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CONTENTS

President: Mr. Emilio ARENALES (Guatemala).

AGENDA ITEM 91

Problems of the human environment

1. The PRESIDENT *(translated from Spanish)*: The Assembly has before it a note by the Secretary-General *[A/7291]* and a draft resolution sponsored by fifty-five Member States *[A/L.553 and Add.1-3]*.

2. As rule 90 of the rules of procedure does "not permit the proposer of a proposal or of an amendment to explain his vote on his own proposal or amendment", I shall now invite the sponsors of the draft resolution, and any other delegations that wish to do so, to speak on the draft resolution. When they have finished, the Assembly will then hear explanations of vote.

3. Mr. ÅSTRÖM (Sweden): The General Assembly is now beginning a debate on a matter which, it seems to the Swedish Government, is of direct and critical concern to all peoples on earth. Before starting my statement, I should like to express the deep satisfaction felt by my Government that the problems of human environment in their entirety are now before the General Assembly. It is our conviction that this debate in itself will serve a useful purpose. It may be expected to heighten the general awareness of the importance and the urgency of the problems involved, thereby facilitating their solution. We hope that, as the problems are common to all mankind, and many of them can be solved only through common action, the decision that the General Assembly will take on the subject will be unanimous and lay the foundation for further efforts at the national and international levels.

4. The subject under discussion is a vast and complex one. I intend to deal with it under four main headings. First, what is the character and the scope of the problems under discussion? Second, what should be the general purpose of action undertaken in this field? Third, what has already been done to deal with the problems? And fourth, what action could the General Assembly usefully take at this stage?

5. First, then, the definition of the subject. I submit that it is possible, as a general proposition, to describe the question of human environment as one that relates to the interaction between man and his environment. What we are dealing with is, on the one hand, the changes in the natural surroundings of man brought about by the use of technological advances in agriculture and industry and, on the other hand, the impact of this process on man himself.

6. Of course, such interaction has taken place throughout history. Man has always had to struggle to force a living out of an often hostile natural environment, thereby changing it and undergoing changes himself. Every civilization has indeed been built on, and conditioned by, the way the natural resources have been utilized. We also know that whole civilizations disappeared as a result of mismanagement and misuse of natural resources, in the first instance the soil. However, such misfortunes and tragedies were mostly local and temporary. They did not jeopardize the very basis of continued human existence on earth. New soils were found, more mineral and other natural resources were discovered and utilized. Whole peoples migrated to virgin lands. From the point of view of humanity as a whole, the problems of the environment were manageable.

7. We now live in a situation which is qualitatively different and certainly much more serious. Let me point to a few factors which have made it so. There is no longer any hope of finding new important soils to feed an increasing population. It is rather a question of making already cultivated soils yield richer harvests through higher productivity. Such efforts imply the extensive use of fertilizers, pesticides, the building of huge irrigation systems, and so on. Mineral and other resources are becoming scarce and their exploitation involves the use of increasingly sophisticated modern technology.

8. As a result of all these trends the interference with the processes of nature becomes continuously more severe. The ultimate consequences of such interference cannot be foreseen with accuracy, but we do know enough, through warnings that come to us from all parts of the world, to affirm that the risks inherent in the uncontrolled application of modern technology are very real and very frightening. It is evident that increased attention to the problems of human environment is essential for sound economic and social development, in developing countries as well as in industrially already developed countries.

9. As I have just indicated, there are two broad categories of problems. Within the first category fall problems such as erosion and depletion of the soil, salinization, air and water pollution, the harmful results of excessive and uncontrolled use of biocides, deforestation, extinction of wild life, problems of waste, noise, and so forth, and the disturbance of the ecological balances caused by many of those phenomena. To the second category belong issues pertaining to health, working and living conditions as influenced

by changes in the natural surroundings, physical and psychological effects of unplanned and uncontrolled urban growth, and so forth, and the ensuing threats to the well-being and dignity of the human being.

10. With regard to the first category of problems, it is a disquieting fact that the components of the biosphere—that is, the air we breathe, the water we drink or use for various industrial purposes, the soil from which we draw our sustenance of life and the oceans which are the repositories of living organisms producing food and oxygen—are undergoing constant impairment on an ever-increasing scale and at an ever-accelerating rate. May I be allowed to give some examples, starting with the problem of soil erosion and other forms of soil deterioration.

11. As the world population increases there is a demand for higher agricultural productivity everywhere. It is therefore more important than ever that soils be maintained as fertile as possible and, in particular, that none is being destroyed beyond the possibility of regeneration. However, in spite of that knowledge, soil deterioration does continue on a global scale.

12. The mechanism of soil deterioration varies between the different climatic zones. In the temperate regions, wind erosion and the lowering of the ground water levels which dries out the soil, constitute the most serious problems. In certain highly industrialized regions water is used to such an extent that rain and snow replace only one third of what is used. We already see the signs of water scarcity in some densely populated and heavily industrialized regions.

13. The same problems, although partly due to other factors, are found in the tropical regions. The situation there is complicated by the fact that many tropical soils are even more sensitive to change than the soils of the temperate regions. If such soils are left without cover, for instance through faulty methods of forestry, the hot sun turns them into a leathery surface. The next step is that the surface grows as hard as brickstone. That laterized soil can no longer be used and must be left as desert. No technique is known by which laterized soil can be made fertile again.

14. One of the more striking examples of the degeneration of the human environment is, of course, the pollution of air, water and soil, a process which has been hastened by urbanization and industrialization in connexion with rapid population growth. Pollution may be described as an undesirable change in the physical, chemical and biological characteristics of our air, land and water that may, or will, harmfully affect human life or the life of other desirable species, our industrial processes, living conditions and cultural assets.

15. Some pollutants may be defined as natural resources in the wrong place. Substances which in the right place are valuable resources may in another place be harmful. An example of that is the spreading of chemicals as fertilizers on the fields. If those chemicals reach lakes and rivers they become pollutants. Pollution has been and continues to be recognized and attacked as a public health problem of ever-expanding dimensions. Polluted particles seem to be one of the major causes of the increase in lung diseases like cancer and chronic bronchitis. It is also an economic problem intimately and directly affecting many industries, and agriculture. It is a social problem which is not only increasing public health expenditures but also creating constraints on the nature and direction of urban and regional development.

16. One well-known example of pollution is the rise in the concentration of atmospheric carbon dioxide produced by the intensive combustion of fossil fuels during the past few decades. The buffering action of the oceans has not been able to keep pace with the increased rate of production, and we now find the carbon dioxide content increased by 10 per cent and still rising. As an illustration of the dimension of this man-induced change in the environment, I may mention that a four-engined jet passenger aircraft in normal flight emits about two and two thirds tons of carbon dioxide and one and a third ton of water vapour every ten minutes. The increase in the proportion of carbon dioxide may have certain effects on the radiation balance of the earth and thus on the world's climate. Carbon dioxide and water vapour are more transparent to short-wave solar radiation than to the long-wave heat radiation from the earth to space. The increased proportions of these substances in the atmosphere tend to bring about a rise in the earth's surface temperature—the so-called green-house effect. On the other hand, one scientific school suggests that the enormous emission of particles to the atmosphere may block solar radiation, causing a decrease in the earth's temperature. No definite answers to the question of which process may be the more important in the long run are available at the moment. What is evident, however, is that man has already rendered the temperature equilibrium of the globe more unstable.

17. The international implications of air pollution are clear. There is a need for international co-operation and understanding designed to control such pollution. The winds do not know any national frontiers.

18. In many temperate regions, where nature has supplied man lavishly with fresh water, that asset has been used as though it could never come to an end. The rich countries in those regions have therefore treated water resources in a careless way. Rivers and lakes are used as recipients for all the wastes and poisons of the cities and industries, usually without any purification of the effluents. A particular problem in this field, which is causing serious misgivings and has necessitated governmental action in my country, is the spread of methylated mercury.

19. The degradation of the quality of the fresh water has accelerated even more than expected because of a process known as eutrophication. Certain wastes from homes and industries—for instance, synthetic detergents—may fertilize lakes and rivers to such an extent that, ironically, they ultimately die. Simultaneously, due to the extensive use of water in cities and by industries, the ground water level sinks dangerously low.

20. To continue this list, the coastal waters are in many places used as dumping places for wastes from cities and industries. Often it is not the emitting industry, or even the polluting country, that is first hurt in these cases: other nations can be struck just as easily. The water currents and the fish, like the winds, cross national borders without

passport and visa. Also in this field international co-operation is evidently desirable.

21. May I here also point to the problem of oil pollution, which has been dramatized by two well-known recent catastrophes, and which is becoming more serious with the growth of the tanker fleet and of the size of the ships. The concept of marine pollution is, of course, a wider one, as witnessed by the proposal put forward by Iceland *[A/7477, para. 11]*, and actively supported by my Government, in connexion with the subject of the sea-bed and the ocean floor.

22. Furthermore, ecological disturbances brought about by man can lead to, and have led to, the extinction of whole species of fish and other marine organisms, thereby causing severe strains on the food situation in the world, and great economic difficulties for fishing nations. Such extinction also causes changes in the metabolism of the oceans, which are difficult to anticipate but may involve serious risks. These matters have obviously to be considered at the international level.

23. Still bigger disturbances of the living systems in oceans seem to be impending. Only one danger will be mentioned here. The pesticide DDT, which is active for years after it has yielded its planned results, is spread by the winds, the waters and their various inhabitants to all corners of the world. DDT has been found in penguins in the Antarctic. It can, in fact, be detected in the fatty tissues and nerve tissues of all living beings, including man. According to a scientific report issued in the spring of 1968, 1/1000 of a gram of DDT in 1,000 kilograms of water may lower the metabolism of the algae by 75 per cent. This would be a direct threat to the life of the algae, since hundreds of thousands of tons of DDT are spread over the continents every year, of which a major part ultimately finds its way to the oceans. Global oxygen production depends largely on photosynthesis of oceanic plankton and algae. We may thus endanger even the critically important oxygen content of the air.

24. Finally, the algae also constitute the basic food for all marine organisms. If the existence of the algae is threatened, then all life of the kind we know is also threatened. The use of environmental poisons, pesticides of all kinds, and so on, should therefore be limited to the minimum necessary and where they have to be used, it is important to prevent their transportation by wind and water to other places where they may be the cause of irreversible damage to the delicate balances of nature.

25. I should not like to conclude this list of disturbing phenomena without referring briefly to the problem of noise. In the near future this problem, which in earlier times seemed to be limited to cities and industries, may become more general. Medical experts know that large groups of people exposed to strong intermittent noise for long periods may be damaged physically and mentally. If and when supersonic aircraft are introduced also for civilian use, hundreds of millions of people may be exposed to intense noise without being able to protect themselves—in order, may I add, to allow relatively few people to reach their destinations a few hours earlier.

26. I shall refrain from dealing with the important problem of the disposal of radio-active waste. Serious as that problem is, it also furnishes an encouraging example of precautionary measures being designed and applied simultaneously with the development of the technology which causes the waste.

27. As to the second category of problems—that is, those which relate to the influence of environmental changes on man himself, suffice it here to say that the physical, social and mental well-being of man is to a large extent determined by his physical surroundings. This is obvious in a narrow sense, inasmuch as the health of an individual can be endangered by certain living and working conditions. It is equally true in the wider sense that the whole of mankind may face degradation of the quality of life as a result of already observable environmental trends, if these are not properly controlled.

28. An individual is subject to the risks of environmental deterioration in its more acute form when he is part of a rapid urbanization process. These problems are well known in all parts of the world, in developed as well as developing countries. The appalling and degrading living conditions in areas known as slums, shantytowns and bidonvilles bear witness to the seriousness of the problem. The rates of illness, crime and suicide soar under such conditions. Human happiness and harmonious social adjustment cannot be registered statistically; but who doubts that they too are part of the price for unplanned, precipitate urbanization?

29. Having now tried to define in broad outline the character and the scope of the problem, I turn to the question of what should be the general purpose of action on these serious problems. The first and obvious answer is that all efforts should be encouraged which are designed to reduce or to eliminate the harmful side-effects of the large-scale application of modern technology. This is, in the first instance, a matter for the various Governments. It is they who are responsible for taking such legislative and administrative action as they consider appropriate and necessary. However, given the diversity and the complexity of the problem, it is inconceivable that each single Government could muster the means and resources to undertake the necessary basic research and to devise measures on the basis of such research. Consequently, the knowledge and the experience gained in some countries, as well as by some international organizations—governmental and non-governmental—must be made freely available, and the interest of other countries must be stimulated to make full use thereof. One of the primary purposes should be to enable the developing countries to avoid making the same mistakes which have made parts of the environment in the industrial countries unhealthy, unpleasant and ugly. It seems to us, therefore, that projects of economic co-operation should be planned with due regard to these factors. It may also be that assistance could be rendered for the specific purpose of giving developing countries an opportunity to make use of available knowledge and experience.

30. I just said that the problems are diverse and complex. From this flows the conclusion that a further purpose for action in this field must be to encourage and, where necessary, to co-ordinate research carried out by Governments and international organizations.

31. I have so far spoken mainly about how to prevent the deterioration of the human environment and to cure the ills

already brought about. But there is also a positive aspect of the problem; that is, to utilize modern science and technology to improve the human environment through deliberate, rational action.

32. Man is today in possession of scientific and technological resources which are truly spectacular. It can safely be assumed that further progress will follow in the years ahead. The achievements of science and technology are the prerequisites of rapid economic development, just as they form the material basis for the armaments race. So man has now in his hands unprecedented possibilities for destroying himself but also for bettering his lot on earth. Let me say in passing that if only a fraction of those resources in the form of brain-power, technical know-how, equipment and capital which are now devoted to the perfection of the means of mass destruction were released to be utilized for social purposes, for the rational planning of the human environment in urban and rural areas, then the total gain in terms of human happiness and of social justice would be enormous.

33. Rapid economic development remains, of course, one of the primary goals of all Governments. It is not an end in itself. It should serve ultimately to satisfy fundamental human needs and to allow the peoples, in dignity and justice, to enjoy basic human rights. Therefore, working and living conditions must consciously be made safer and better suited to the aspirations of modern man. The cravings for spiritual and cultural fulfilment must be satisfied.

34. A famous modern writer has described our time as "the accidental century", to indicate that we have all too often let the miraculous changes in our environment, brought about by science and technology, just happen to us without proper foresight and without proper planning. This must not be allowed to continue. Therefore, the quality of the human environment must enter as one necessary element into all economic planning. This should be achieved at a very early stage, so as to prevent large expenditures in the future.

35. It is our view that an informed and alerted public opinion is essential for influencing Governments, international organizations, private industry, etc., towards making rational planning for an improved physical and social environment an integral part of the planning for economic growth. This is not a question of "either–or" but of "both–and".

Mr. Ohin (Togo), Vice-President, took the Chair.

36. As the third heading of this statement, I mentioned the question of what is already being done to meet the need for adequate action at the national and international levels. With regard to this question I would like to start by mentioning some developments in my own country, Sweden. For some years an intensive debate has been going on in Sweden on the various aspects of the environmental problems. Public opinion has become interested and aroused due to some dramatic revelations, for instance, the dangerously high proportion of methylated mercury in fish caught in certain lakes and the harmful effects of the sulphurous wastes emitted by industries inside and outside Sweden.

37. Action has been taken by Government and Parliament and most of the field of natural conservation is now covered by legislation. A special governmental agency, the National Nature Conservation Office, has been established. Conditions are laid down under which waste water may be emitted. Areas may be set aside as national parks for purposes of recreation or for scientific and cultural purposes. Recently a decision was taken by Parliament to limit the content of sulphur to 2.5 per cent in fuel-oil for household purposes. The city of Stockholm has decided to prohibit the use of fuel-oil with a higher content of sulphur than 1 per cent, in the inner parts of the city. Proposals for legislation on mandatory exhaust-cleaners for motor vehicles have been submitted to Parliament. Local authorities receive grants for the building of sewage-treatment works. There are now 800 highly effective works of this kind in existence, in comparison with only eleven in 1950.

38. General legislation for protection against water and air pollution, noise and other inconveniences is now being prepared. Detailed standards will be established for admissible environmental disturbances. A licensing system for activities which constitute a danger to the environment is also proposed. A special Government agency for the examination of licence applications will be set up. This new legislation is planned to come into force on 1 July 1969.

39. One basic feature of the proposed legislation is that already the risks for environmental inconveniences and disturbances are to be taken into account by the licensing authority. If an industry wants to emit new substances into the air or water which may be suspected to be dangerous, it is incumbent on that industry to prove that no negative effects will occur.

40. Finally, earlier this year a Government advisory agency was set up consisting of representatives of various Ministries, including the one which deals with town-planning, other governmental authorities, trade unions and scientific communities. The Government is expected to consult with the agency on all important environmental questions.

41. As to the work performed on these problems at the international level, I would like, in particular, to refer to the important activities of many of the specialized agencies. As regards pollution problems, WHO has prepared this year a valuable report[1] for the Economic and Social Council. Another valuable report[2] on conservation and rational use of the environment has been prepared by UNESCO and FAO, also for the benefit of the Economic and Social Council. ILO, in view of its responsibilities regarding the protection of the health of workers, deals with pollution in the working environment. The ECE is planning increased efforts on certain aspects of these problems and will organize a regional conference to take place in 1970 or 1971. A good survey of all this work is to be found in the Secretary-General's report[3] to the forty-fifth session of the Economic and Social Council this summer.

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1 E/4457 and Add.1 (mimeographed).

2 E/4458 (mimeographed).

3 *Official Records of the Economic and Social Council, Forty-fifth Session, Annexes*, agenda item 12, document E/4553.

42. Various aspects of the total question are under study by WHO, IMCO and IAEA in Vienna. I should like here to stress the active interest that UNESCO takes in these problems. The Conference on the Biosphere,[4] organized by UNESCO in September of this year in Paris, was remarkably successful in defining certain aspects of the problems of human environment and indicating roads to their solution. The recommendations of this Conference are now before us in the annex to the report *[A/7291]* prepared by the Secretary-General for this agenda item.

43. The Swedish Government, for its part, wholeheartedly supports these important recommendations and wishes them to be followed up in the years ahead. I wish to mention in particular recommendation No. 1, on an international research programme; recommendation No. 19, on the rational use and conservation in assistance projects for developing countries; and recommendation No. 20, on the preparation of an intergovernmental and interdisciplinary programme. There is also recommendation No. 17, on a United Nations conference on human environment, which is of direct importance for the debate here in the General Assembly. It deals specifically with the resolution *[1346 (XLV)]* adopted by the Economic and Social Council this summer under the item "Question of convening an international conference on the problems of human environment" and it recommends that the General Assembly take into consideration the recommendations of the Conference and, furthermore, consider the advisability of a universal declaration on the protection and betterment of the human environment.

44. I wish to say here that the Swedish delegation supports the idea of an international declaration, which was sponsored at the Biosphere Conference by several countries, including France and the Soviet Union. Such a declaration could be worked out in time to be issued at the proposed United Nations conference on human environment.

45. During the fifteenth General Conference of UNESCO, which took place in Paris only a few weeks ago, from 15 October to 20 November, the recommendations of the Conference on the Biosphere were approved by large majorities or unanimously. Sweden, together with Belgium, Madagascar, Mali, Czechoslovakia and Poland, sponsored a resolution *[15 C. resolution 2.313]* on a plan for a long-term intergovernmental and interdisciplinary programme on the rational use and conservation of the natural environment and its resources. The plan is to be focused on the scientific, technical and educational aspects of the problem. In operative paragraph 2 of that resolution the Director-General of UNESCO is invited to submit this plan to the General Conference at its sixteenth session, in 1970, taking into account all relevant decisions by the General Assembly of the United Nations, that is, including such decisions or decision as we will take as a result of the debate which has begun today.

46. Also many intergovernmental regional organizations outside the United Nations system are increasing their activities in the field of the human environment. I would like to mention, in particular, the Organization of African Unity, which at the recent meeting in Algiers[5] adopted a Convention on the Conservation of Nature and Natural Resources; the Council of Europe has designated the year 1970 as the Nature Conservation Year, and so forth. Also many national and international non-governmental organizations are making valuable contributions to our common efforts. I wish to mention particularly the International Union for the Conservation of Nature and Natural Resources, the International Council of Scientific Unions and the International Biological Programme. All this work, it seems to us, deserves active support and should be encouraged in every possible way. This, indeed, should be one of the main purposes for action by the General Assembly on the item now under consideration.

47. I now come to the last heading of my statement: what action could the General Assembly usefully take at this stage? The Swedish Government, for its part, has come to the conclusion that it is desirable to provide a framework for a comprehensive consideration of all the problems of human environment within the United Nations. The purpose of such consideration would be to stimulate Governments and organizations to continue and to intensify all efforts for the study and solution of the problems regarding the protection and the improvement of the natural surroundings in the interest of man. Action should be taken at the national, regional and international levels.

48. It is important that the activities be given a common outlook and direction in order to achieve maximum efficiency. A primary practical purpose would be to mobilize knowledge and experience in such a manner that it could be made easily available to developing countries. Finally, we should try to identify those aspects of the problem which can only, or best, be solved through international co-operation and agreement. At its summer session this year the Economic and Social Council endorsed these objectives and recommended *[resolution 1346 (XLV)]* that the General Assembly, for its part, consider ways and means to further them, including, in particular, the desirability of convening a United Nations conference on the problems of human environment.

49. It is the belief of those Governments that stand behind draft resolution A/L.553 and Add.1-3, which is now before the General Assembly, that it is advisable for the General Assembly, in furtherance of the objectives just mentioned, to decide to convene in 1972 a United Nations conference on human environment and to begin immediately preparations for such a conference. We are convinced that the decision in principle to hold a conference and the preparations for it will in themselves serve as a strong impetus for increased and co-ordinated action on the part of governments and organizations.

50. May I add a few clarifications. The decision to hold a conference, and the preparations for it, should in no way be allowed to hinder or delay the valuable substantive work that is being done by Governments, as well as by organizations within their respective spheres of compe-

4 Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere, held in Paris from 4 to 13 September 1968.

5 Fifth session of the Assembly of Heads of State and Government of the Organization of African Unity, held at Algiers from 13 to 16 September 1968.

tence. On the contrary, this work should be encouraged. Thus, it is not envisaged that the General Assembly or the Economic and Social Council would undertake any work of their own on the substance of the problems; for instance, in the field of basic research. They should rely on the work performed by governments and organizations, which therefore would have to be consulted very early in the course of the preparations. In particular, such consultations are indicated, indeed are imperative, at a very early stage with the specialized agencies concerned.

51. It is suggested that the preparations be undertaken in two stages. In the first stage, the Secretary-General, through the Economic and Social Council would work out a report indicating the main problems facing developed and developing countries in this field, which might with particular advantage be considered at a conference. The report would deal with the possibilities for increased international co-operation, especially as they relate to economic and social development, in particular of the developing countries. It would also suggest possible methods of preparing the conference and a possible time and place for it, etc. It would be presented at the twenty-fourth session of the General Assembly. The arrangements for the preparations in the second stage would then be debated and decided upon by the General Assembly.

52. It might appear to some that the time allotted for the first stage of preparations is somewhat short. To these I wish to say that the first report should be considered a preliminary one. It is designed, primarily, to collect and to make available sufficient information to allow the General Assembly to decide on the preparations to be undertaken in the second stage.

53. It is not the intention of the sponsors that the conference should be a mammoth gathering of scientists drawn from all the specialized fields involved. On the contrary, detailed scientific discussion at the conference itself should be avoided. It is assumed that the scientific problems would already have been extensively clarified long beforehand in the course of the preparations, at regional meetings, scientific gatherings, etc.

54. In our view, the conference would bring together, from each country that wishes to take part, a limited number of representatives. These may be members of Governments, outstanding educators and leaders of public opinion, leading scientific journalists, etc. Their task would be, *inter alia,* to draw conclusions and to consider guidelines for further action. The conference would be of short duration, not longer than two or perhaps three weeks. We attach special importance to the presence at the conference, and the active participation, of representatives of the specialized agencies and other organs members of the United Nations system, as well as the interested non-governmental organizations.

55. The timing of the conference is, of course, a matter for careful consideration. The General Assembly has expressed the wish that only one major international conference should take place each year. In view of what is now known about the calendar for the United Nations, the year 1972 has appeared to the sponsors to be suitable. This date would also, it seems to us, allow for the careful preparations that are necessary if the conference is to be successful. By taking a decision now on the year for the conference we would gain valuable time and give the total work desirable momentum.

56. As regards the expenditures to be borne by the United Nations, it is as yet only possible to indicate the general order of magnitude. I would like to do this by mentioning that the expenditures borne by the United Nations for the Third International Conference on the Peaceful Uses of Atomic Energy in 1964 were about one million dollars. The cost to the United Nations may be reduced by contributions from the host country, etc. In this connexion I would like to say that the sponsors do not foresee the need for any new institutional machinery to be set up at the conference.

57. I have come to the end of my statement. May I express again the satisfaction of my Government that so much interest and so much support has been forthcoming for the idea of a United Nations conference on human environment. This is evidence of the growing concern which is felt about these problems in all parts of the world, amongst developed as well as amongst developing countries. It also shows that there is widespread understanding of the motivation behind the proposal now to bring this matter before the General Assembly of the United Nations.

58. Let me sum up. Man depends for his survival on an infinitely complex system of relationships and balances between innumerable living organisms, all existing in or on the extremely thin crust of the earth or just above it. The system has a remarkable capacity for adaptation and regeneration; but nature's patience has a limit. Indiscriminate and uncontrolled use of modern technology, indispensable as such technology is for economic and social progress, may set trends in motion which will lead to unforeseen harmful effects in unexpected places. Many of these effects are irreversible. Even if we avoid the risk of blowing up the planet we may, by changing its face, unwittingly be parties to a process with the same fatal outcome.

59. It seems, therefore, that a broad consideration of the environmental problems and of possible approaches to their solution is of equal interest to all peoples on earth. The United Nations provides a unique forum for such consideration. There are many issues on which the members of the United Nations are divided and deeply divided. On the issue now before the General Assembly we are, I hope, all united. It is ultimately a question of collective self-preservation.

60. Mr. OGBU (Nigeria): At the timely initiative of the Government of Sweden, the General Assembly is embarking on the examination of the important problems of the relation of man to his environment. There are few periods in history when the significance of this question can be of higher contemporary interest. But this is also a problem of timeless relevance. Let me, therefore, at the outset express the appreciation of the Nigerian delegation for the foresight and wisdom of the Swedish delegation in bringing this item to the focus of international discussion within the framework of the United Nations.

61. The representative of Sweden, Ambassador Åström, has set forth before the Assembly a comprehensive and

detailed analysis of the scope of this subject as well as thoughtful ideas about the manner in which the international community should now endeavour to cope with the issues involved. There is hardly anything that I can add to that masterful and thought-provoking exposé. I should like, however, to underline the point that this is a vast and complex subject: the interests and concerns which it must compel are of universal application. It would be unwise to take an exclusively narrow national or regional view of this question. We should be concerned with the problems posed for man and his environment in all the locations of human life.

62. In the view of my delegation, the problems of human environment are an attendant, indeed an integral, part of the problems of development for economic and social progress to which Nigeria, like all other developing countries, is dedicated. We would wish that only a small fraction of the financial resources and energy currently devoted to explorations of outer space could be utilized for the study of direct and critical human environment. Even at this stage, when the developing nations of the world are far from the goals which they all cherish, there are pressing problems arising from the normal utilization of the natural endowment of man which raise difficulties in themselves and pose more difficulties in the way of the efforts for development.

63. Those of us who live in the tropics know the problems posed for us by the phenomenon of vast soil erosion and the consequently severe impoverishment of the soil. The progressive deterioration of the soil is an acute danger for agricultural productivity, and all the more in a situation where higher agricultural yields are essential for the well-being of the human population. In addition, developing countries as a whole also face in varying degrees such problems as those arising from deforestation, lake-silting and the gradual extinction of wildlife.

64. It was because of the increasing concern for such problems that the Assembly of Heads of State and Government of the Organization of African Unity at its fifth session, recently held in Algiers, unanimously adopted the Convention on the Conservation of Nature and Natural Resources by which African States have undertaken to protect their continent against all forms of indiscriminate exploitation, which it experienced for so long during the colonial era. It is, of course, the tradition of the OAU to co-ordinate its efforts in this field, as in other relevant matters, with the common international co-operation which may develop on this question under the aegis of the United Nations.

65. But, to look ahead a little to the future, the significance of this subject for the developing countries is immeasurable. Industrial and technological development, which the world has seen, has been achieved at a high price for man and the harmonious relationship which must exist between man and his environment. If the advancing development of the vast areas of the world follows the nature and character of present achievement, then these countries also will be doomed to coping with the grim problems inherent in technological development.

66. On the other hand, an urgent international effort to examine and analyse these problems and pursue the means to their solution could prove of invaluable assistance to developing countries in forestalling, or at least avoiding, the whole plethora of problems which have up to now attended what I shall call "classical" industrial and technological development. That, in the view of my delegation, is a constructive and existing approach in the field of international co-operation. It offers a timely opportunity for us to anticipate intelligently problems which loom not too far on the horizon, and to begin to pool our resources and prepare ourselves for their prevention or amelioration.

67. Now that this item has come to the attention of the Assembly, we in my delegation are convinced that there can be no disagreement about its vital importance. We also believe that there is a large number of delegations which, like Nigeria, will give their enthusiastic and active support to the Swedish initiative in introducing the discussion of the subject in the United Nations. The immediate question now is what action the General Assembly can take at this stage. In an attempt to give a proper answer to this question my delegation has gladly joined as co-sponsor in putting forward, for the consideration of this Assembly, the proposal contained in draft resolution A/L.553 and Add.1-3.

68. The aim of the draft resolution is simple and straightforward—it seeks to get the Assembly to agree that a United Nations conference on human environment should be convened in 1972 and that the necessary preparatory work for the conference should be put in motion immediately. It is our expectation that with the continuation of the substantive work at present being undertaken on various aspects of the subject by some Governments and certain international organizations and bodies, as well as the scientific and other preparations at various levels which will be undertaken before the proposed conference, a valuable amount of data and documentation will be available for study on the basis of which, we hope, useful programmes and decisions for the rational organization of international co-operation for the universal solution of the problems of human environment can be formulated.

69. It is our earnest hope that the draft resolution readily commends itself to unanimous adoption by this Assembly. It is our belief that at this stage, once the General Assembly has fully discussed the scope and merits of this item, we can all agree to focus further activity on the convening of a United Nations conference on human environment and to develop the momentum to ensure the success of the proposed conference.

70. Mr. SHAHI (Pakistan): At the outset, the Pakistan delegation would like to pay a sincere tribute to the Government of Sweden for its initiative in increasing the awareness and concern of the world community about the problems of human environment. The masterly exposition which was made by the representative of Sweden brought out clearly the vastness, complexity and diversity of this subject which, as Ambassador Åström rightly said, is of direct and critical concern to all peoples on earth.

71. The well-being of man has been inescapably linked with the environment he lives in. It is to man's ability to adapt to the changing interplay of natural forces that one must look when trying to explain his great biological

success in the course of evolution. However, the application of science and technology to industry and agriculture and the tremendous increase in world population threaten to jeopardize the possibility of maintaining the delicate balance between man and nature. The problem is compounded by the advance of modern science and technology which, so essential for human betterment, can bring in its wake serious ecological disturbances.

72. The rapid increase in population in parts of the world with a preponderantly rural society suffering from extreme impoverishment threatens to lead to an appalling despoliation of the human environment. The problems of air and water pollution, soil deterioration, rampant disease, illiteracy and hunger acquire magnitudes which are difficult even to visualize, much less to resolve. Urbanization offers no panacea unless steps are taken to remove the deleterious effects which have so far accompanied such a development.

73. The consequences of uncontrolled urban growth are more evident in the industrially advanced countries–the ghettos, air and water pollution, waste, noise–with consequent adverse physical and psychological effects. Millions upon millions of people are born, raised and procreate in the cities. Their whole biological development is taking place exclusively in an urban environment. Instead of striving to strike a balance with the forces of nature, man is in urban centres more and more being forced to adapt to forces let loose by himself. Already we see him the victim of family disorganization, mental tension, and mounting crime.

74. The answer to those problems in developing countries lies not in seeking to escape from urbanization, but in trying to forestall the concomitant ills through planned development. We, in Pakistan, have given importance to physical planning and regional development in our development plans precisely with the aim of avoiding some of the most acute problems which plague existing cities. In developed countries the major effort wili have to be devoted towards removing the ghettos and finding practical ways for tackling the problems of noise, traffic, radiation, waste disposal, air and water pollution and lack of recreation areas.

75. The use of insecticides and pesticides is essential in any intensive effort to increase agricultural production. Those biocides, however, have secondary effects which impair the environment. Again the answer lies not in forgoing their use but in ensuring that the adverse effects of such use are obviated. Uncontrolled water management and water use can lead to serious effects on man's environment. One such problem that we face in West Pakistan is that of waterlogging and salinity of irrigated land. This adverse development has, however, been arrested and reversed by installing thousands of tube wells to drain the affected areas.

76. Modern science and technology have not only led to the creation of ecological hazards; they have also provided us with the means to control nature for the advantage of man and improving his environment. Weather satellites can provide data which can prove of great use in minimizing the dangers from cyclones and tidal waves. Serious research is being done on how man can change weather conditions to his advantage, for example by increasing precipitation, suppression of hail and prevention of lightning. A great deal of work however remains to be done to perfect the theory and practice of weather-making and ensuring reliable results.

77. The problems of human environment also comprehend radiation and radio-activity, pollution of the sea, deforestation and poor cultivation techniques. Many Governments have embarked on tackling those problems in their countries but their complexity and vastness necessitates that an international co-operative effort be made to overcome them. We have therefore joined with many other delegations in co-sponsoring draft resolution A/L.553 and Add.1-3. This draft resolution aims at providing a framework for comprehensive consideration within the United Nations of the problems arising from the accelerating impairment of the quality of human environment. The main recommendation in the draft resolution relates to convening a United Nations Conference on Human Environment in 1972. This Conference should help to focus attention on the problems that have been mentioned, as well as on their solution. We hope that it will lay the groundwork for greater international co-operation in this field, and in particular to enable the developing countries to derive benefit from the mobilization of knowledge and experience to overcome or forestall such problems, so as to avoid making the same mistakes which have made parts of the environment in industrial countries so unhealthy.

78. A good basis for this Conference has already been provided by the recommendations adopted by the Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere held in September this year in Paris under the aegis of UNESCO. The success of the Conference will largely depend on the active participation, especially during the preparatory stages, by the concerned organizations of the United Nations system. Those organizations are already making, in their respective fields of competence, significant contributions to the identification of the problems of human environment and on ways and means of dealing with them. We sincerely hope that they will lend their full co-operation to the Secretary-General in all matters related to the proposed Conference and in particular on the main problems facing developed and developing countries in this field which might be considered at the Conference, especially increased international co-operation relating to economic and social development of the developing countries.

79. Mr. KAPLAN (Canada): Man's increasingly rapid thrust into a technological age has not taken place without serious consequences for our human environment. Alarming changes have occurred in the environment as a result of human activity, principally as a result of the growing forces of industrialization and urbanization. If we are to preserve our environment and ensure the survival of our living resources and, in some regions, human health and life itself, then we must react to those changes in a positive and determined way. In analysing those changes, we have made scientific discoveries about our environment which run counter to popular assumptions. As those discoveries gain acceptance, as they must, they are bound to affect all our values, cultural, social and economic, as we develop a new respect for the balance of nature.

80. Popular assumptions have been based on the view that we have learned to conquer our environment and have become its master. We can now establish comfortable human settlements in the cruellest climates; we can grow crops in sterile soil; we can make food from waste; we can travel vast distances in minutes; we have extended the span of man's life. With all that power it is small wonder that we have assumed our environment to be a virtually limitless reserve of air, fresh water and clean earth, there for us to exploit as we develop the capacity to do so. Research has discerned the limits of those elements, but we have believed such limits to be of only theoretical interest.

81. What has recently become clear, and has altered our assumptions of human power over nature, is our realization that our human environment rests in a fragile balance. It is subject to laws which, for all our technology, we must learn to respect and obey if conditions are to be maintained in which man and his living resources can survive. Our environment is like a living organism, sturdy enough to absorb some stresses but in some regions pushed beyond its limits by our production of vast amounts of noxious materials of great complexity. Nature can break down only some of those substances into simple and even beneficial elements, and no matter, however harmful and menacing its form may be to the survival of life, is ever lost to the system. The dynamic forces within the natural system, on which we have relied in the past, cannot break down and absorb those substances nor can the system, of itself, recuperate from the devastating effects.

82. At least one startling example of how the delicate balance of nature can be upset is provided in the Great Lakes region of North America. Lake Erie is, or was, one of the largest fresh-water lakes in the world. Through persistent neglect and inadequate remedial measures that great lake has been converted from a source of food, fresh water and recreation into a chemical tank, in which pleasure boating, let alone swimming, is done at peril. For example, if a man falls from a boat into Lake Erie he is advised to have a tetanus injection. As for food from the lake, it should suffice to say that the blue pike fish catch, which was 6,900,000 pounds in 1956, had by 1963 dwindled to less than 200 pounds.

83. The message for all of us is this: that we must act to arrest the abuses of our environment and to remedy the abuses already inflicted upon it, and that this challenge to life itself should rank in importance with the major issues of our time. Our technology has in the past been directed to controlling our environment for the production of goods and services. What must now be conquered and put under control are the forces of environmental deterioration and destruction which have been released by contemporary industrial and urban activity. Technology must now be directed to restoring the normal balance in our human environment. New techniques are available to reduce waste, to cleanse polluted areas and to improve industrial and urban processes. It is not that we lack the knowledge but that in the use of our present knowledge we lag behind—a result, undoubtedly, both of insufficient awareness of the consquences and of insufficient concern about the costs involved in making use of those new techniques.

84. A proper appreciation of what must be done involves making a new appraisal of the value to our peoples of a clean environment. For the purpose of that determination, fresh air, fresh water and clean soil must, for the first time in man's history, be considered in the same economic terms as food, clothing and electricity. The latter are valuable because they provide the basis for a good life and because, as commodities, they have a determinable cost of production. What has to be understood now is that air, water and soil must be regarded as being of equal, or even greater, economic importance as central elements of life which make everything else possible.

85. The United Nations family has already made a contribution in many areas. In the International Covenant on Economic, Social and Cultural Rights *[resolution 2200 A (XXI), annex]*, the United Nations has provided us with a definition of the human goal towards which we should be working, and that is: "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health" *[article 12, para. 1]*. The Covenant has also placed responsibility on Member States to take steps towards "the improvement of all aspects of environmental and industrial hygiene" *[article 12, para. 2* (b)*]*.

86. Individual countries, as well as the world community as a whole, must be concerned when those rights are threatened by forces of industrialization and urbanization. Governments have a primary role to play, both individually and through appropriate international co-operation, in which the United Nations can play an important part. Experience in developed areas of the world, regardless of the economic and social system under which they have been developed, points up the problems which are now facing or are likely to face all countries as the technological age embraces more and more of mankind.

87. The Canadian delegation is convinced that the time has come when the world community, as represented in this Organization, must give attention to the problems of human environment. We must do that with a sense of concern and urgency and in a spirit of international co-operation. We must do it in the realization that all of us have a great deal to learn about the problems of human environment, that mistakes committed in developed areas need not be repeated elsewhere and that developing countries in particular have an opportunity, through the application of new techniques, to take preventive steps which may enable them to avoid some of the more horrendous consequences of abuse of the human environment.

88. Our experience has shown us that preventive and control measures must now form an integral part of our industrial and urban programmes. We believe that such measures should also form an integral part of the development plans of the developing countries, so that the excessive costs of carelessness may be avoided and the economies of comprehensive planning achieved. Apart from the contribution that would be made to the welfare of their peoples, such an approach would also make a direct contribution to economic development in the developing countries by providing at an early stage, and at a fraction of the cost, a degree of environmental control which the developed countries would now be able to achieve only at a very high price. We would submit, therefore, that the time

has come when developing countries will want to take due account in their development planning of the implications for the human environment. We should all be prepared to play our part in encouraging and contributing to that essential aspect of economic development.

89. Thus the steps that each country takes or fails to take in improving our environment by reducing pollution are of great importance to the rest of the world, because our environment is continuous. The same air envelops us all; the water which falls from the sky, flows through our lands and joins the coasts of all countries is one. The pollution which any country contributes to the human environment unavoidably affects the rest of the world. Each of us can reduce our output of pollution, but we shall remain the helpless victims of those who fail to do so. Therefore not only national efforts but international co-operation must be encouraged and increased, for the general benefit of mankind on an increasingly populous planet.

90. With new appreciation of the rigid limits imposed by the laws of the balance of nature to which I have referred, every government, including the federal and provincial governments of my own country, has difficult decisions to make. What level of environmental purity shall be required? Producers in the past under all economic systems have been permitted freedom to seek in production the greatest output for the least input or cost, irrespective of the pollution produced in the process. Economic decisions in the past have not taken pollution into account and as we reach and strain the limits of nature's tolerance, costs appear which the community bears, in terms of waste and deterioration of environment. In this context the question of standards, which is the crucial beginning, is really the same as asking what level of environmental purity can each economy afford, because, as I shall indicate in a moment, huge costs are involved, far greater for developed than for developing areas, and a responsible decision will undoubtedly affect the gross national product.

91. Having decided upon the goal, each government must then decide how, within its society, it will induce the reforms required to maintain the target level. One thing is clear: within each region there must be a concentrated effort at reform in which responsibility is broadly shared, because all of us contribute to the production of pollution. We benefit as consumers from the lower costs of goods and services created under conditions where pollution is not controlled, and we all suffer the consequences in the broader context of wasted resources and a deteriorating environment. The choices are whether to require producers to bear the costs directly, or to make direct government expenditures, or to make use of subsidies, tax credits or exemptions: what method is chosen will depend on the society and the economic system involved.

92. It is against that background that the Canadian delegation views the question now before us. A first step was taken by the Economic and Social Council, which in its resolution 1346 (XLV) set forth the reasons for concern about our human environment and recommended that this Assembly consider the possibility of an international conference being held on this question. That resolution came none too soon, and it is the Canadian view that the time is now ripe to take the next step. Accordingly, my delegation has been glad to join with Sweden and many other countries in co-sponsoring draft resolution A/L.553 and Add.1-3, which would have the General Assembly decide to convene a United Nations conference on human environment in 1972.

93. As the draft resolution indicates, the Secretary-General would be asked to prepare a report, through the forty-seventh session of the Economic and Social Council, for the twenty-fourth session of the General Assembly. On the basis of that report it should be possible for the General Assembly to define clearly and precisely the purposes of the proposed conference, and how those purposes should be achieved. For our part, we would hope that the agenda and terms of reference would be shaped in such a way that the conference would produce constructive guidelines for future action, particularly through international co-operation.

94. My delegation cannot give sufficient emphasis to the importance of the preparatory work to be carried out, carefully and conscientiously, taking into account the role now being played by Governments of Member States, members of the specialized agencies and of the IAEA and other appropriate organizations. When the Secretary-General's report is received, the Canadian delegation believes that the most effective way of continuing preparations for the conference would be to establish an *ad hoc* preparatory committee which would work in close co-operation with the Secretary-General. That, of course, is not a matter to be decided at this time, but the Canadian delegation does hope that this method of work will be chosen. Canada will be fully prepared to assist in any way possible in the work of such a committee.

95. A key question, already worthy of preliminary consideration, is the nature of the proposed conference. While this also remains to be decided, my delegation can see much merit in a conference which would be of not more than three weeks' duration and which would attract a wide spectrum of participants, such as public officials, educators and distinguished journalists, as well as technical experts. The conference should focus its attention, in our view, on questions relating to pollution.

96. In suggesting concentration on pollution I should like to offer some explanations in terms of my own country's experience. Canadian experience indicates some of the dimensions and tremendous costs of failure to introduce effective anti-pollution measures at the earliest stages of development. Canada is a young country, still in the process of developing many of its natural resources, and building its primary and secondary industries. Canada shares the upper portion of the North American continent with the United States, the world's most industrialized and most urbanized country. Because so many industrial areas are located along the common border between our contries, we are both naturally concerned with the problems of pollution, and we are engaged in many joint studies and programmes designed to deal with them. I hope that our experience may be helpful within the United Nations family in defining and attempting to solve some of the more serious problems of pollution.

97. Allow me to list briefly some of the major problem areas which are of concern to Canada and to our United

States neighbours—areas in which we are already considering or taking corrective measures involving international co-operation. The Great Lakes and the St. Lawrence River provide fresh water, hydroelectric power, fish, recreational facilities and shipping access through 1,000 miles of lakes, rivers and canals to the heart of the North American continent. This great inland waterway provides resources and transportation vital to the economic and social welfare of millions of people in both countries. Indeed, the resources of this magnificent river system are so large that our peoples never believed that they could be seriously depleted or polluted. Now, however, we are approaching the point of no return. This is the time when we must take active and costly measures if we are to preserve these resources and restore what we have contaminated, without crippling the adjacent industrial areas which support millions of people living in the Great Lakes region of our two countries.

98. Among the problems is pollution from industrial waste, sewage and chemicals, which for over a century have been dumped, in ever-increasing quantities, into the lakes and rivers. These wastes have destroyed the purity of the water, damaged the fishing industry, and ruined extensive recreation areas and wild-life sanctuaries, all of which were among the hitherto magnificent and invaluable sources of wealth of our two countries.

99. Let me cite one or two examples of the pollution measures which we in Canada are now exploring. The Province of Ontario, which has a population of only 7 million people, covers the northern side of a long stretch of the St. Lawrence River, Lakes Ontario, Erie, Huron and Superior and the Niagara River. It is along much of this system that our major industrial-urban areas have developed—as they have on the other side of the border, in the United States. Recognizing the serious threat of pollution in the early 1950s, the Ontario Government undertook an investigation of the problem, and it estimated in 1955 that it would cost $24,000 million, spread over a period of twenty years, to install in Ontario adequate water and sewage facilities for anti-pollution purposes. Anti-pollution measures are now being implemented both in Ontario and in the riparian States on the United States side to help restore and recover the natural resources we have so seriously and inadvertently damaged or destroyed. To take another example, the cost of constructing sewage systems in Ontario between 1957 and 1967 reached $182 million because it was not done gradually through the years as the Province developed. A recent study of pollution in the Great Lakes cost $7 million. That was the cost of the study alone; implementation of remedial programmes will cost hundreds of millions of dollars.

100. It will be clear from those examples that anti-pollution programmes are very expensive and require years of extensive study and planning and construction. The cost of preventive action before pollution occurs is small in comparison. Two of the most expensive problems encountered in developed areas can be entirely avoided in developing areas by planning controls in advance. These problems are the elimination of existing pollution and the upgrading of existing productive facilities which do not satisfactorily control pollution. Here I might mention that among the proposals which have been made is one which would involve the drainage of Lake Erie, the serious conditions of which I have already described. You may well imagine how badly this beautiful lake, which is 241 miles long and 57 miles wide, has been polluted if consideration is now being given to its virtual destruction. How much better and less wasteful it would have been if problems had been recognized and overcome before such a stage was reached.

101. I have spoken so far of water pollution because it is one area with which we in Canada are now particularly concerned. But there are many other problem areas which are becoming serious threats to our environment and to our cities and towns. Among them are the pollution of the air by industry, domestic heating, and exhaust fumes from automobiles and trucks; the contamination of our waters, harbours and coasts and fishing areas from shipping as well as from urban and industrial wastes; and noise from aircraft—a new problem which Governments and the International Civil Aviation Organization are now studying as it becomes increasingly serious. The poisoning of the soil and crops through the uncontrolled use of chemicals and the effects which such chemicals have on the balance of nature and our wildlife are other problem areas.

102. It might be of interest to add at this point one example in which, through forethought and sound planning, a serious potential problem of pollution was avoided. The introduction and rapid spread of nuclear power stations in my country might have added seriously to the contamination of the environment; but, thankfully, preventive measures were taken at the time these plants were erected. This particular programme of industrial waste management may well suggest how the problem of pollution might be controlled in new industrial areas. It has been costly, but this cost is insignificant in comparison to the costs of attempting to repair the damage that could have been done.

103. Canada is both a developed and a developing country. I regret to say that in the regions which are already developed very little thought was given to preserving the values to which I have referred. But to a large extent we have learned our lesson and, like other developed nations, we look foward to the proposed conference as a way of communicating to others the advantages of early planning and preventive action. For developing countries in particular, we hope that the experience which we and others have gained in the past will make it possible for contamination and loss of resources to be prevented in those areas which are only now being opened to modern technology and industrialization.

104. In concluding my remarks, may I make one final general comment. For some years various organizations in the United Nations family, such as WHO, FAO, UNESCO, IMCO and IAEA, have been concerned with and have been carrying out important work in attempting to protect man's environment from the effects of pollution. I would draw attention to the Secretary-General's report on the work of the specialized agencies in this field. In addition, many Governments and many intergovernmental and regional agencies, among them the International Joint Commission composed of Canada and the United States, have been actively engaged in studies of pollution and programmes

designed to reduce or eliminate the effects of pollution. My delegation strongly urges Member States, and members of the United Nations family as well as intergovernmental, governmental and non-governmental organizations, to give their fullest assistance and support to the Secretary-General in preparing the proposed report and in carrying forward the arrangements for convening the proposed conference.

105. The rapid economic development of the past several decades has offered mankind the promise and the hope of a life free from hunger, from disease, and from the degradation of poverty and illiteracy. And yet the industrialization which has brought, and is bringing, more and more countries to the threshold of this new age is also, ironically, threatening the continuing health and welfare of mankind through the hitherto unforeseen threat to the rich and often irreplaceable resources of the land, the forests, the lakes, the sea and the air. We must answer this threat by ensuring that future generations do not suffer from inaction or indifference on our part. I therefore urge, without prejudging the observations of the Secretary-General concerning the scope and nature of the proposed conference, that at this session we take another step forward, indicating our willingness and desire to deal with the problems of human environment. We can do this by taking a decision in principle now to hold a conference on human environment in 1972 and to co-operate fully in the preparatory work to ensure that the conference will be a concrete success. I therefore invite all delegations to join with the co-sponsors in unanimously adopting the draft resolution *[A/L.553 and Add.1-3]* before us.

106. Mr. DIACONESCU (Romania) *(translated from French)*: The Romanian delegation attaches particular importance to item 91 of the General Assembly's agenda because it recognizes the interdependence between faster economic and social progress on the one hand, a course to which Romania is firmly committed, and the quality of the environment on the other, a problem closely linked with the basic objective of the Romanian Government's policy, namely, the steadily increasing satisfaction of the material and cultural needs of mankind.

107. Convinced of the usefulness of debates, within international bodies on questions of social and international ethics, Romania at the same time affirms the usefulness of exchanges of experience and international co-operation in the field of ecological ethics, that is to say, the relationship between man and his environment.

108. The exploration and conservation of the environment in which man lives and from which he draws all his means of subsistence involve one of the most fundamental problems with which mankind is faced. This problem is one of the most urgent importance, since world population is increasing so rapidly that greater and greater pressure is being exerted on the environment and, in the effort to apply modern science and technology to development needs in most countries the long-term effects of technological evolution are not fully understood or properly assimilated.

109. The unremitting deterioration of the biosphere, due to the various negative factors affecting the environment in which man lives and carries on his activites, should be of increasing concern to us.

110. The scientific and technical knowledge that has been developed over the years has implanted in mankind the hope that the needs of an ever-growing population will be satisfied. In reality, however, the existence of a technology capable of benefiting the whole of mankind does not automatically imply that it can or will be used for improving human welfare. Very often, the potentials of nature are sacrificed to increased production of goods expressed in terms of the indices of economic profit.

111. Experience has shown that, so far as the human environment is concerned, the introduction of technology into the economy may have, apart from certain well-known advantages, a whole series of negative effects, such as air and water pollution, erosion and other forms of destruction of the soil, noise, the secondary effects of the use of insecticides, and the like.

112. The existence and development of such phenomena may lead to a deterioration in the ecological balance of the biosphere and in the harmony between man and nature.

113. In almost all countries, there is a growing move towards the development of the knowledge necessary for the rational use of natural resources; but, as the studies made by United Nations bodies have revealed, in both the developed and the developing countries there is a general lack of planning with regard to the rational use of the environment by man and effective control of that use.

114. Due attention must be given to the long-term effects of man's activities. Economic and social development planning must take into account not only the technical, economic and political criteria but also the ecological factors which in the long run determine the success or failure of development activities.

115. There are immense natural resources in the world which, if effectively developed on the basis of contemporary science and technology, could provide mankind with the means of attaining a level of living worthy of our era.

116. All countries, it is true, are making increased efforts along these lines, but few countries really have the necessary means and knowledge for the rational development of their resources. In many cases, the natural resources of the biosphere are wasted or irrationally destroyed as a result of uncontrolled deforestation, excessive hunting and fishing, nuclear experiments, pollution of the various environments, and the like. Atmospheric pollution by toxic substances in a single year is estimated by experts at 750 kilogrammes per person. Through food, each person accumulates in the course of one year some 1,359 grammes of chemical additives, not to mention the exaggerated consumption of medicines. The irrational destruction of forests and the steady increase in the number of engines which consume oxygen pose one of the most serious problems for the future. A single aircraft crossing the Atlantic consumes more than thirty-five tons of oxygen. The greater quantity of carbon dioxide in the atmosphere, which goes hand in hand with the reduction in the supply of oxygen, will increase the absorption of solar heat and, by implication, the temperature of the air.

117. In studying these phenomena, specialists have come to the conclusion that man cannot go on wasting and

calmly destroying large natural resources, especially since in certain cases a "critical point" has already been reached as far as the resources of the biosphere are concerned. Governments should pay attention to the warning of the specialists.

118. In addition to the considerations which I have just put forward, I should like to stress the particular importance of the most efficient exploitation of natural resources. Each nation possesses within its territory irreplaceable treasures—whether they are recognized as such or not—in the form of living species of plants or animals, natural environments and scenery of exceptional beauty. It is incumbent on our generation to protect these treasures; they must be preserved for the future generations of each nation and of the world as a whole. Their value is enormous and, to some extent, beyond reckoning. If we consider only the importance of these treasures for national and international tourism—one of the most profitable economic activities nowadays—we shall readily understand the urgent need to set up a conservation and development programme for that purpose, a national programme for each country, backed by measures taken at the international level. In that connexion, it is clear how important and useful it may be to set up nature reserves, reserves for scientific purposes, national parks, specially developed zones, and the like.

119. In addition to the rational use and conservation of the environment, it is of vital importance to prevent its deterioration and to take steps to improve it. The majority of nations suffer, in varying degrees, from the pollution of their environment—air, water and land—by the products or by-products of urban and industrial technology. Similarly, serious problems may arise from the unregulated dissemination of these by-products and from the use—whether peaceful or military—of atomic energy, which is capable of polluting all environments.

120. Detailed studies should be made of the "diseases of civilization", as these harmful phenomena are frequently called, and a dynamic balance should be maintained both for man and nature.

121. In Romania, long-term economic and social development planning makes provision for the rational exploitation of natural resources. In this way, we have succeeded in preserving the natural environment and in preventing its deterioration. The planning bodies and research institutes are studying the various aspects of the environment. The problem is, of course, extremely complex and new aspects continue to emerge as subjects for our research and practical activities in this field.

122. It seems to us that, in one way or another, similar problems also arise in other countries. That is why we feel the time has come to intensify international co-operation in the field of the human environment, since such co-operation must inevitably benefit all States, regardless of their level of technical and industrial development.

123. The United Nations, which is considering this problem at the initiative of the Swedish delegation, is once again demonstrating its ability to provide an appropriate response to new elements of the complex question of development.

124. The draft resolution before the Assembly *[A/L.553 and Corr.1 and Add.1-3]*, which Romania is proud to co-sponsor, defines the scope and implications of the human environment for economic and social development and for the individual himself.

125. In his statement, the Swedish representative, Mr. Åström, eloquently described to us the full extent of the problem, its effect upon development as a whole and the role of international co-operation in this field.

126. The documents placed at our disposal, which describe the activities undertaken to date by United Nations bodies and the specialized agencies, also show that various aspects of the question, such as the rational use of the resources of the biosphere, the creation of industrial complexes, the process of urbanization, air, water and soil pollution, appropriate and rational use of the soil, the environment and, by implication, the effect which the environment has upon man, have all been studied and discussed at numerous meetings in UNESCO, the ILO, FAO, IAEA, IMCO, the Economic Commission for Europe, the Economic and Social Council and various non-governmental organizations.

127. Romania, both through its specialized technical bodies and through the delegations representing it in the above-mentioned organizations, has supported and encouraged the activities of United Nations bodies in this field.

128. At the twenty-second session of the Economic Commission for Europe, Romania welcomed the initiative of the Czechoslovak delegation, as expressed in resolution 5 (XXII), regarding the organization of a meeting on the human environment. We believe—and this will be our position at that meeting—that discussion at the regional or international level of questions relating to the human environment and to its influence upon society and the development of national economies is of great concern to all States. The discussion of such questions is particularly timely, inasmuch as the present scientific and technical revolution continues to raise new problems with regard to faster economic and social development.

129. In accordance with the provisions of resolution 5 (XXII) of the Economic Commission for Europe, Romania's specialized technical bodies have suggested to the Executive Secretary of the Commission certain problems which could be discussed at the Meeting of Governmental Experts on Problems relating to the Environment, to be held in Czechoslovakia in 1970 or 1971, including: the use and protection of agricultural land, natural resources and the sea; air, water and soil pollution; physical planning and the factors determining changes in the environment.

130. While fully recognizing the value of the activities already carried out by the various United Nations bodies, the Romanian delegation considers it useful, given the urgency of the problems of the human environment, that an over-all examination of this problem should be undertaken within the framework of the United Nations, for the purpose of drawing the attention of Governments and of public opinion to the importance and urgency of the problem and of highlighting those questions which cannot be dealt with and settled except through international co-operation or with its assistance.

131. The conference proposed in the draft resolution could help to develop the "ecological awareness" necessary for organizing relations between man and his environment, while at the same time putting a stop to the irrational use of land and of nature.

132. In the opinion of the Romanian delegation, it would have been both useful and just, in the very interests of the objectives we were proposing, if the draft resolution had been addressed to all interested countries wishing to make a contribution. This is particularly true in that the problem of the human environment is, by its very nature, a universal one.

The meeting rose at 1.5 p.m.

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