or origin or any other difference	Seeking funds
33-2	International Exhibition on Nature Conservation	The preparation of several sets of exhibitions (mainly in form of printed posters) explaining the modern concept of environmental conservation to a broad general public	Seeking funds
33-3	International University Manual on Environmental Conservation	The preparation and publication of a general, internationally conceived, model university text-book on environmental conservation	Seeking funds

No.	Title	Scope	Status
33-4	Methods Handbook on Environmental Conservation Education in Primary and Secondary Schools	The collection of case studies illustrating environmental teaching practices at the primary and secondary school level in selected countries of the world, and on the basis of these and also other materials, general, internationally valid and helpful principles will be set forth in form of a special Methods Handbook	Active
33-5	Popular Publications on Environmental Conservation	The preparation, publication and distribution of small books giving a brief and witty description of environmental problems and solutions	For future elaboration
33-6	European Working Conference on Environmental Conservation Education	The organization of a conference in 1971 to consider the further development of environmental education in Europe	Active
33-7	IUCN Press-Service for Educational Periodicals	The provision of information and article service for periodicals devoted to education all over the world	Active
33-8	Method-Books on Some Important Forms of Environmental Education	The production of method books dealing with some important form of environmental education	For future elaboration
33-9 (EEC)	International Conservation Posters Competition for Children and Young People	The organization of an international competition for posters on conservation subjects designed by children and young people (East-Europe Committee sponsorship).	Accomplished
33-10 (EEC)	Methods Handbook on Environmental Conservation Teaching in Higher Education in the East-European Socialist	The preparation and publication of a methods handbook on conservation studies at the university level in socialist countries to serve as a guideline for all specialists involved	For further elaboration

No.	Title	Scope	Status
33-11	Methods Handbook (EEC) on Out-of-School Environmental Conservation Education of Children and Youth in the East-European Socialist Countries	The preparation and publication of a book giving a survey of forms and methods used in out-of-school education and activities of schoolchildren and young people in the East-European Socialist countries and guidelines for their further improvement and development	For further elaboration
33-12	International Seminar (EEC) on Environmental Education in the School Curriculum in East-European Countries	The organization of an international Seminar for senior education officers, in the East-European Socialist Countries, who are responsible for curricular development, innovation and decisions at the primary and secondary school levels	For further elaboration
33-13	Annotated List of Popular Scientific Periodicals for Children and Youth	The compilation and publishing of an annotated list of popular periodicals for children and youth, which are being issued in various countries all over the world (suggested as joint-project with the ICC)	For review and further elaboration
33-14	Annotated List of Youth Organizations concerned with Conservation	The compilation and publication of an annotated list of youth organizations, federations, scientific societies, etc., directly or indirectly concerned with conservation (suggested as a joint project with the ICC)	For review and further elaboration
33-15	International Course for Teacher Training in Environmental Conservation and Education	The organization of an international course in environmental conservation (with special attention to educational aspects) for teaching staff of teacher training colleges	Active
46-1	Coordination of Environmental Education in Central and East Africa	Arrangements for consultation between groups involved with environmental education in Central and East Africa and for coordinating work on environmental education in this region	Active

No.	Title	Scope	Status
--	International Conservation Posters Competition for Children and Youth	The organization of an international competition for posters on conservation subject drawn by children and youth on the occasion of the UN 1972 Conference on the Human Environment	Draft
--	International Course for Youth Leaders Training in Environmental Conservation and Education		Being drafted

ANNEX (B)

PROJECT PROPOSALS OF THE NORTH-WEST EUROPE COMMITTEE
PROJECT GROUP

- I General
- II Information
- III Informal education
- IV Formal education
- V Research and enquiries

I General

- A. Cooperation and exchange of plans and experiences between the Commission and its Executive Officer is essential for fruitful results.
- B. The scope of projects undertaken by the NW Europe Committee should be as concrete as possible. They should be limited in number closely related to NW European countries and their apparent needs, and dealing with specific topics which are being actively pursued in NW European countries. So that results and experiences can be made available in other parts of the world.
- C. The broad IUCN projects listed in Annex (A) of the Commission on Educations Report (p. 79) are open to suggestions by members of the North West Europe Committee, for additions or other modifications.
- D. As a matter of principle I. Y. F. projects should be supported wherever possible.
- E. It should be a principal objective of the NW Europe Committee to promote curricular reform aimed at introducing effective and integrated environmental education at primary and secondary school level. For this purpose teacher training in ecology and environmental conservation is essential: student exchange arrangements for national teacher training courses should be encouraged, wherever linguistic considerations make them possible, e.g. between Scandinavian countries.
- F. Survey of outdoor field study areas and the extent to which they are available and in reasonably close proximity to schools, especially in densely populated zones.

II Information

- G. An extremely useful, if rather specialized project, would be to investigate the possibilities and costs of establishing a Translation Service. An organisation ready to serve this need could play a most helpful role in acting as a sort of "clearing house" in the dissemination of information.

III Informal education

- H. The facilities for nature conservation education in

zoos, museums, visitors centres etc. will be recommended for study by members of the NW Europe on a country by country basis. An annotated list and analysis might eventually be published.

IV Formal education PROJECTS

1. An international training course for teachers. Specialists in the Committee would be responsible for organizing such a course, which would aim at covering environmental education methodology.
2. A publication on opportunities for laboratory work in environmental studios, including the methodology and place in the school curriculum. Experience from various countries such as Sweden could provide a basis for the project.
3. Investigation of field study facilities and methods in countries within the sphere of the NW Eur Committee, with special reference to productivity, financial upkeep and future developments in this field.
4. A Case Study of environmental education in primary schools. There should be ample material available from several countries as the Netherlands and the results of the study should be published.

V. Research and enquiries

5. A comprehensive survey of environmental programmes leading to the publication of a basic annotated list of successful environmental projects in member countries. This list could perhaps be published in the Commission on Education Newsletter or as an IUCN Supplementary Paper.
6. A Case Study of the coordination of environmental education at the national level in NW Europe. Background, experiences, work at national level etc.

AGENDA ITEM 15:

INSTRUCTIONS ON FOLLOW-UP ACTION

A preliminary paper submitted by Mrs. Anne von Hofsten was discussed and redrafted in the following form:

The Committee, meeting in the Netherlands from 30th August to 4th September, 1971, for its Ninth Regional Conference, reached the following conclusions about its future structure and methods of functioning:-

1. The following countries should be represented on the Committee: Belgium, Denmark, Finland, Federal Republic of Germany, Iceland, Ireland (Eire), Luxembourg, Netherlands, Norway, Sweden and United Kingdom. The maximum number of Members from each country will normally be three.
2. The Committee shall elect a Chairman, a Vice-Chairman, a Secretary and a Projects Officer, who shall together form the Executive Committee.
3. The Projects Officer and Secretary shall maintain close liaison with the Executive Officer of the Commission on Education and, with him, shall constitute the Projects Group.
4. The Committee will normally hold two Regional Conferences every three years. Smaller meetings of specialists in particular fields should be organized by the Projects Group between Regional Conferences. The Executive Committee and the Projects Group should meet as frequently as possible.
5. As agreed at the Eighth Regional Conference, Members of the Committee should strive for the establishment in their own country of a national committee on environmental education, in accordance with the recommendation of the UNESCO Biosphere Conference of September, 1968. It is recommended that IUCN or its Commission on Education should write to the appropriate national authorities and stress the need for national committees. When such a committee exists, it should select or approve the Members from that country to serve on the North-West Europe Committee. Until such time, existing membership of the Committee should be regarded as provisional.
6. One Member from each country be designated as National Correspondent, to whom material and requests may be sent by the Officers of the Committee and by IUCN Headquarters. He/she should be responsible for disseminating information in that country and for collating a national report of developments in environmental education for distribution before each Regional Conference.
7. Every Member should strive to make an active contribution to the Committee's work, by responding to requests, putting forward suggestions for agenda and for national reports, securing publicity, assisting in projects, supplying information and material related to his/her specialism, etc. A few specialists may be allowed to attend as observers.

The proposed agenda for Regional Conferences should, if possible, be discussed by the national committees beforehand.

8. Members should make every effort to attend the Regional Conferences. The membership of any person failing to attend two successive Regional Conferences will be deemed to have lapsed unless he/she gives a satisfactory explanation.
9. Members returning home from Regional Conferences and other meetings are expected to supply information about them to their national committees, to their own organisations, and to relevant news media and journals.

SEMINAR WITH THE TEACHERS HELD DURING THE NINTH REGIONAL CONFERENCE ON SEPTEMBER 2-3 1971.

Address by John Paull, Country Hall, Glenfield, Leicester, England.

Working with materials drawn from the environment has always formed a substantial part of the Primary School programme. The nature table filled with collections of tree leaves and sea-shells, the nature walk and nature diary and the occasional small pet animal were to be seen in nearly every classroom. Today the style and method of involving children with the surrounding natural and man-made world has changed - the approach is far more complex. Environmental work now has to be seen in a wider context in the day-to-day life of the primary school - it is not an isolated part of the young child's school experience. It relates more to his natural tendencies to observe, investigate, and explore with his five senses the immediate world. Schools accommodate this by making a wider and more thoroughgoing use of the environment available, by bringing more of it into the classroom and by taking children out of doors more effectively.

Environmental Education, in practical terms, is a conception of education which is environmental in style. Most teachers would agree that the development of the child's mind and character depends on his personal involvement with the world around him. In and through this involvement the child is able to assimilate knowledge and tradition as these fit his own growing perceptions and needs.

Inside the classrooms there is a hum of activity as the children move purposefully around the room, using a piece of equipment, selecting a book, talking with each other, or consulting the teacher.

You see children engaged in numerous individual investigations: classifying minerals, experimenting with various seeds and plant cuttings, perusing an assortment of local and national maps. There are colourful graphs pinned on the walls, written and illustrated summaries, shelves full of jars and simple science equipment, a microscope, a few magnifying glasses, perhaps an incubator, some animal cages, and a collection of rocks from the local environment. Occasionally there is a polaroid camera and a portable tape recorder. There are sizeable book and magazine displays, available for reading and study in the place where the action is around the material. Some of these books are the children's accounts of their observations and experiments. The classroom tells you a good deal about the surrounding area, reflecting the local biology, geology, history, industry and local crafts.

The children's involvement is initiated jointly by teacher and pupils, perhaps by general discussion or by the introduction of something from the outdoors. It might be a bucket of pond water full of snails and insect larvae. Quickly a cardboard box is lined with polythene sheeting and the children gather excitedly to watch the action. Well illustrated reference books and magnifying glasses are at hand for a closer investigation. The boys and girls bring up lots of questions, and the teacher guides those who are most interested into more practical involvement by suggesting ways of experimenting or observing to find some of the answers. The teaching role is somewhat decentralized.

The teacher plays a major part in creating the stimulating atmosphere through materials and ideas, helped by the children who are encouraged to be actively involved in their own education. After the introduction of the initial stimulus, the teacher steps back listening to the response, asking searching questions, and waiting for the right moment to suggest (or help with) activities that might solve some of the queries. Those children with similar questions and interests work together, each member of the group taking a responsibility for part of the ensuing work. As enthusiasm for the pond creatures grows, the teacher has a number of choices: he might add more resources which provoke further questions; he might organize an afternoon visit to the local pond where the children can explore the water and pond weeds for living things. If they go to the pond plans of the site are drawn to scale and all the details put on to paper once back in the classroom. More aquaria are set up around the room and the children are able to observe the features and life-cycles of the inhabitants over a long period of time. As more and more trips are made to the pond animal populations are compared in different areas and in different conditions - perhaps the children are accompanied by a specialist from the nearby city museum who can add yet another dimension to the children's work.

Different groups work on different studies: some investigate the bird visitors to the water, others the creatures found around the leaves of the plants, perhaps another group will measure the fluctuating depth and temperature of the water. As the project grows so the teacher will add further suggestions and materials, but he will also plan for those children who are not particularly enthused by the idea.

So around the room there will be other activities that these children can be involved in, and they, too, will expect and demand the same support as the main group get from the teacher.

The development of this work is not isolated from the remainder of the curriculum, and tends to form the basis for what goes on at other times. Some children will make models of the pond creatures, poems about trees and water will be written and recited, books will be searched for more information.

The classroom is set up to encourage the unpredictable - when the pond water is brought in by the child, he receives active encouragement, time, space, and supporting ideas and materials to extend and develop his sense of curiosity into a meaningful study.

Quite often, the environmental stimulus is created by an outdoor trip, perhaps first to the area around the school; the playground, the flower beds and sports field. The teacher would be familiar with the potential of the school environs. The class ramble is normally preceded by a class discussion and a gathering of the required practical equipment. Armed with the predictable necessities, the class go off in a general search, the teacher stopping and addressing a group after taking his cue from the children's comments. They might notice the different kinds of insects visiting the flowers, the presence and behaviour of ants and earthworms, the shading effects of the trees and shrubs, or the effect of insect sprays.

They collect tree and flower seeds, fallen leaves, and make plaster casts of footprints in the earth. Many different things are found and brought back to the classroom and the children display them on tables and desk tops.

How further activity develops depends largely on the children's response and the teacher sensing a 'ripe' and rich situation. Some children will make suitable containers to house the small animals, like earthworms and insects, and observe their behaviour. Perhaps one group became especially interested in the birds that were pecking on the school lawn. Wood is collected and fashioned into a bird feeding table. Food and water would soon attract different kinds of birds, easily seen through the classroom window and easily identified using the classroom reference books. The food is weighed before and after the birds land on the table, and simple block graphs show the amount consumed each day. Different kinds of food are prepared; nuts are suspended on thin cotton strands; migrants from distant countries are noticed. Soon the children are into first-hand research and a potentially rich and long-lasting project is under way.

Local bird charts are made, records are sent to the Natural History Department of the Museum. Frequent visits are made throughout the year to the school grounds, the children noticing the different patterns of life - cycles of plants and insects.

Another half-day trip might be to nearby old deserted houses which are rich in potential and safe to explore. Early inhabitants can be traced through records in the city Archives; the neglected gardens are full of small creatures and plants. The trip might be to the local churchgrounds or farm. But whatever the site it is sure to arouse questions and interests that can be developed back in the classroom.

There are full day excursions to a Day Field Centre. This is much more organized than the ramble around the school grounds. Before the school visit, the teacher goes to the Centre with other teachers for a day, working in and talking about the potential of the surrounding environment.

Here is chance to get acquainted with the area, and the range of things that the children will inevitably find when they visit the Centre. There is time also to thoroughly plan for the forthcoming trip - plan in the widest sense. Where is the richest area? What equipment will be most useful? How many adults should there be? What is the most suitable clothing? Narrow planning sometimes threatens the diversity of the children's response to the environment, restricting the growth of their interest.

On the field day, the children locate the available science apparatus in the Field Centre, and begin to investigate and search the surrounding environment, with adults who try to anticipate the children's needs from their previous experience. Small animals are found under stones and in the herbage; spiders are seen dangling from silken webs. Bones are found in owl pellets, or remains of small rodents are sometimes discovered in discarded milk bottles. Trees are measured; streams searched for insect larvae. There is a lot to do. After the excitement of the morning, when the children return to the base for follow-up work, using microscopes and other equipment they embark on more penetrating investigations. New experiences are taken back to school ripe for full development over the following days.

Excursions to Residential Centres are again proceeded by the teacher spending time at the Centre, (normally a weekend), investigating the environment and planning for the forth-coming trip. In a week much can be attempted and completed. For the urban child it is an opportunity, perhaps the first, to spend five days in the field; chance to become briefly a part of the wild

environment. The specialist staff of the Field Centre make it possible for diverse detailed work to develop, taking the children out and about through the day and evening.

What follows is a report by a teacher of 9-10 yr olds after spending a week which has children in a residential centre.*)

"The centre was situated in a small valley which had been a private family estate for several centuries, and was very rich in animal and plant life having been virtually undisturbed for so long. The animal life included deer, foxes, rabbits, badgers, waterfowl, and a great variety of birds. The foot-paths were studded with fossils and the undergrowth lush with spring flowers. There were five lakes, a spring, and an unfinished mansion which had become a haven for bats. The living quarters were in what was modestly called "The Cottage".

Because of the children's classroom experience they had many interests to pursue, and they were alert to signs and signals from the environment. One hillside was riddled with badger setts and a small group sat quietly each evening, having walked up the long, straight paths flattened over centuries by the lumbering animals. One night we laid a large piece of paper outside one of the entrances to the sett, hoping to get some badger footprints when the animal emerged.

The group waited in silence a head emerged, sniffed the air, and the badger cautiously crept out. Walking towards the paper, it paused, sniffed again, then, taking one corner of the paper in its mouth, promptly disappeared down the hole, paper and all!

Another occupation was to set small live mammal traps under the trees near the cottage. The children set these at night, baited with food and stuffed with dry bedding, camouflaged with dead leaves. Next morning, before breakfast, the eager trappers set forth to see what they had caught. There was always a hush as the traps' contents were emptied into a large plastic bag. We could tell from the weight of the bag whether or not a mouse was inside the bedding. Imagine the excitement when a small, furry body emerged from the straw! After looking at the animal through the sides of the clear plastic bag the lucky trapper gently laid the bag on the floor, and watched as the occupant scurried away.

On the third morning, Timothy said he had seen a vole enter the same hole on three different days. This raised many questions among the group; had we caught the same vole three times? Did different voles use the same hole? Did they live in families? Or did the vole pop down the first hole it found? We had long and involved discussions about how we could find the answers. Howard thought a piece of thread wrapped around a vole's tail would show us, whereas Nigel was in favour of shaving off some tail fur. Carolyn thought it would be a good idea to block one of the holes, and see if this confused the animal. Some of these ideas were tried and others we rejected, but the discussion was very valuable as the children challenged or accepted the suggestions.

*) Extract from: "Yesterday I found!! by Dorothy and John Paull, to be published by the University of Colorado, U.S.A.

Frances, using twigs and yarn showed the children the way Huichol Indians make Eyes-of-God. A group became very intrigued by this, and also used toothpicks and embroidery silk to produce a delicate Eye-of-God. We also made dyes and paints from some of the nearby plants and the children used these in their paintings.

Further investigation carried on at night, using books, maps and bird-song records, while other children sang folk-songs, accompanied on the guitar by a teacher.

Frances taught them some American folk-songs which the children enjoyed tremendously.

Nigel and Michael were really in their element. From morning till night they walked, peered, discussed, surmised, and shared their excitement with everybody. Nigel was interested in everything he saw, and his awareness showed in his movements - the angle of his head as he listened for sounds, his eyes searching the ground for tracks and trails. Michael, too, was a natural environmentalist. He was delightful to see: in his gum boots, woolly hat, pocket bulging with collecting bags, magnifying glass, and note book. Over his arm was the hammer, just in case he found some good mineral deposits.

Nigel found a bird's nest, and after the other children had a peep, he made sure it was carefully camouflaged so that it wouldn't be attacked by predators. Whenever he turned over a stone to look for insects, he took great care to put it back in place.

Six of us went on a six-mile hike around the lakes, and came across a lime-stone outcrop full of small fossils. As we were chipping with the hammers Anthony found a sea urchin fossil embedded in a rock, and Howard discovered caddis fly and stone fly larvae clinging to underwater rocks. We walked on a little further, and then came to a beautiful spreading tree which just had to be climbed. I had a rest.

That same day, the men took a large group on a long hike to see an ancient burial chamber, called Hetty Peglar's Tump. This was open to the general public and was kept in good repair by the Ministry of Works. All the chambers were illuminated by electric lights, and the children were very excited about what they saw. Frances' group had an equally exciting time down by one of the lakes, watching a moorhen swimming to the bank, back to her nest and eggs.

Living and working together for a long period of time was very rewarding, and I had great satisfaction watching the children playing together, and searching for things of interest in the woodland and valley. I noticed several things about the children that I had missed in our overcrowded, busy classroom, and we were all relaxed and aware of each other as individuals. The activities that developed through the week helped their social and intellectual development. The children, of course, did not react immediately to all their experiences at the centre. Several months later we watched a Schools' Television Broadcast called 'Out of the Past'. One of the programmes dealt with Stonehenge and long barrows and it was then that Timothy remembered his trip to Hetty Peglar's Tump. He collected all the material that he needed, and built a model of all that he could remember, including the internal chambers. When he had finished the building he covered the whole model with earth and grass that he collected outside the school. "

Whether it is in the classroom, around the school or miles away in the heart of a forest, the quality of observation improves as the children become more familiar with the wealth to be seen. By working closely with the environment they acquire an appreciation of the life-styles of organisms they see; the appreciation grows as they are exposed to a vast range of experience with a variety of organisms in a variety of habitats. Care of the environment is an integral feature of all environmental work: turned rocks are replaced, collecting is limited to reduce the risk of wanton plundering, inculcating a regard for nature as a property. Animals kept in the classroom are housed in roomy cages, fed the right diet, and there is positive attempt to make the environment as rich as possible. Large 'natural' terraria are built for slugs, snails and caterpillars - through most are returned to their original habitats. The welfare of small creatures is as important as the well-being of the children - animals, too, should live well within the classroom.

Our Primary Schools then, are inevitably taking on their share of the conservation responsibility. By involving children in their environment, schools create positive opportunities to increase awareness, provoke and extend the sense of curiosity. It is important that when we use the environment with our children we remember the primary motivating qualities of our own learning - of perception, involvement and enjoyment, avoiding the danger of Environmental Education becoming just one more didactic package.

Environmental Education, in the full sense indicated, can lead "children to enjoy more of the planet from their own direct experience, valuing themselves as its custodians - beyond our own dismal record of ignorance and indifference."*)

*) D. Hawkins - Extract from Testimony before the Committee on Labor and Public Welfare, U.S. Senate Education Subcommittee, May 19, 1970.

SEMINAR WITH THE TEACHERS HOLD DURING THE NINTH REGIONAL CONFERENCE ON SEPTEMBER 2-3-1971

Address by Hans Jörgen Karlsson, The National Swedish Board of Education, Fack S-104 22 Stockholm, Sweden.

SCHOOLS AND ENVIRONMENT CARE IN SWEDEN

"Environment conservation is one of the most critical problems confronting modern society. Urbanization, industrial development and new techniques of agriculture and forestry have caused grave dislocations in our environment. . . . It is therefore the duty of schools to provide pupils with a basic introduction to the nature and scope of environmental problems and to endeavour to arouse in them a sense of their obligation as private individuals and future citizens to help prevent the destruction of the environment and to create a healthy environment for themselves and their successors. "

This quotation is taken from the new curriculum for the 9-year compulsory school in Sweden, but it could equally well be applied to environment education throughout the Swedish school system.

Its wording leaves no doubt as to the importance attached to environmental problems by teachers and educational authorities. The curriculum emphasizes that environment education is to be provided in its natural context in all grades. Given the interdisciplinary nature of the subject it is natural for many of the subjects taught in school to be involved in it and to co-operate in examining the problems it entails. This is why environment education has not been made a subject in its own right with special periods allotted to it on the timetable. The concept of environment care - to use the Swedish term - has widened during the last few years, so that the new curriculum incorporates it in several school subjects.

Environment education has also been given considerable scope in the suggestions for interest and assignment sectors contained in the curriculum. This is particularly the case with the natural sciences, but it also applies to social studies such as history and geography. Thus the most comprehensive assignment sector proposed for orientational subjects in the upper department goes under the heading of "Our Environment in Danger".

Environment education in schools has attracted a great deal of interest in Sweden in recent years. The general debate on environmental questions has focussed more urgent attention on the subject, which until no more than two years ago was mostly concerned with litter and good behaviour in the countryside and the protection of plants and animals, i.e. nature conservation. Nowadays teaching is concerned on a completely different scale with questions of survival and environmental problems.

Committee on Environment Education in Schools (SMIL)

During the autumn of 1968 the Swedish National Board of Education appointed

a special committee on environment education in schools (SMIL) with the task among other things of revising the curricula to provide a basis for efficient environment education at all school levels. This committee is to propose measures for the development and reform of teaching methods, review teacher training and investigate the need for special training for persons who are to work professionally with environmental problems (environmental engineers). Attached to the committee is a larger reference group comprising some thirty representatives from government bodies and voluntary organizations. The work of the committee, which is expected to be complete some time during 1971, will result in the revision and rapid development of environment education in schools.

During the autumn of 1968 SMIL conducted a questionnaire survey among teachers of orientational subjects (i.e. biology, chemistry, physics, geography, history and civics) and gymnastics as the first stage of an analysis of current environment education in the upper department of the 9-year compulsory comprehensive school. The questionnaire was sent to one out of every ten upper department teachers in the country.

The survey was designed to analyse the structure of environment education in the various subjects during the school year 1967/68 as well as the teachers' opinions concerning the future needs and possibilities of environment education in their subjects. Special attention was given to teaching methods, the need for teaching materials and additional teacher training.

The questionnaire revealed a very lively interest in environmental questions on the part of the teachers, who considered that the time allotted to them should be at least doubled.

The answers received on the subject of excursions were particularly striking. The overwhelming majority of teachers of biology and geography - i. e. the subjects in which excursions figure most prominently - regarded excursions as a highly rewarding means of environment education. But hindrances of one kind or another had prevented some 50-75 per cent of the teachers from organizing any excursions at all during the current school year.

The questionnaire provided an admirable basis for SMIL to work on. Among other things, it showed the need for better excursion opportunities as well as for better basic and further training of the teachers themselves. Finally, the results of the questionnaire showed how urgently necessary it was for the scope of environmental studies in school to be broadened and their methodological resources improved.

A new teaching method

One of the most important developments since SMIL began its review of environment education has been the development of a new teaching method in the natural sciences. A working party from SMIL, in consultation with scientists and educationalists, has compiled experiment descriptions with an accompanying teacher's manual.

Scientific and environment-technical methods have been selected and pedagogically simplified with a view to obtaining meaningful results using the resources which schools have at their disposal.

This methodological renaissance has played a crucial part in the rapid

development of environment education. Formerly there were very few suitable school experiments available covering the specialized and somewhat novel field comprised by current environmental problems. The committee have also devoted particular attention to the subject of school excursions. The former comprehensive school curriculum also emphasized in several contexts the importance of excursions as an aid to teaching and an integral part of social education in schools. Their importance as an auxiliary instrument of environment education is heightened still further by the new curriculum. The teacher questionnaire mentioned above showed that teachers considered excursions a valuable feature of environment education but that there were several practical impediments encountered by schools when trying to organize them. The National Board of Education has therefore recommended local authorities to review their land resources to find areas suitable for school excursions and to work for the preservation of wellsituated and sufficiently large areas of natural scenery, not least with a view to meeting the requirements of schools in the future.

Reference material and problem material

A distinction is made in environment education between reference material and problem material. Reference material constitutes the most important and weightiest part of environmental studies. Its purpose is to provide pupils with knowledge to understand the functioning of a biological community in equilibrium and the factors which can upset that equilibrium. Thus pupils are enabled to see the long-term implications of a disturbance in nature such as the discharge of effluent. Problem material concerns topical questions such as motor exhaust and oil pollution.

Without adequate reference material, the discussion of environment conservation - whether in school or elsewhere - can easily be characterized by flimsily based opinions and irresponsible attitudes. At the same time as one raises a current environmental problem such as fuel exhaust one should also take into consideration the economic side of the matter and ask: How much will it cost to remove the lead from petrol? The devision of the financial responsibility for conservation measures between individuals, industry and the community is an important topic of debate.

Questions of this kind can be discussed in senior classes if not earlier.

The economic aspects of environment conservation can be admirably augmented with the aid of a historical perspective. Thus knowledge of the rise of industrialism during the 19th century is an important body of reference material with regard to contemporary environmental problems.

Project week on environmental care

The work done by SMIL has comprised long-term planning, i.e. the development of efficient environment education in schools, and short-term planning in connection with European Conservation Year 1970. The National Board of Education has encouraged schools throughout the country in addition to their other activities during European Conservation Year to make the care of the environment the subject of a special campaign during the first week of September. Various specimen plans for this project week have been

drawn up by SMIL together with teacher's manuals and a list of teaching aids for environmental studies.

The project week is not to be regarded as an isolated event concluding with the end of the campaign. There are many good reasons for repeating it every few years. Properly planned, it could provide valuable practical training in tackling a social problem, as well as material for other, more fundamental studies.

When SMIL began its review of environment education in schools two years ago, the subject included in the curriculum was still known as "nature conservation". The new comprehensive school curriculum has replaced this term with "environment care". The change is one of attitude as well as name. Environment care is a broader term than nature conservation. The changes that have been effected in environment education in schools are reflective of social development and can be taken as the response of the school system to the current social debate.

ANNEX: BOARD OF EDUCATION STATEMENT ON LAND REQUIREMENTS FOR TEACHING PURPOSES

Excursions (field work) are specified in the current comprehensive school curriculum as a basic element of many of the subjects taught. Thus excursions are prescribed for local studies at lower level, in geography and general science at middle level and in geography and biology at upper level.

The curriculum stresses the importance of excursions for teaching purposes and their role in the social education provided by schools in a variety of contexts:

Excursions, study visits and day-to-day observation of nature will give the pupils an opportunity not only to observe, experience and study reality but also to co-operate with each other and to share common experiences in a manner which is beyond the scope of ordinary classroom studies.

Well-planned excursions would seem to be the most valuable form of instruction in general biology.

If the study of biology is to arouse a sense of responsibility for nature and respect for all living things, and if it is to stimulate the pupils' enthusiasm for the study of nature and help them to experience the beauty of nature, it must bring them into contact with nature itself.

In the course of the revision of the comprehensive school curriculum now in progress, the importance of excursions has been further emphasized in connection with an expansion of environmental education. The importance of excursions is also stressed in the curricula for continuation school and gymnasium.

During the current year special attention has been paid to school excursion activities by the Board of Education survey of environmental

education in schools. A questionnaire sent by the survey to teachers at the upper level of comprehensive schools has revealed that schools are at present encountering considerable obstacles in arranging the excursions prescribed by the curricula. The results of the questionnaire show that time-consuming journeys to excursion areas together with inadequate financial resources to pay for such journeys as well as problems posed by the school timetable are major causes of the failure of many schools to arrange any excursions at all.

In view of what has already been said concerning the role of excursions as a formal basis of the curricula and their importance to teaching at all levels, and also in view of the actual conditions revealed by the survey, the Board of Education wish to emphasize the need for municipal authorities when planning their land disposition to take into account the need of schools for easily accessible areas well-suited for teaching purposes.

Bearing in mind the methodological objectives laid down by the curricula for excursion activities, excursion areas should to the greatest extent possible comprise genuine natural areas and should be of a size and character suitable for field studies by pupils. The situation of these areas in relation to schools is also a major determinant of the ability of schools to make effective use of them.

In many cases it should be possible to reconcile the interests of schools and open air life so that both considerations combined can justify municipal authorities in exempting certain areas from development. It is advisable for both educational and conservation expertise to be consulted in the investigation of planning matters of this kind.

In the light of what has here been said, the Board of Education wish to request that the local education authority be instructed in consultation with other municipal authorities and committees concerned to carry out a review of available land suitable for school excursion activities and to work in this connection for the reservation of well-situated and sufficiently large areas of unspoiled country in the future, not least with a view to the requirements of schools.

**RECOMMENDATIONS 1-3 DRAFTED BY THE SEMINAR AND ACCEPTED BY
THE CONFERENCE**

Since conservation and environmental education are concerned with man and human well-being, and at the same time the social implication of the deterioration of the environment is an evident problem, the Ninth Regional Conference of the North-West Europe Committee of the Commission on Education IUCN stressed the importance of the social sciences in environmental education as a necessary corollary to the accepted role of ecology.

Therefore the Ninth Regional Conference accepted unanimously the following three recommendations drafted by the 'Seminar with the Teacher', which had formed part of the Conference:

1. During a conference of people active in the field of environmental education, assembled under the patronage of the North-West Europe Committee of the Commission on Education of the International Union for Conservation of Nature and Natural Resources (IUCN) and the Ministry of Culture, Recreation and Social Welfare of the Netherlands, at Conferentie-oord "De Tempel", Rotterdam-Overschie, on 2nd and 3rd September 1971, the following recommendation was passed: -

Recognizing

- a. that stocks of natural resources are not inexhaustible,
- b. that ecological functioning and balance of the vital environment depend upon recycling processes and are threatened by one-sided technological and economic developments, and
- c. that environmental education is a necessary prerequisite both to maintain a healthy environment and to meet man's emotional and intellectual needs,

this conference urges the appropriate authorities in the Netherlands and, through the IUCN, in other countries: -

1. to take the necessary measures to acquaint teachers with the relevant concepts, facts and methodology;
 2. to increase the attention given to environmental education at all levels in school curricula;
 3. to make the necessary financial provision for appropriate facilities within the classroom and in the school grounds, and for specially established field centres and study areas within easy reach of the conurbations and in the countryside.
2. During a conference of people active in the field of environmental education, assembled under the patronage of the North-West Europe Committee of the Commission on Education of the International Union for Conservation of Nature and Natural Resources (IUCN) and the Ministry of Culture, Recreation and Social Welfare of the Netherlands, at Conferentie-oord

"De Tempel", Rotterdam-Overschie, on 2nd and 3rd September 1971, the following recommendation was passed: -

- Recognizing a. the value of exchanges of experience on an international level, and
- b. the ability of the North-West Europe Committee to promote such exchanges,

the Dutch participants request the Committee to maintain contact with them after the Conference and to use them as a nucleus for developing and extending its work in the Netherlands and in the other countries of North-West Europe.

3. During a conference of people active in the field of environmental education, assembled under the patronage of the North-West Europe Committee of the Commission on Education of the International Union for Conservation of Nature and Natural Resources (IUCN) and the Ministry of Culture, Recreation and Social Welfare of the Netherlands, at Conferentie-oord "De Tempel", Rotterdam-Overschie, on 2nd and 3rd September 1971, the following recommendation was passed: -

Recognizing the urgent need for environmental education as a prerequisite to maintain a healthy environment,

this Conference requests the United Nations

to take all the necessary measures to promote environmental education on national, regional and global levels, through the 1972 (Stockholm) Conference on the Human Environment, by launching appropriate national and international programmes and committing the necessary financial and technical resources.

RECOMMENDATIONS 4-6 OF THE CONFERENCE

4. The North-West Europe Committee of the Commission on Education of the International Union for Conservation of Nature and Natural Resources (IUCN), meeting in the Netherlands from 30th August to 4th September, 1971, for its Ninth Regional Conference,

Recognizing the need for education to promote environmental awareness;
 Recognizing also the need for young people, as the future citizens of the world, to understand and feel involved in the problems of environmental management;
 Having regard to Recommendation No. 65 adopted at the 31st Session of the International Conference on Public Education (Geneva, 1968) and the recommendations of the International Conference on the Scientific Basis for the Rational Use and Conservation of the Resources of the Biosphere (UNESCO, 1968);
 Noting with satisfaction that the Council of Europe's Committee of Ministers has decided to recommend that the governments of the member states introduce the principles of nature conservation and ecology into their educational programmes at all levels and in all appropriate disciplines;
 Noting also that the United Nations will hold a Conference on the Human Environment in Stockholm in June, 1972;

Urges the United Nations to launch a global appeal for the promotion by its member governments of a sustained programme of environmental information and education.

5. The Committee, meeting in the Netherlands from 30th August to 4th September, 1971, for its Ninth Regional Conference,

Considering the social implications of the deterioration of the environment;
 Noting that nature conservation and environmental education are concerned with man and human well-being;

Stresses:

- 1. the importance of the social sciences in environmental education as a necessary corollary to the accepted role of ecology;
- 2. the value of the techniques of the social sciences in promoting environmental awareness; and
- 3. the need to interrelate the teaching of ecology and the social sciences;

and therefore

urges the appropriate authorities to strengthen environmental education institutions by including social scientists within their membership.

6. The Committee, meeting in the Netherlands from 30th August to 4th September, 1971, for its Ninth Regional Conference,

Considering environmental awareness to be of crucial importance to all people;

Noting that environmental education has to be differentiated and adapted to the educational level, as well as to the social and cultural circumstances of the recipient;

Stresses the importance of informal and adult environmental education and urges the appropriate authorities to promote the means to achieve it.

APPENDIX

NAMES AND ADDRESSES OF OFFICIAL PARTICIPANTS IN THE
NINTH REGIONAL CONFERENCE OF THE NORTH-WEST EUROPE
COMMITTEE

Belgium

Mr. E.J. Kesteloot	Institut Royale des Sciences Naturelles, 31 Rue Vautier, Bruxelles 4.
Prof. Dr. J. Hublé	Laboratorium voor Oecologie Rijksuniversiteit Gent, K. L. Ledeganckstraat 35, Gent

Denmark

Mr. Fr. Lauritzen	Friluftsrådet, Strandboulevard, 5, 2100 København Ø
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Finland

Prof. N. Söyrinki	Department of Botany, University of Oulu, Topeliuksenkatu 10A 00250-Helsinki
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Great Britain

Mr. C. L. Mellowes CBE MA †	Council for Environmental Education, 26 Bedford Square, London W. C. I B 3HU
Mr. P. H. Oswald Mrs. J.M. Oswald	The Nature Conservancy, Attingham Park, Shrewsbury, Shropshire
Mr. J. Paull	Advisor Environmental Education County Hall Glenfield Leicester

Netherlands

- Drs. J. P. Doets
Drs. J.B. Pieters
Mr. J. Goudswaard, ing.
Mrs. E.R. Goudswaard
Mr. H. Wals
Mrs. J. Wals
- Ministerie van Cultuur, Recreatie en
Maatschappelijk Werk,
Afdeling Natuur- en Landschapsbescherming,
Steenvoordelaan 370
Rijswijk 2104.
- Commissie voor Natuurbeschermings-
educatie (CRM)
Jan van Loonslaan 20a,
Rotterdam 3001
- Gem. School- en Kindertuinen,
Raaltestraat 4,
's- Gravenhage-2031

No rway

- Prof. O.A. Høeg
- The University,
Blindern,
P.O. Box 1068,
Oslo 3

Sw eden

- Mrs. A. von Hofsten
Adjunkt H. J. Karlsson
- Svenska Naturskyddsforeningen
Ljungvägen 13
182 75 Stocksund
- Skolkonsulent Skolöverstyrelsen,
Fack S,
104 22 Stockholm

IUCN

- Dr. J. Čeřovský
- IUCN, Education Executive Officer,
(1110) Morges, (VD),
Suisse

IYF

- Mr. Th. Vethaak
- Populierenlaan 193,
Amstelveen 1134,
Netherlands.



Visit of the participants Ninth Regional Conference North-West Europe Committee to Children's farm Zuiderpark The Hague, Netherlands, 31 August 1971.

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