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Agenda item 91:

Problems of the human environment (*concluded*) 1

President: Mr. Emilio ARENALES (Guatemala).

In the absence of the President, Mr. Ould Daddah (Mauritania), Vice-President, took the Chair.

AGENDA ITEM 91

Problems of the human environment (*concluded*)

1. Mr. BRADLEY (Argentina) (*translated from Spanish*): It is indeed a difficult task to say something new and interesting on the subject before us after the masterly statement this morning [1732nd meeting] by Ambassador Åström of Sweden, whose sober analysis of the situation was both flawless and engrossing. It is made even more difficult by the learned statements which followed, and which put the finishing touches to the ominous and alarming picture of the dangers which threaten the human environment.

2. Hitherto, international awareness of the problem has been limited to certain unrelated aspects of specific problems, and no attempt has been made to encompass them in a single comprehensive approach with a view to concentrating on their methodical, rational and effective study and solution.

3. By this I do not mean to say that there was no realization that something strange and dangerous was happening to the air we breathe, the earth which sustains us and the waters which bathe it and make it fertile. Indeed, some of these phenomena have been known to us since ancient times, and remedies have been sought. Problems of the erosion and attrition of fertile land are telling, and ancient examples of that awareness and soil conservation works go back perhaps to times as remote as when the first terrace plantation or the first irrigation canal were constructed by man at the dawn of history.

4. Other phenomena are of modern origin—phenomena as new as the advent of jet propulsion and the extensive use of fissionable material, internal combustion engines and the presence of industrial enclaves in the most populous urban centres. Steps have only just begun to be taken at the international level to analyse these recent phenomena and find remedies for them although some regulations on air and water pollution may be found in the municipal laws of the most developed population centres throughout the world. The same applies to congested housing, intense noise

and other factors which have a direct impact on the social environment. Nevertheless, the considerable and meritorious efforts made at both the national and international levels have not, so far, been on the scale demanded by the problem and have not produced really positive results. With every passing day it becomes increasingly necessary to stimulate international awareness of the alarming magnitude of the problem.

5. Speaking on this same subject at the forty-fifth session of the Economic and Social Council held at Geneva, I said that the human race seemed to be driven forward by a blind force of self-destruction and that, by indiscriminately using the products of the creative capacity with which God has endowed it, was slowly, but just as surely as the most dreadful atomic holocaust, destroying the natural environment. Today I repeat that statement with just as much emphasis and with the same concern as on that occasion.

6. We are today seeking solutions at all levels of international activity to the under-development which afflicts more than two thirds of the world's population. We are paying special attention to the exploitation of natural resources, we are earnestly tackling the problem of food production, industrialization concerns us deeply and we are submerged in the vast depths of the sea, seeking to wrest from it its secrets and to exploit its immense wealth. Yet, strange to say, we have not yet devoted ourselves with the same assiduity to the task of preserving the sources of that wealth, of jealously preserving man's environment, whose miraculously balanced components have alone made possible the glorious adventure of the human race and its almost incredible achievements. Development will be out of the question unless the human environment is preserved, and all our present efforts will have been pointless and in vain. Hopes of a better future will recede still further from us, to fade away and be lost in the wastes of solitude and emptiness.

7. Perhaps the knowledge we are now acquiring in our research on outer space and space navigation will then prove useful, if only to look for a new planet on which to settle and begin all over again.

8. I could mention numerous technical, economic and particularly social considerations to demonstrate the importance of the Swedish Government's action in bringing the problem to the attention of a United Nations conference on the human environment. However, I prefer to endorse and support, on behalf of the Argentine delegation, the very weighty, rational and convincing arguments presented by Ambassador Åström in his statement today.

9. We have no doubt at all that the convening of this conference in 1972 is of great importance and that it will

constitute a positive step of unquestionable benefit to mankind. It will also serve to focus international attention on the problem, provide information on the real scope of its various aspects and identify the most urgent areas of action to which the search for solutions should be directed.

10. My delegation has, from the very outset, unconditionally supported the request made at the forty-fourth session of the Economic and Social Council that the problem of the human environment should be included in the agenda of the Council's forty-fifth session, and was one of the sponsors of Economic and Social Council resolution 1346 (XLV), which proposes to this General Assembly that it consider an item entitled "The problems of human environment".

11. Now, as a co-sponsor of draft resolution A/L.553 and Add.1 to 4, which has been distributed, we request and hope that it will receive the attention which the subject deserves. We are confident that it will be approved unanimously.

12. Before concluding, I should like to draw attention to the contribution being made by the United Nations specialized agencies within their respective fields of competence, in investigating some of the aspects of the problem before us and in seeking appropriate solutions. In particular, I would mention the work being done by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the success of the Conference on the Biosphere¹ held under its auspices in September 1968.

13. The activities of the World Health Organization, the World Meteorological Organization and the International Atomic Energy Agency will undoubtedly do much to ensure the satisfactory organization of the conference in 1972. The international non-governmental organizations which are particularly interested in problems related to or connected with the one under consideration, also deserve our praise and encouragement. Their investigations, studies and experience will be of valuable help in preparing the conference and ensuring its successful outcome.

14. The Argentine delegation wishes to express its gratitude for the opportunity it has been given to state its views on a topic which is of deep concern to the Argentine Government.

15. My country, which is large in area and magnificently endowed by Divine providence, possesses virtually uninhabited regions which we are today endeavouring to develop in an unremitting effort to achieve national integration. On the other hand, large conurbations in which more than one third of its twenty-three million inhabitants live, suffer from most of the ills which afflict large modern cities and which were described in detail here today. It is natural, therefore, that we should seek to conserve the wealth of our land, rivers and seas and to preserve and improve the environment in which our people must develop and grow.

16. Mr. WIGGINS (United States of America): The United States is privileged to join with Sweden and fifty other

nations in a draft resolution [*A/L.553 and Add.1-4*] to convoke, not later than 1972, an international conference on the problems of the human environment. We join in this proposal with a deep sense of the importance of this subject for every nation—and with admiration for the initiative of Sweden and its able representative, Ambassador Åström.

17. The evidence of mankind's gathering environmental crisis does not have to be sought in books or in scholarly documents. City dwellers on every continent of this crowded earth see it, hear it, smell it, absorb it and suffer from it. It is in our air—filled with the noxious fumes of factories, furnaces, builders, wreckers, trains, trucks, buses, boats, aircraft, and automobiles by the scores of millions. It is in our lakes and rivers—suffocated by fertilizers that drain from our farmlands, and polluted by an ever-growing flood of industrial, agricultural, and chemical wastes. It is on our land—more and more of which is buried under the encroaching megalopolis, or poisoned by pesticides, or wounded by strip mining and timber cutting, or strewn with the ugly rubbish of our fabulous productivity. Despite tardy efforts to relieve these conditions, they pose a rising threat to human well-being in every nation and community, at whatever stage of development.

18. In the last century, a mere tick on the celestial clock, we have loosed upon the earth such a mass of humanity and such a torrent of energy as to transform much of the earth beyond all recognition. For the first time, we are brought face to face with the stark facts that space upon this planet is finite, that the resources of this planet are exhaustible and are not easily renewed. We are made aware that by his sheer numbers and his heedless ingenuity man can injure his environment so as to hasten his own extinction. We have not much time left in which to learn to proportion our population to available resources, and to become good enough trustees of our inherited wealth of air, water, earth, and forms of life so that our posterity may hope to survive in a condition better than bestial struggle.

19. The United States, as a highly industrialized nation, is well acquainted with these environmental problems, and has begun, however belatedly, to mobilize considerable efforts to attack them. It may be useful for me to give a few examples—not forgetting that our American problems are but illustrations of a world-wide problem.

20. The extent of a people's capacity to transform its environment—for better or for worse—corresponds very closely with the amount of energy it consumes. Since the middle of the nineteenth century, while the population of the United States has multiplied ninefold, the nation's consumption of energy has multiplied by twenty-five. It is still increasing, and at an accelerating rate; in less than twenty years it will be half again what it is now. This rising expenditure of energy has brought our people many good results. It has relieved us of backbreaking drudgery, given us undreamed-of creature comforts, lengthened our lives and brightened them with books, pictures, music, travel and recreation. But along with these blessings, a host of unintended and unwanted byproducts have made the word "pollution" a part of our daily vocabulary.

21. Every year in the United States 142 million tons of smoke and noxious fumes—over 1,400 pounds *per*

¹ Intergovernmental Conference of Experts on the Scientific Basis for the Rational Use and Conservation of the Resources of the Biosphere, held in Paris from 4 to 13 September 1968.

capita—are dumped into the atmosphere. Every year this nation discards 7 million automobiles, 20 million tons of paper, 48,000 million cans, 26,000 million bottles and jars. Much of this material, made of aluminum and plastics, is virtually proof against decay. One wonders what archaeologists of some future age will think of us when they dig these things up. Every year the American mining industry discards more than 3,000 million tons of waste rock and mill tailings. Every year American lakes, rivers and estuaries receive some 50 trillion gallons of hot water, used for cooling by the power industry, and unknown millions of tons of organic and chemical pollutants from our cities, farms and industrial plants.

22. A brief glance into American history reminds us of what a change we have wrought in our natural environment, especially our waters. The Hudson River, which our Secretary-General can see as he looks west from his office window, was described by Henry Hudson in 1609 as "clear, blue and wonderful to the taste". In colonial times salmon were plentiful in that river. A hundred years ago giant sea sturgeon were caught and stacked like cordwood on Hudson River wharfs, and their caviar, not yet popular in this country, was exported by the ton to Russia. Ten to 20 million pounds of oysters were harvested in the lower Hudson as late as 1880. Today most of the lower Hudson, from Albany to the sea, is so polluted with the wastes of cities and factories that it is unfit for drinking or swimming and of little value for fishing or even boating. Oysters and clams have virtually disappeared. The worst stretches of the river have been described in such phrases as "a torrent of filth" and "one great septic tank". It will take a thousand million dollars and a ten-year programme, only now getting under way, to restore this once beautiful river. The Hudson, by the way, originates in the Adirondack mountains in a lake called "Tear of the Clouds". No wonder the clouds weep.

23. Other American rivers, with far less concentration of population and industry upon their shores, have also sunk into degradation. When Captain John Smith, one of the earliest Virginia explorers, first saw the Potomac River, its waters were so clear that he could see the bottom in several fathoms. He described it as "fed with many sweet rivers and springs" and frequented by otters, beavers, martens and sables, and fish so thick that he and his men attempted to catch them in a frying pan. He wrote: "Neither better fish, more plenty or variety, had any of us ever seen in any place".

24. A description of that same Potomac 350 years later appears in a recent report of the President's Council on Recreation and Natural Beauty:

"As the Potomac slowly flows through the nation's capital, its load of silt, filth and acid from farms, mills and mines blends with discharge from overloaded sewers to nourish an algae bloom and a summer stink that rises from the river for miles below the metropolis".²

There again, a long and costly programme of rehabilitation will be required before the river is restored to health.

25. A similar story can be told about the pollution of Lake Erie, the Mississippi, the Androscoggin, and hundreds

of other once beautiful American lakes and streams. Such is the dark side of the story in America. There is a bright side—or at any rate a brightened one. In the past few years the United States has seen a rapid acceleration of programmes of conservation and pollution control at many levels of government and private industry. The Federal Government has embarked on a five-year \$3,500 million programme to help cities build modern sewage treatment plants. New York State voted two years ago to raise a thousand million dollars to clean up the State's rivers.

26. New York City alone plans to invest \$2,000 million in the next ten years for clean air, clean water, and clean streets. Within five years it plans to complete its system of modern sewage treatment for the 1,300 million gallons of the city's daily water supply. This will improve the waters around the city enough to open miles of new beaches to public recreation. In the fight on air pollution, city after city has tightened regulations. New York City power plants have drastically reduced the sulphur content of their fuels. A month ago this city began operating a computerized air monitoring system to warn against pollution crises and to gather knowledge for better controls. All such efforts are aided by nationwide limits, now being set by the Federal Government, on the amounts of harmful exhaust which new automobiles may emit—beginning with 1968 models, and due to be further tightened by 1970.

27. American private industry is spending increasing amounts to control pollution. Its controls on air pollution alone are costing an estimated \$800 million a year. The American oil industry is spending \$382 million in 1968 to combat water pollution. Even these figures are small compared with probable investment in all forms of pollution control in the United States over the coming decades—a figure which has been estimated at well over \$200,000 million.

28. Our remedies are still several jumps behind the problem; in some cases we seem to be gaining on it; but we still have a long, long way to go, and there is much that we have yet to learn. I have cited these facts about the United States not because they are unique, but rather because they are typical of the environmental predicament of all industrial societies, especially those in a stage of rapid growth.

29. Pollution is no respecter of nations, cultures or economic systems. Consider Lake Baikal, that almost sacred lake among the virgin pine and larch forests of Soviet Siberia—420 miles long and the oldest and deepest body of fresh water on earth. The crystal-pure waters of Baikal contain a thousand species of plants and animals known nowhere else. It is famous the world over as a unique laboratory for the botanist, zoologist and student of evolution. Over a year ago, despite protests from scientists in the USSR and abroad, pulp mills began to discharge their sulphurous effluents into the waters of that lake. Similar pollution problems afflict other waters in the Soviet Union, such as the great Angara River, with its vast electric power and manufacturing complex, and the sturgeon fisheries on the Volga River and the shores of the Caspian Sea.

30. In the heart of Western Europe the story is much the same. There is no more sorrowful victim of industrial progress than the fabled River Rhine, that "valley of sweet

² *From Sea to Shining Sea* (Washington, D.C., U.S. Government Printing Office, 1968), p. 95.

waters” of which Lord Byron sang a century and a half ago. In recent decades the Rhine has had to struggle ever harder against the industrial wastes of the Ruhr, which have turned some of its tributaries into almost open sewers.

31. The prevalence of such conditions in industrial areas has, fortunately, not gone unnoticed by the developing nations. Their growing concern for problems of the human environment has been manifested in many ways—among others, by the large number of such nations that are co-sponsors of the present draft resolution in this Assembly. As we approach the second Development Decade, those nations wisely desire to achieve the benefits of development at the least cost in damage to their natural environment. They can well take warning from the past mistakes of other countries, including my own.

32. The universality of these conditions is one reason why pollution of the human environment has become a world problem, calling for the concerted efforts of the world community. But there is another reason. Our cities, industries and farms operate on such a scale that their physical environment is literally the whole planet, with its all-encircling ocean of both air and water. Man-made pollution crosses every boundary, riding the wind and rain, the rivers and ocean currents, the bodies of migrating fish and birds. The Conference on Human Environment is sure to have high on its agenda such global pollution problems.

33. For example, what are we going to do about long-lasting pesticides such as DDT, which are sprayed on crops at a rate of more than 100 million pounds a year? Minute concentrations of them can be lethal to fish and birds and to the ocean plankton which are a vital link in the chain of life. DDT has been detected in places as remote as Antarctica. How can we prevent a rising level of such pollutants throughout the world?

34. What are we going to do about the rapidly rising quantities of inorganic nitrogen fertilizers, which drain from the farmlands of the world into lakes, rivers and estuaries and combine with urban sewage to rob those waters of their oxygen and their ability to support life? How can that pollution be curbed without hampering the world-wide effort to grow more food?

35. What are we going to do to prevent contamination by radioactive wastes from the growing number of nuclear power stations throughout the world? In the present generation, for the first time since the world began, all of us have been exposed to man-made sources of radiation whose effects are still not fully known.

36. What steps should we take to preserve the immense diversity of the earth's plant and animal species? It is that diversity which gives stability to the intricate balance of living nature in every environment. In the industrial century just past, over seventy species of mammals alone have been exterminated—more than in the previous 2,000 years of the world's history. Today some 1,000 other animal species face the same danger.

37. What are we going to do about the accidental spilling of oil from tankers and other ships? Since the *Torrey Canyon* disaster of 1967 there has been some advance in

methods of combating that menace, but such accidents continue to occur, with devastating effect; and with the giant tankers of yesterday being dwarfed by the 300,000-ton monsters now coming off the ways, the potential for future disasters is very great.

38. And what are we going to do about the steadily rising burden of carbon dioxide in the earth's atmosphere? In the past hundred years, since fossil fuels began to be burned in huge quantities, atmospheric carbon dioxide has increased by close to 10 per cent. That increase will probably total about 25 per cent by the year 2000, given the rapidly accelerating rate of fuel consumption. Will the resulting “green-house” effect cause a permanent warming of the earth's climate, and perhaps even a rise in the world sea level as the polar ice caps melt? No one is sure, though much of human destiny could depend on the answer.

39. One could mention many other problems common to industrial nations which will surely be considered by the Conference on Human Environment, such as the safe and economical disposal of solid wastes, the preservation of forests and ground cover, whose loss has been a prime cause of catastrophic floods in many lands, the ever-rising clamour of noise that surrounds our cities, our factories, our highways and our airports—and, not least important, the education of our children to respect and defend their environment, for without the support of public opinion nothing enduring can be achieved.

40. I have sought in this discussion to concentrate on the concrete and the practical, but when we speak of the threat to our natural environment we inevitably think also of a threat to our minds and spirits. As one Soviet conservationist, Miss V. Sagalova, wrote recently, “It is impermissible to consider forests only as a source of timber”. In much the same vein, our United States Supreme Court said a year ago, in deciding against a proposed dam project, “A river is more than an amenity; it is a treasure”.

41. It would be tragic indeed if man, in exchange for his fabulous power to mine and manipulate his environment for particular technical ends, should lose his more ancient power to relate to that same environment, to feel his primeval kinship with it, to wonder at it and draw strength and solace from it. That power is deep in our nature. We are incomplete if we do not express it. One American naturalist, Dr. S. Dillon Ripley, believes that in today's industrial-urban civilization “man is building his own zoo”, a cage that cramps his nature as surely as the bear's nature is cramped as he paces behind the bars of his cage in the zoo. I do not think it is sentimentalism to include that among the unintended ill effects of all our dazzling industrial progress.

42. Experience tells us that our manifold environmental problems are not going to be solved automatically by any economic system, whether that of the free market or that of the State planner. The hope for their solution lies in our own purposeful decisions to uphold, even at considerable cost, certain values that we cherish, such as respect for the beauty and vulnerability of our earthly surroundings and a provident regard for our posterity. Those values can find effective expression only in the collaboration of natural and social scientists, governments, businessmen, engineers and

good citizens—people with the requisite knowledge and the requisite power to decide, mobilize, organize and lead. To raise the efforts of all those people to a sufficient level and to organize them on a world scale will be the purpose of the Conference on the Human Environment.

43. Fortunately, there is already a momentum of action by many international bodies which bodes well for the conference four years hence. Mr. Åström ably described many of those actions, by both governmental and scientific organizations, in his eloquent address this morning [1732nd meeting]. It was those accelerating activities that led to Sweden's initiative in the Economic and Social Council last July³ and hence to the draft resolution now before this General Assembly.

44. All of this is taking place at a time of rapid growth in the science and technology of environmental improvement. There is thus an increasing reservoir of knowledge and experience in many countries, on which the proposed conference may draw. The conference should be able to bring to many nations a better knowledge of the processes of change in our living environment and the best and cheapest means of preventing its destruction. It should strengthen efforts to regenerate those environments already seriously impaired and, what is equally important, forestall the depredations that await the natural environment of those lands which are only now entering upon industrial development.

45. Indeed, let us all hope that Governments will not wait for the conference of 1972 before taking energetic action to relieve and repair the wounds we have inflicted upon nature and upon ourselves. All in authority should surely act without delay to supply and apply the correctives that are already known. The period between now and 1972 should be one of ferment, not only of preparation for the conference but of practical action in every field: new scientific work, technical and administrative development, training of qualified manpower, public education and political decision.

46. I believe that the environmental problems we are now asking the General Assembly to consider will appear, in the perspective of years, as of incomparably greater importance to the human species than the many political dissensions to which, because they arouse such dangerous passion, we must devote such a great part of our days and nights at the United Nations. As one contemplates the future that will be in store for all the children of men if society does not address itself to these problems, one is struck by the irrelevance of many of the issues that have for so long engaged our closest attention here.

47. One morning recently, just at dawn, I stood at the window of the American Embassy on the forty-second floor of the Waldorf, looking eastward towards the rising sun, which was lifting slowly above a great bank of cloud and smog. I thought of how the river and the land and the sky must have looked when western man first came to these shores and how everything had changed. As I watched in gloomy contemplation, a great airplane traversed the now brightening sky above the cloud-bank. Then a morning

breeze, stirring in those high altitudes, began to twist the vapour trails it had left behind until they slowly formed themselves into a vast interrogation point in the eastern heavens.

48. I know the question that was asked in the skies. It was: "Can man on this planet survive his own fecundity and his own folly?" That is the question, and the time is at hand when the nations of the earth must answer it.

49. Mr. HAYMERLE (Austria): For generations man has tried to dominate nature and to make it serve his interests. This attempt has been successful beyond expectations and at an accelerating pace over the last decades. Man has succeeded in exploiting the riches of the earth to an unprecedented degree. Industrialization is furnishing goods and services in ever increasing quantities. Scientific discoveries and technological achievements have enabled man to advance the boundaries of human endeavour to outer space and to the bottom of the sea.

50. Yet this process, being witnessed in all parts of the world, although in varying degrees, has been accompanied by dangers and threats to man's health and well-being, even affecting his personality as a whole. Industrialization and technological progress seem to counteract the very achievements which were intended exclusively to benefit mankind. We are becoming increasingly aware of the necessity of giving nature the possibility of regeneration and conservation, thereby preserving ultimately mankind also from degeneration.

51. The item we are at present discussing may, consequently, be summed up by saying that man in his own interest should help nature to fight a successful battle against the negative effects resulting from human activity. This challenge to today's technological civilization has not escaped the attention of national and international agencies. In many countries where these problems present themselves measures have been taken, with differing degrees of success, to prevent a deterioration of the four basic elements of human life, namely, air, water, soil and, as a component of those three, climate. Schiller, possibly anticipating our present discussion, said—and I shall quote him in my mother tongue, if I may be so allowed: "*Vier Elemente, innig gesellt, bilden das Leben, bauen die Welt.*" Freely translated, this means that these four elements, closely linked, create life and build the world.

52. If in this context I take the liberty of referring to Austria for one moment, it is in view of the fact that my country is an industrialized nation and at the same time a country with large recreational areas. Therefore it may not be surprising to find an Austrian law of 1883, which is still in force, with the provision that industrial installations that may possibly affect the health, safety or comfort of the neighbourhood by way of "harmful influences, excessive noise or unpleasant smells" are subject to control and approval by the competent authorities.

53. The importance attached to the problems of the preservation and controlled exploitation of the water resources in Austria is clearly manifested in the law concerning the utilization of water, which lays down a set of detailed rules for the conservation of the water supply.

³ Official Records of the Economic and Social Council, Forty-fifth Session, Annexes, agenda item 12, document E/4466/Add.1.

Of almost equal interest to the individual as well as to society as a whole are the relevant articles of the Road Traffic and Motor Vehicle Act which provide for measures against air pollution by exhaust fumes and against excessive noise. On the recreational side—if I may use that term—considerable efforts are being made on the federal, provincial and municipal levels to preserve the countryside, the mountains, the lakes and the forests and thus to afford to an increasing number of tourists the opportunity for physical and mental recreation.

54. In mentioning these few examples out of a series of legal and administrative measures in my own country, I am fully aware of similar actions in other countries faced with problems resulting from the impact of modern civilization and technology on the human environment. I am also fully conscious of the fact that more can and should be done everywhere to improve the situation and to stop developments that tend to be harmful to the individual.

55. Therefore it may be considered a logical result of these actions in individual countries that the international community, in trying to co-ordinate them and to exchange knowledge already acquired, should have turned its attention to this set of problems. The report of the Secretary-General⁴ contains a summary of the activities undertaken in this field by various international organizations. That report has been supplemented by a note by the Secretary-General [A/7291], in which extensive reference is made to the results of the 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.

56. On a regional level, the Council of Europe and the Economic Commission for Europe (ECE) have taken a number of most helpful initiatives. I may mention in particular the adoption on 6 May 1968 of the European Water Charter by the Council of Europe. I may also say in this context that, in following up the aims of that charter, a "water protection week" was held in Austria from 14 to 16 October 1968. An international meeting of governmental experts which is to take place in 1970 or 1971 in Czechoslovakia under the auspices of ECE is already being prepared and will undoubtedly render valuable results.

57. Yet, with all these various activities, what is needed now is a channelling of the experience and knowledge already gathered on so many levels, both national and international. What is needed, in other words, is to "encourage further work in this field and to give it a common outlook and direction". I wish to pay a special tribute and express our gratitude to the Swedish delegation for having drawn the General Assembly's attention to the manifold aspects of the problem and for having embodied them in a comprehensive draft resolution [A/L.553 and Add.1-4], of which we are happy to be a co-sponsor.

58. The purpose of the draft resolution, as we see it, is to have a look at the problem in its totality, as it presents itself in a world characterized by rapid industrial and technological developments everywhere. We may look at it from still another angle: one of the main tasks of the United Nations in the economic field is to encourage, to

assist in and to promote the industrialization of developing countries. The other side of the coin is the necessity to forestall from the outset the occurrence of adverse side-effects of the process of industrialization. That is precisely one of the objectives of the draft resolution before us.

59. The international conference which it is proposed to hold in 1972 will, we hope, help to analyse and identify the problems in their various forms and draw appropriate conclusions. It has been rightly stressed by the representative of Sweden that the 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 competence. We could even go further and express the hope that the conference may also serve as a forum for presenting a first world-wide record of positive achievements in this field.

60. We are agreed, I think, that the international conference to be held in 1972 calls for thorough preparation. Close contact with other governmental and non-governmental organizations will prove to be highly desirable. The preparatory work will point up the areas where national and international action is likely to yield the greatest results. It will also, as it proceeds, indicate those areas where measures are most urgent. Recognition of these "preliminary results" may well lead to immediate concrete action on the national or international level.

61. Without prejudice to the results of the preparatory work ahead of us, we, for our part, are inclined to think that air and water pollution, as well as soil erosion and the damaging effects of excessive noise may be the foremost topics at the conference. This would necessarily entail an examination of the role of chemicals, in the form of fertilizers and biocides, and of ways and means to eliminate or to lessen the damaging side-effects of these products.

62. Austria will be happy to co-operate fully in the preparation for the conference and will continue to work in every way possible for the realization of the ideas embodied in the draft resolution before us, which we sincerely hope the General Assembly will adopt unanimously.

63. Mr. BORCH (Denmark): The problems related to human environment in the broadest sense of the term are of great concern to my Government, which wishes to ensure that a growing population in an already densely populated country may continue to live in open and healthy surroundings. This year proposals will be submitted in the Danish Parliament on land and planning legislation to ensure planned and systematic development of towns and rural areas to protect them against indiscriminate building and speculation in town development, and to preserve amenities and recreation areas. Moreover, legislation on conservation of nature will be enacted this year to preserve historical sites and landscapes of scenic beauty.

64. May I mention an example of how we in Denmark have in recent years been affected by pollution problems. For its size, Denmark has a very long coastline, and pollution of our beaches by waste oil discharged from passing ships has posed a serious problem. Through international action, regulations have now been laid down to

⁴ *Ibid.*, document E/4553.

prevent such pollution. The fact that such measures have been agreed upon at the international level leads my Government to trust that we shall be able, by concerted efforts, to avert further deterioration of the human environment.

65. Being a small country covering only an extremely modest portion of the world's surface but situated in a very highly industrialized region of the world, Denmark is able only within certain limits fully to influence the changes that are taking place in our environment. The origins of many of the disturbances lie outside the borders of our country, and the problems must therefore be tackled in co-operation with other countries. For that reason we attach great importance to increased international co-operation in this field, be it on a regional or on a global level.

66. As a co-sponsor of draft resolution A/L.553 and Add.1-4, which was so fully and lucidly introduced this morning by the representative of Sweden, my country warmly supports the idea of convening in 1972 a United Nations conference on the problems of human environment. We agree that it is necessary further to co-ordinate the various efforts that are being made at the national, regional and international levels to protect and improve the human environment.

67. We are convinced that a conference attended by outstanding personalities involved in these problems will be useful and that it will render more efficient the efforts that are now being made to improve the environment of man. We consider it essential, however, that such a conference should be carefully prepared. The tasks of the conference must be defined as clearly as possible so as to ensure that it will lead to concrete results. My Government finds it very important that the conference take advantage of the experience that will be gained by the Council of Europe through its organization of the Nature Conservation Year 1970. The problem is a complex one, but if the conference succeeds, we have no doubt that an important step will have been taken to make this world a better place to live in.

68. Lord CARADON (United Kingdom): We are now on the last lap of this session of the General Assembly—a session which started in deep gloom for reasons of which we are still painfully aware; it has only slowly made headway through much frustration.

69. Some superficial observers seem to think that the gloom and the frustration are due to shortcoming or failure in the United Nations. We are familiar with that popular delusion. We representatives know—and it is well that it should be often repeated and emphasized to the outside world—that there is nothing wrong with the United Nations except the Members. It is not the Organization which has failed; it is the nation Members which have not yet sufficiently grasped the truth that we are all members one of another. Our economic and political salvation will come not by everyone grabbing for himself and the devil take the hindmost; our salvation will come from international understanding and international co-operation. That is the overriding self-interest of us all. That is the obvious truth from which we can all draw comfort and confidence for the future.

70. So we particularly welcome the fact that we can turn from our anxious search for common ground on which to escape from deadlocks in the Far East and the Near East and Africa—wherever we look; turn for a while to consider a question of world-wide importance on which there need be no deadlock unless we ourselves invent one. We turn to consider a question which is certainly urgent and undoubtedly international, a subject in which we all have a vital interest and in which we can all play a part and on which there is no cause for us to disagree.

71. When we look back on the twenty-third session of the Assembly in future years, we may remember it not for continued stalemate between East and West and North and South, but for a new initiative in which we came together from the four corners of the world to support an international initiative of incalculable consequence. I trust that we shall agree to act in full agreement just as we did last year when, at the call and inspiration of Malta, we passed unanimously a historic resolution [2340 (XXII)]—the resolution directed to ensure that the untold riches of the deep sea shall be devoted to the needs of all mankind.

72. Again we have cause for gratitude to Sweden. It is not for me to praise the contribution which the Nordic countries in general, and Sweden in particular, make to the work of the United Nations. They give us a lead in every field. Their voluntary contributions put larger nations to shame. They give us men of ability and integrity and courage whenever we need them. They are constantly engaged on the search which should occupy us all—the search for means to make our Organization more effective. And now by introducing this draft resolution [A/L.553 and Add.1-4], they have again done lasting service to the United Nations by forcing us to concentrate our attention on a purpose as fundamental as it is far reaching. Furthermore, in the remarkable speech which we heard this morning [1732nd meeting], the Swedish Ambassador raised the level of our deliberations by the range and the clarity of his wide review.

73. We representatives are a motley collection of diplomats and politicians and civil servants and lawyers engaged and absorbed in the new and unfamiliar processes of parliamentary diplomacy. We are all apprentices in the new profession, cadets in the new service. We live in a confusion of pressures and interests and prejudices and conflicts. We can seldom look beyond the next session, often not beyond the next resolution. In our own countries few of us can look beyond the next election—if we are lucky enough to come from a country which has such things. But now Sweden has made us look ahead and think in terms not of immediate tactical self-interest, but of long-term universal advantage. All of us should be grateful for the imagination and inspiration of the Swedish initiative.

74. Just as it would be impudent for me to praise the Swedish delegation, so it would be presumptuous for me to attempt to speak on the substance of the great issues on which the searchlight of international inquiry is now to be directed. I am not a scientist. But already I begin to comprehend something of the value of the Swedish draft resolution in heightening the general awareness of the problem, to use the phrase of the Swedish Ambassador. Even I am now being required to think about some of the

terrifying problems of the future of the universe. Already I am strengthened in my conviction that science is much too serious and much too dangerous to be left to the scientists.

75. We see already the first fruit of the Swedish draft resolution. Diplomats, politicians, civil servants and lawyers as we are, we must raise our sights from our daily preoccupations, we must peer into the future, we must contemplate disasters almost beyond comprehension, we must think of vast possibilities which may decide the future happiness and the future survival of mankind.

76. I will say this for the scientists. They have not failed to give us warnings. They are perhaps apt to discover and release a danger before they think how we can control it. They let the genie out of the bottle before they start to think of how we can put him back. But their warnings are now coming loud and clear. They are sufficiently alarming. I take one aspect of the warnings alone, as an example of the horrors which the scientists now threaten.

77. Take the threat of urbanization, to which the Swedish Ambassador referred this morning when he spoke of the price to be paid for unplanned precipitate urbanization. It involves the threat of the abandonment of the countryside, the loss of fresh air, the neglect of physical exertion, the submergence of the individual into a crowded and stunted mass, the expectation that before long all mankind will be packed tight into cities which exude a poisonous waste and belch out pollution. To anyone like myself brought up in the countryside that is a horrible prospect.

78. A leading scientist was telling us only the other day that nearly 40 per cent of the world's population is already living in urban conditions and that, on present trends, it will take only sixteen years for half the world's population to be living in cities, and only fifty-five years for it to reach 100 per cent. Within the lifetime of a child born today, on present trends of population increase, 15,000 million people will be fed and housed in cities—nearly five times as many as now. The whole human species will be living in cities, each of a million-and-over inhabitants, with the biggest city having 1,300 million inhabitants. Those are the staggering predictions of Professor Kingsley Davis, recently quoted by my friend Lord Ritchie Calder.

79. But that is not all. I was reading the other day that in the United States a baby is born every twelve seconds and a car every five seconds. The two together set up a new demand for living space and road space which eats away two acres of countryside every minute. In my own country I am told that urban expansion will swallow up one sixth of Britain's farmland between now and the end of the century.

80. But even that is not all. We are told by the same leading authority that urban growth in underdeveloped regions is now going ahead far faster than in any developed regions. Between 1920 and the end of the century the urban population of the developed countries is expected to quadruple: the urban population of underdeveloped countries will multiply twenty times, so that nearly twice as many people will be town dwellers in the poor regions as in the rich.

81. The rich are now discovering the enormous overheads of city dwelling and the vast investment and maintenance

involved in keeping the great cities functioning, but there is no prospect—no prospect whatever—that the poor regions will be able to invest even a fraction of what will be needed to prevent the development of tropical slums on an appalling scale.

82. Nor is the communist world free from these dangers. I quote a recent statement by a distinguished communist scientist, who said:

“Scientific study of all the interrelationships in nature and the consequences of our interference clearly lag behind the changes. Large amounts of harmful wastes of industry and transport are being dumped into the air and water, including cancer-inducing substances. Will the safe limit be passed everywhere, as has already happened in a number of places?”

And he went on to say:

“The salvation of our environment requires that we overcome our divisions and the pressure of temporary, local interests. Otherwise, the Soviet Union will poison the United States with its wastes and vice versa. At present, this is a hyperbole. But with a 10 per cent annual increase of wastes, the increase over 100 years will be 20,000 times.”

83. Not only are the dangers almost beyond our imagination, they are also clearly international. They are the concern of the communist as much as the capitalist. They are the concern of the poor as much as the rich. They are the concern of everyone irrespective of their country or their wealth or their origin or their race.

84. I have made a personal comment, and I have fully admitted my own ignorance. That is not to say that my Government will not have a very positive contribution to make when the preparations are made for the 1972 conference and when the conference takes place. In the whole range of technical and scientific problems involved, my Government will have a contribution to make based on our own experience and our own practical progress. We claim to be in the forefront of such progress and we shall not be prepared to be second to anyone in the part we now play.

85. Now let me say a few words about our responsibilities here in this Assembly. First we should pass the draft resolution, and I greatly hope that, imitating the decision we took on the sea-bed last year, this draft resolution will be passed unanimously.

86. I would emphasize that in setting in motion this new initiative we are not seeking to delay or prejudice any of the enterprises in this vast field which are already going forward. In particular we took note of the important Conference on the Biosphere held in Paris last September. The recommendations of that Conference [A/7291, annex] envisage a leading role for UNESCO in future research and the recommendations of that Conference must be given the fullest weight here. Our purpose is not to duplicate but to stimulate. We wish not to discourage all the work now proceeding in the complicated range of scientific research, but rather to give all such effort a new and balanced stimulus.

87. The second comment I make is that for a conference of the kind envisaged for 1972 the preparation will be

all-important, indeed as important as the conference itself. I must admit that when I first studied the draft resolution before us it seemed to me that inadequate thought had been given to the need for continuous and expanding preparation leading up to the conference itself. It is well no doubt that the Secretary-General should be asked to report to the session of the Economic and Social Council in Geneva next summer. But that report can scarcely be more than a preliminary review. We must ensure that thereafter the work of preparation, so wide in its range and so complicated in its ramifications, goes forward with increasing momentum.

88. The third comment I would make on the draft resolution is about the conference itself. It should not be a mere gathering of experts or a long-drawn-out exposition of technical detail. It should not be composed only of those who carry out scientific research. It should be a concentrated conference of those who take decisions. It must invite the attention of the world to the interlocking problems. It must indicate where inquiry and research have so far been inadequate. It must do no less than awaken the conscience of the world to the obligation to make our planet not only habitable but also congenial and even beautiful to future generations.

89. I am glad to say that on all these questions concerning the purpose and scope and preparation and duration of the conference we were reassured and encouraged by the clarification given to us this morning by Ambassador Åström. So far we have all been rough and careless and greedy in our exploitation of nature for our own needs. And now if nature is not to get her own back on man, we shall have to be more gentle and more persuasive and more understanding with her.

90. I am impressed by the argument that in the past century or so the world has developed a new kind of social concern. We have factory acts, laws about violence and cruelty, provision for the old and the sick and the poor. Slowly and haltingly we have been trying to check the neglect and exploitation of man by man. The next great step in civilization—and it is a step which we cannot delay—will be to make effective provision for the welfare of the planet itself.

91. It is with considerations as far reaching and indeed as hopeful as these that we should now join in expressing our overwhelming approval for the draft resolution put before us, and our readiness to join in the preparations for the 1972 conference and our determination to make that conference an effective call to mankind to be a master and not a prisoner in his own planet.

92. Mr. HAMBRO (Norway): The problem we are discussing today is in human terms perhaps the most important question before the United Nations. In humanity's march forward to an ever-increasing mastery of nature we have paid a terrible price. Territories which were once blooming gardens are today deserts of stone, sand and dust. Rivers have been turned into sewers. Lakes have been killed and remain stinking and dangerous cesspools. Forests have been decimated. Green fields have been scorched and defiled by erosion. The clean air has been turned into smog and the sun itself has been hidden by the waste products of our

modern towns. Is it not time now to call a halt to this deadly race to destroy our environment? We have started, but we have started late and too slowly.

93. Problems connected with development have been in the past, and must be in the future, of growing concern to the world community. It is all the more essential, therefore, that we should stop for a moment, reflect and consider the real meaning of the term "development". It is not only a question of national capital. Important as this measure is, it is becoming increasingly clear that the progress of mankind must be seen in a much wider perspective and calculated on a different basis. The value of many factors, essential to the welfare and even to the survival of mankind, are difficult and often impossible to express in monetary terms alone. Those factors do not enter into the estimates of national income and their value has, therefore, very often been totally ignored.

94. The problem of maintaining and, if possible, recreating the essential natural human environment while developing and using our natural resources has, in the past, been largely neglected. The consequences are here for every one of us living in the industrial and urban communities, to see, to feel and to suffer in the form of congested, dirty and noisy cities, transportation problems as well as air and water pollution. The problems are in no way restricted to the urban communities in developed countries. In agriculture the indiscriminate use of pesticides and other chemicals is constantly introducing new substances into the biosphere or changing their distribution without proper knowledge of the physiological—and possibly toxic—effects. Lakes and rivers are in many cases used mainly as recipients for industrial wastes. Landscapes and coastlines have been in the past and are today being destroyed through construction work. Potentially valuable species of plant and animal life are threatened with extinction. It is extremely shortsighted to aim at raising the standards of living for the present generation if we destroy our natural heritage for untold generations in the future.

95. It is true that some limited progress has been made recently both on the national and international levels with a view to counteracting these undesirable side effects of economic development. In my own country—if I may use that as an example—it is possible that immediate problems are in general less serious than in countries with a greater industrial concentration. But that also means that the values and the natural resources which are still there to be protected and safeguarded for future generations are correspondingly more important. The problem in my country is exactly the same as in that of many developing countries. Industrialization is important but it is essential to avoid the many tragic mistakes which were committed in practically all the present industrialized countries.

96. In Norway we have tried to direct the fight against pollution. Measures have been taken in the past to control pollution both of air and water and new legislation is being prepared in both those fields. In Norway the danger of pollution of the sea is of particular importance on account of our long coastline. The new legislation in this field would cover pollution of the sea as well as pollution of rivers and lakes. It will be used, together with a recently enacted building act, in the implementation of a global plan aiming

at a rational utilization of our national resources for various purposes, including recreation and the preservation of nature. I might mention in this connexion that a new law forbids the construction of new houses within a limit of 100 metres from the sea.

97. The use of natural resources is unavoidable in all economic development. But any permanent deterioration of the natural environment should be taken into consideration as part of the total cost of the project and should only be allowed if expected benefits can justify it and the benefits would have to be very great indeed because such deterioration is, in most cases, irreversible. As a result of technical progress and the population increase more and more measures of conservation are needed. Development must in future be guided in accordance with long-term planning where all interests and needs can be properly evaluated and taken into account. In Norway that long-term planning has been started and a special committee has been established to advise the Government on alternative uses of our natural resources, in the widest sense, over a period covering the remaining part of this century. It is already clear that the needs of the population for natural recreational facilities and the preservation of nature will be given high priority in these considerations.

98. But, we are also painfully aware of the fact that no national legislation, however good it is, will be sufficient to protect human environment. Technical developments, mainly in industry and transportation, create enormous problems of sea and air pollution and that pollution does not respect any national frontiers. The United Nations family of organizations and other international organs have already responded to the call for co-operative measures on an international scale. Many of those measures have been mentioned already in the very many interesting and inspiring speeches we have heard in this hall today and I should like in this connexion to pay special tribute to my friend and colleague the Swedish Ambassador, Mr. Sverker Åström.

99. The most recent example of international co-operation in the field of human environment has been the Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere organized by UNESCO with the participation of the United Nations, the Food and Agriculture Organization and the World Health Organization, and in association with the International Union for the Conservation of Nature and the International Biological Programme. The recommendations of that Conference are now in front of us [A/7291, annex].

100. A study of the recommendations adopted by the Conference of Experts provides us with a detailed, but also, I hasten to add, a rather sombre picture of the present situation with regard to the resources of the biosphere. The recommendations also underline the extreme urgency of the problems. We learn—and I shall quote from only one of the recommendations (No. 1)—that

“improvement of the human condition has been very largely achieved on a pragmatic basis aimed at obtaining immediate benefits, without sufficient consideration or even understanding of the long-term environmental consequences and their implications to human health and well-being . . .”.

We further read that a situation has been created

“which is becoming increasingly perilous and which, if allowed to continue, may produce an extremely critical situation that could seriously harm the present and future welfare of mankind, and become irreversible unless appropriate actions be taken in due time”.

101. The experts who participated in this extremely important Conference considered it their duty to invite

“the Member States, intergovernmental organizations, particularly the United Nations through its General Assembly, and non-governmental organizations, to take cognizance of this situation and take appropriate action at national, regional and international levels”.

102. The Conference made a special appeal to the United Nations, through its General Assembly, and the draft resolution [A/L.553 and Add.1-4] which is now before Members and which my delegation is happy to co-sponsor, should be viewed in the context of that appeal. We are convinced that unless we succeed very soon in creating a broad understanding among our peoples of what is now at stake in the field of human environment and in obtaining strong support from all sectors of the community for the actions which we shall have to take both nationally and internationally, we shall be fighting a losing battle, in spite of the important work which is carried out in various separate sectors.

103. It is against that background that my Government has decided to give its full support to the proposal to convene in 1972 a United Nations Conference on Human Environment. My Government has done so in the firm belief that such a conference will contribute greatly to focusing the attention of governments and public opinion on the importance and urgency of all aspects of the problem and will form the basis for increased international co-operation and agreement in solving the problems of human environment.

104. I feel certain that the twenty recommendations of the Conference will be subject of very careful study by the Governments of all countries represented here in the United Nations. They cover a wide range of suggested activities, including environmental education, technical assistance for studies of the resources of the biosphere and rational use of natural resources and conservation as part of assistance projects for developing countries. I am confident that they will form the basis for additional efforts by national Governments in this field.

105. I should like to add, in conclusion, that the matter is not only important, not only urgent, but of the utmost urgency. Time does not work for us; time works against us. Every year, every single year, that passes without constructive efforts on the international plane will increase the destruction of our environment and make reclamation more difficult. We may still have time to save those countries which have not yet been despoiled by the ravages of industrialization. Energetic and concerted efforts are necessary to save our planet and the life on it.

106. Mr. FERRETTI (Italy): I should like to recall the constant interest of the Italian Government in the problems

relating to human environment, problems which, because of their complexity and importance, should be studied and solved at both the national and the international levels.

107. In particular, we must try to eliminate the harmful side effects of large-scale application of modern technology and at the same time utilize science and technology to improve human environment with multifaceted and well-concerted action. To reach positive results we must, in the meantime, increase public awareness, at the national and international levels, of the damage caused by the continuous deterioration of the human environment and also promote sustained and concerted efforts on the part of governments, scientists, institutions and industries in all countries.

108. For these reasons the Italian delegation has co-sponsored, together with fifty-four other countries representing all geographical groups, draft resolution A/L.553 and Add.1-4 which has been brilliantly introduced by the representative of Sweden, Mr. Åström. This draft resolution not only underlines the necessity to find as soon as possible a solution to the main problems connected with the continuing and accelerating impairment of the condition of the human environment caused by the most varied factors, but also proposes concrete measures by means of which to confront such problems.

109. Having considered Economic and Social Council resolution 1346 (XLV) of 30 July 1968, the General Assembly is invited to convene in 1972 a United Nations conference on human environment and to ask the Secretary-General to study the best possible methods of preparing the conference. The problems of human environment to be discussed at the conference not only are important and urgent, but will represent in a few years one of the main concerns of the industrialized as well as the developing countries and a social question of capital importance.

110. It is so true that these problems are common to both the developed and the developing world that some of the more polluted areas today are situated in countries not yet completely developed. I refer specifically to some urban areas in Asia and South America where the situation is particularly difficult because of lack of investment and technical and scientific experience. That is why the draft resolution that we have co-sponsored expresses *inter alia* the hope that the developing countries will derive particular benefit from the mobilization of knowledge and experience through appropriate international co-operation. Knowledge and experience will be utilized not only to alleviate the present difficulties, but also to plan the future development of these countries in such a way as not to impair the existing condition of the human environment.

111. No doubt the problems which we are now examining are most urgent for the industrialized and over-populated countries. This is certainly the case in Italy, a country of only 300,000 square kilometres, where the majority of 53 million inhabitants live in a few urban and suburban areas. It is in these areas that the condition of the human environment is deteriorating in spite of serious efforts by the competent authorities to improve the situation. That is another reason why the Italian Government is particularly

interested in improving international co-operation in this field and hopes that the draft resolution now before this Assembly will be adopted unanimously.

112. Mr. VRATUSA (Yugoslavia): The initiative of the Swedish delegation concerning the problem of human environment is a promising and encouraging step which deserves our full attention, especially at a time when man is becoming more and more master of surrounding nature and when enormous efforts are being exerted to transform into deeds the dreams of the greatest ingenuity of the human race, to have man become a free and creative social being.

113. The issue now before the General Assembly represents a complex matter having a direct impact on the individual and on his life, regardless of his profession or the social system in which he lives. Therefore, the outcome of this endeavour will depend in a great measure on the extent to which the United Nations succeeds in arousing interest in the issue, not only of Governments, policy makers and the specialized agencies of the United Nations family, but also of the large masses of ordinary people, above all educators, scientists, health and welfare workers and public opinion shapers in individual countries, with a view to making it a subject of permanent attention, constituting an integral part of their daily concern and enjoyment.

114. It would be erroneous and one-sided to assert that the problem of human environment chiefly relates to industrially-developed nations and that the developing nations should concentrate their efforts primarily in the direction of development. The experience of developed as well as developing countries shows that life and development continue to refute the formula: development first, and then environment. Development has been shaping environment according to its own logic, at times even escaping the control of a development programme. Furthermore, no development takes place in a vacuum, outside of a given environment. Every development presupposes a kind of environment, imposing upon it its own progress in the same way as the environment may encourage or discourage or even hinder development—at least the harmonious development we are concerned about.

115. Therefore, the problem is not whether to cultivate or not to cultivate an environment; the problem is how to progress in order to ensure a harmonious development and a normal life for man. That is why, in analysing the issue of environment, we should not limit ourselves only to the material aspects of development but should concern ourselves also with its effects on the condition of man, his physical, mental and social well-being, his dignity and his enjoyment of basic rights in developing as well as in developed countries.

116. There is no doubt that in terms of environment there are priorities in developing countries which do not fall into the same category of priorities as those in industrially developed countries. However, both priorities have in common the need to promote a harmonious development, to make the best possible use of available resources, to avoid waste of goods and to preserve and promote all elements and factors which are vital for the prosperity of man as a social being and for the reproduction of a normal, natural, social and economic human environment. Since

development and progress are an endless process, the concern for environment is not of a transitory nature either. Environment has been living with man and consequently it must necessarily constitute for him an issue of permanent concern.

117. The acceleration of development means, among others, more extensive utilization of natural resources. The building-up of industry and the modernizing of agriculture have as an immediate aim improved living and social standards, the elimination of illiteracy and mass diseases and so on. Civilization itself is a kind of permanent interference with the wilderness and with unconquered nature. The problem arises when this interference and change affects the cycle of normal regeneration of vital elements in all spheres of environment.

118. However, the question is not only how to prevent the deterioration of human environment and to curb the unfavourable consequences of what has already happened; it is even more important to know how to apply modern science and technology to improve human environment through rational action. From this point of view it is of special importance to know how to avoid errors committed earlier and damage caused to natural surroundings by evil side effects resulting from one-sided industrialization and a lack of rational utilization of science and technology. In other words, every effort should be made to learn from the experience of others through a concerted international exchange, including technical assistance, environmental education and an appropriate policy on resources.

119. In this respect the international community should exert additional efforts to enable the developing countries to apply the acquired knowledge, not only of how to change surroundings but also of how to preserve nature. True, economic and social development in each country has its own historical and cultural background and characteristics. Development is not something which could be shaped on the basis of prefabricated schemes. Furthermore, development priorities are not the same in every situation. Therefore, it would be erroneous to imagine a mechanical transplantation from developed to developing countries of certain schemes on human environment. That does not imply that the experience of industrially developed countries cannot be extremely valuable to developing countries, for example in the field of urbanization, location of industrial centres, regional planning and so on.

120. The draft resolution [*A/L.553 and Add.1-4*] of which we are happy to be a sponsor stresses the most important components of man's physical environment, such as fertile soil, living oceans, and air of the right composition and the right temperature. The representative of Sweden spoke very convincingly and lucidly about the significance of these components for the future development and life of man. We share his views. At the same time, we wish to stress that, thanks to the unprecedented progress of science and technology, the man of today should be capable as never before of shaping his environment and protecting himself from serious deterioration and destruction. It is obvious, however, that these activities require concerted action and international co-operation, not only among Governments but also in other fields, especially in science and technology. That is why we agree that the United

Nations provides a suitable forum to develop activities recommended by the draft resolution before us.

121. The undertaking is not a simple one. It requires a lot of goodwill, a concerted effort on the part of the international community as well as of individual countries, by Governments as well as by professional and other associations, scientific and other institutions and, above all, it requires peace, international co-operation and understanding on the basis of solidarity and respect for man and human values.

122. Man and his imaginative ingenuity in freeing the forces of nature and in demanding to be their master is acting as an untiring actor in shaping the environment and in altering the relations in which he is living. The results of his effort to change the environment stimulate his interest in associating his endeavours with those of others. By so doing he is approaching progressively the aim "where man will face nature as a free creator, and digging ever deeper into its laws, will subordinate it more and more to himself and to his free purposeful activity; where his own social relations will be increasingly his own free creation, while objective sources, those for ruling history, will be under the control of man."

123. The success of this undertaking will be ensured provided that the change of human environment and its protection are in the interest of the greatest number of the members of society and if our endeavours are not aimed only at freeing man from material hardships in his efforts to conquer the forces of nature and make them obedient to his purposes. In other words, in developing our activities, to use rationally the inexhaustible sources of energy and richness of nature we should at the same time keep in mind another aim, and actually to develop a community with full respect for the dignity and integrity of the human personality.

124. M. D'MELLO (India): Human environment is a vast subject with numerous aspects and many problems. Those problems as they impinge on the well-being of man have reached such a magnitude that to ignore them would not only be injudicious but at some future date may well prove to be intractable, as was so ably noted in an excellent statement this morning by the representative of Sweden. The wise and timely initiative of Sweden has provided us an opportunity to discuss this important subject.

125. We know what is involved when we refer to the various problems of human environment. Those problems arise mainly in the course of man's effort to come to terms with nature and to live in society. Man, in dominating nature in the course of his progress, interferes with air, water, soil, and now outer space, and introduces noise, waste and other damaging substances which gradually tend to undermine his environment. But it does not stop at that. Because of the close relationship existing between nature and man, his social life is conditioned by the environment he recreates. In his efforts to live in society man is increasingly forced to live in congested urban areas and this affects his social relationships and possibly even alienates him from his natural self. With the numbers and concentrations of people increasing rapidly, we are already on the threshold of an era when man is slowly getting dehu-

manized. But today the problems go even beyond the adverse effects on man's social well-being. His very survival may be in question. How serious then is the environmental situation? Nearly everyone agrees that there is an environment crisis.

126. For no other species has preyed on nature in the manner that man has. Man is the pre-eminent predator, the most effective and most ruthless, the greatest living force for changing the character of the earth. He has mined minerals, cut trees, farmed acres of land and used water as if these were unlimited. He has brought about economic progress out of nature's capital with short-term benefits, but long-term consequences which are proving to be unhappy and may prove to be catastrophic. As long as the natural wealth appeared boundless, the cost of extravagances was not apparent. Today these costs can be seen on all sides: in the gap between rapidly expanding demands and the inadequacy of the environment to meet them. In fact it has become a race between abatement technology and despoliation. Some experts believe that environmental deterioration is already ahead of measures to prevent it. The exact nature of the crisis and the possible solutions to it have to be worked out through an international confrontation of scientists and politicians.

127. But even if there are differences of opinion on the threat to human survival, there can be no doubt about the health hazards posed by polluted environment in many parts of the globe. In other parts of the world, mainly in the developing countries, the problems of human environment assume a different character. In those countries the problems concern the effective utilization of environment but avoid the pitfalls occurring elsewhere, that is, to take into account the side effects of advanced technologies, and adopt the necessary corrective measures.

128. Broadly then the problems of human environment can be graded in three classes: first, those that are international; second, those of developed nations; and third, those of developing nations. Regarding the problems which come in class one, that is, international, one may consider those pertaining to radiation and disposal of nuclear wastes, depletion of oxygen in the atmosphere, disturbances in temperatures and destruction of ecological systems on land and water.

129. Regarding class two, the problems of the developed countries: those are mainly the by-products of industrialization, and therefore can be endemic in highly industrialized countries. To take the example of the most industrially developed nation, the United States of America, the President of the United States said last year in November: "We are pouring at least 130 million tons of poison into the air every year, two thirds of a ton for every man, woman and child in America." The Director of Public Health Services, Mr. Jerome H. Svore, testified recently that an average of five tons of waste per person is being thrown away every day and it is estimated that this will double itself within a decade.

130. There are other more lethal ways of polluting the surroundings, for instance, through wastes produced by radioactive material and so on. There are only three ways of disposing of those wastes. They can be buried, cast into

water or incinerated—i.e. released into the atmosphere—but the three natural disposal elements, soil, water and air, have limited capacities of performing those functions and they are already being over-loaded. Because of over-loading, a point may be reached in the future when nature will not be able to regenerate itself, as has happened in certain parts of the world. Then environment can no longer sustain life. Therefore it has been said that "the greatest problem of affluence is to get rid of its effluent". For instance, at one stage there appeared to be prospects of eliminating wastes from the burning of fossil fuels by the substitution of nuclear power installations. But what about radioactive waste? At the moment it is stored in concrete blocks and buried in the ocean in deep beds, but the risks still continue. There is danger of release of radioactive materials into the ocean through container decomposition.

131. Those are the technological risks; but instruments of advanced technology can work havoc in the natural balance of plant and animal life, sometimes totally eliminating certain species of wild life or vegetation. These ecological systems interact and what happens in one area can have long-term effects in another, for happenings remote from an individual organism, both in space and in time, may have consequences for that organism, because there exists an intricate web of causes and effects among all living things and between the living and the non-living. As a book prepared by the United States President's Science Advisory Committee points out:

"Living things are interdependent and interacting. And they form a complex, dynamic system. Tampering with the system may be desirable and necessary, as in agriculture, but such tampering often produces unexpected side-effects and these are sometimes damaging."

132. The environmental situation in most of the highly industrialized countries is serious indeed. Nearly everyone agrees that a large number of those countries are face to face with an environmental crisis. It is important, therefore, that the different aspects of the problem should be examined and appropriate solutions sought by all nations, at both the national and the international level, so that at a future date the Assembly will not be confronted by a speaker describing the situation as follows: "Of the waters they made a cesspool, of the air a depository of poisons, and of the good earth itself a dump . . .".

133. There are some who believe that since man has survived over a million years, adapting himself to new conditions, he will manage somehow in the future also. However, the changes in the human environment which have taken place during the last few years are qualitatively of a different nature from the changes of the past. There is a distinct body of biologists which believes that the changes are occurring today too quickly even for man's adaptive capacity. Environmental changes in the past occurred at a pace so slow that it gave man time to adapt himself through genetic selectivity, but today the pace of change has accelerated at such a rate that he may have no time for evolutionary modifications. We have seen more inventions in the last five generations than during the whole of previous history. The remarkable adaptive faculty displayed by man has practically reached its limits and there is no certainty that the human race will survive in an atmosphere of indifference to the side effects of its own creation.

134. Whilst on the one hand the phenomenal rate of advance in the technological field has made it difficult for man's adaptive capacity to cope with the problems created by the application of technology, on the other hand, the technological advancement and knowledge now available enable him to study various complex interrelationships involved in the problems of human environment and to build an ideal environment. What is required is the will and the wisdom to do so.

135. There has been a growing realization of the gravity of the problems of human environment during recent years. That is reflected in the activities of the Economic Commission for Europe in this particular field. Individual developed countries have also adopted measures for facing this growing menace. Awareness of the environmental threats has led the United States Senate, through the initiative of Senator Muskie, to set up a Select Committee on Technology and Human Environment. Other pioneering work is being conducted on allied environmental problems in several European countries.

136. However, human environment at certain levels cannot be segmented into parts, and certainly not the long-term effects. What about the intrusions of modern technology into the developing world? What about the long-term effects of nuclear fall-out from tests conducted in Africa, the South Pacific and so on? Can they be contained in specific geographic areas? Surely it is up to the international community to arrive at some formula by which environment in certain aspects is considered as one unified whole, and measures are taken to protect it accordingly.

137. Apart from the problems caused by advancing technology which have an international connotation, the developing countries face problems which are peculiar to their stages of growth, and that brings me to the third class of problems, that is, those of the developing countries. Those problems are inherent in what may be described as raw environment such as deforestation, soil erosion, flood and drought control, and tapping natural water resources for irrigation, drinking purposes, and so on. As the Prime Minister of India, Mrs. Indira Gandhi, noted on 1 December this year, when inaugurating the Twenty-First International Geographical Congress:

"... India is trying to refashion the country's present day geography to the people's advantage. To make agriculture less a gamble in monsoons, big dams have been constructed to store flood waters of the monsoon period. Whole rivers have been diverted into new channels through mountain tunnels to make irrigation more even. Currently, the nation is engaged in tapping two enormous water banks, Himalayan snows and underground rivers. Even weather and weather-making will be kept under the long-range surveillance of satellites for the benefit of the farmers, who make up 75 per cent of the country's population ...".

She then added:

"The scientists and the politicians should work in such a way that the world is taken away from all that which destroys and towards tendencies which help mankind to live in peace and in harmony with its environment."

138. The application of advanced technology has not reached such a high stage in these countries as to influence the environment adversely but in their bid to industrialize and modernize and to increase agricultural productivity to feed the growing populations they must avoid the dangers visible in the more advanced countries. To take one example, if the fertilizers and pesticides urgently needed in developing countries are not used on a planned scientific basis the potentiality of the soils and the natural ecological systems may be irrevocably damaged. The use of vast quantities of pesticides to increase or maintain agricultural productivity may be one of the most devastating forms of pollution as was ably pointed out by the Swedish representative. Let us take DDT, a common enough pesticide. DDT does not break down easily. It has an estimated soil life of up to approximately ten years. It has been estimated that more than a billion pounds of DDT must now be available to the world's flora and fauna, and, if the present level of use continues, the amount will double in fifty years. DDT residues have been found in animals, including man, in every part of the world, even among Eskimos and Antarctic penguins, indicating the wide range of pesticides' ecological effects.

139. The other aspect concerns the effects of modernization on traditional societies in the developing countries. In the course of migration from the rural to the urban surroundings, not only do the old patterns of living break down but frequently the new urban-dwellers succumb to the polluted urban environment. Thus we find that the transition from the rural to the industrial causes not only psychological adverse effects but also physical.

140. The task of the developing countries to avoid the problems of human environment is, therefore, mainly a preventive one. They have to ensure that their development in various fields is planned in such a manner as to avoid environmental depredations. The industrial development plans should be conceived in such a manner as to have built-in provisions against environmental damage.

141. One of the important considerations should be to give due importance to the social costs in the form of environmental damages that may occur in the process of industrialization. That will require conscious effort by the States in a planned manner. Here the developing countries can draw much from the past experiences of the industrialized countries and from what the latter are doing to prevent the aggravation of the problems of human environment.

142. The problem for the developing countries at the relatively lower stage of growth is mainly how to plan for the utilization of environment for maximum human benefit. In the process of planning for industrialization they must make necessary provisions for housing, sanitation, recreational facilities, health facilities, adequate supplies of potable water and so on. In the course of planning they must also take into account the city complexes that are developing in advanced countries—what are called conurbations and megalopolis.

143. Planning for avoidance of environmental damage during the process of industrialization may not make apparent the urgency that it deserves. However, there is not

the least doubt that if the developing countries show indifference to environment in the process of their economic development the ultimate point of "criticality" for the human race will be reached much earlier. The efforts of developing countries in this field can only be commensurate with their existing levels of educational and technical infrastructure. The main task of international co-operation lies in enabling these countries to have access to the type of advanced technology which would not only facilitate rapid industrialization but also take care of the process of the broad environmental problems. Exchange of experience and research knowledge at the international level will be of great help. It is in that spirit that we are co-sponsoring the draft resolution [A/L.553 and Add.1-4] before the Assembly on this subject.

144. We should like to make a few suggestions regarding the international conference envisaged in the draft resolution. For the conference to be successful it may be necessary to identify those environmental problems which "can only, or best, be solved through international co-operation and agreement." In doing so, we submit, some specific studies should be prepared as a part of the preparatory work for the conference. My delegation would suggest three broad categories of studies in that respect: (a) environmental deterioration—that is, mainly technical—(b) dehumanization as a problem of environment—mainly sociological—and (c) planning for utilization of environment—mainly economic.

145. Within the framework of those categories it would be useful to advance and even to limit the areas which lend themselves to international co-operation and those where the best contribution to the solution of the problems can be made by efforts of national governments. It is only thus that the efforts in those fields can be given "a common outlook and direction".

146. During the course of the preparatory work, studies should also be prepared on the problems of human environment as they impinge on different sectors of social and economic development, that is, agriculture, town planning, health, industrialization and so on. The general papers as well as the papers relating to sectoral problems should be distributed well ahead of the conference so that each country can bring to the conference its own experience in the specific fields.

147. Finally, there should be constant consultation with the appropriate organs of the United Nations engaged in the work pertaining to these problems. Those are a few initial suggestions which my delegation hopes will help the conference yield results that will satisfy all, including those who have some initial doubts about the outcome of the conference.

148. Mr. MENDELEVICH (Union of Soviet Socialist Republics) (*translated from Russian*): The General Assembly is now considering a new and important item, namely, problems of human environment. This question was included in the agenda on the initiative of Sweden, and the Soviet delegation feels it necessary to comment on the timeliness of its action. Indeed, the many important and complex problems raised by various aspects of the composition and development of the environment in which

mankind lives and works deserves the serious attention of Member States of the United Nations. The importance of these problems is explained by the fact that in essence they are concerned with the conservation and rational use of the sole sources of all national wealth—man and his natural environment. It is also an indisputable fact that many aspects of the problems of preserving the human environment in the interests of the development of mankind are of international, as well as national, significance.

149. To an increasing extent, these problems can be solved only on the basis of international co-operation, although, of course, such co-operation must in no way hamper the national efforts of States as regards the development of science and technology. Nor must it lead to the establishment of any kind of international control over scientific and technical development.

150. What, then, is the essence of problems of the human environment? What can be done by the United Nations in this field? I should like to dwell at rather greater length on these questions.

151. In our view, problems of the human environment are above all problems of conserving and improving the biosphere, namely, the envelope surrounding our planet consisting of all the main natural elements—earth, water and air. The biosphere, which is the source of all living things, is becoming ever more densely populated, and people have reached a stage in their development where they take from nature not only the resources they need, but also, on an unprecedented scale, transform the environment which nurtured them. This process whereby man influences the biosphere is in the nature of things and inevitable. The problem consists in the fact that, by altering nature, by creating within it new, positive and useful biological relationships, and by deliberately increasing the creative capacity of the biosphere, man sometimes unintentionally or without proper forethought, and sometimes in the hope of economic gain, destroys in the biosphere what must be preserved or affects it in such a way as to reduce its creative capacity.

152. At the present time, the technical facilities available to human society and their influence on the various elements of the biosphere have reached enormous proportions, and given rise to numerous phenomena that jeopardize many of the normal processes of the biosphere. The tremendous expansion of industry and agricultural production is inevitably changing the face of our planet. Covered by vast urban areas, criss-crossed by roads and railways, and enmeshed by a network of telephone, telegraph and power transmission lines, the biosphere of our planet today bears little resemblance to that of former times. Changes are taking place in the biosphere—changes that are often dangerous to human life and activities. Suffice it to mention in this connexion the pollution of air and water, the erosion of the soil, the side effects of biocides, and various kinds of noise and waste materials. All these factors call for serious attention on the part of all, including the developing countries which have begun to exploit their natural resources and industrialize their national economies.

153. Other equally important problems of the human environment concern the use of the available and potential

resources of the biosphere. Take, for instance, the problem of the utilization of the earth's water resources which is becoming increasingly serious. Irrigation and soil drainage schemes will have to be studied from all angles. But how many problems of the rational utilization of the earth's resources and the air space still remain unsolved! All these problems arise in equal measure in the developed as well as the developing countries, and in each country reveal not only common characteristics but also features that are specific or of local significance.

154. All mankind is now perturbed by the complex problem of increasing the productivity of the biosphere in order to ensure normal living conditions for humanity. This process raises a number of questions which have a direct bearing on the human environment. Specifically, is modern science capable of restoring fertility in areas where it has been destroyed? Will it be able to find a more effective use for the resources of the earth and the vast expanses of the oceans and the ocean floor? Can it make the many natural products which so far have remained virtually unused suitable for human consumption? Can it create a new source of abundance, by synthesizing foodstuffs from our surroundings? Lastly, can science perform the essential task of organizing the human environment in such a way as to maintain man's physical and moral well-being?

155. In our view, science is capable of answering these questions positively, and we consider that international co-operation can play a valuable and useful role in their solution.

156. However, the complexity of these problems is even greater and I would draw your attention to another very important aspect which has a tremendous influence on the nature and development of the processes of man's influence upon his environment, namely, the social and economic character of the society in which man lives and works and in which, together with other members of society, he influences his natural environment.

157. Countless everyday events confirm the indisputable fact that supremacy of private ownership in the production and distribution of material wealth prevents society from exerting a planned and rational influence on the natural environment, and that it leads to exactly the opposite result, namely, the destruction of natural productive forces, and the impairment of the creative possibilities of the biosphere. The supremacy of this system leads to the pursuit of gain by private landowners who, driven on by fierce competition, exert an ever-greater and, in general, elemental influence on natural resources and on man himself. In these circumstances, it is difficult for society to curb these forces of profit, exploitation and rapacious domination and to protect man and nature from their adverse influence. The destructive nature of these forces on our planet increased by leaps and bounds in the period when the domination of monopoly groups was consolidated in the economies of the large capitalist States.

158. In its search for superprofits, monopoly capital is rapaciously exploiting the earth's resources with no thought of husbanding or replenishing them. This confirms the prediction made by Karl Marx, that great teacher of the working class, that if civilization develops spontaneously

and is not consciously directed, it will leave nothing but a wilderness behind. Already, according to specialists, the earth has lost more than 500 million hectares of arable land, two thirds of its forests and over 150 species of wild animals, birds and fish. The further development of capitalist industrialization, the growth of capitalist cities and the development of new land for capitalist agricultural production may create still more serious threats to biological resources, which are the main source of food and technical raw materials, if the necessary measures are not taken in time.

159. We may, of course, well ask whether it is within man's power to curb these spontaneous processes which influence nature and which are engendered by the rapacious approach of capitalist monopolies. Although clearly recognizing the spontaneous nature of those processes, which are inherent in the nature of capitalism, we believe nevertheless that in today's world, in which not only the capitalist system exists, but where the presence of forces of socialism and progress is strongly felt, there is no reason to bow fatalistically to the forces of capitalist anarchy and the search for profits. We are convinced that, through international co-operation, it will be possible to reduce considerably the destructive effects of freely-operating capitalist economies on nature. Our conviction is based on the assumption that the activities of international organizations, the weight of world public opinion and concerted action by governments in devising ways and means of solving the numerous problems of the human environment will prove extremely valuable.

160. We who, in the United Nations, represent a socialist society, guided by the highly scientific Communist theory of social development, know that socialism alone can bring about the tremendous progressive and creative transformation of the human environment and subordinate its development as a whole to the interests of the harmonious development of man himself. The great founder of the Communist Party of the Soviet Union and of the Soviet State, Vladimir Ilyich Lenin who, fifty years ago, headed the grandiose social transformations in our country indicated, on the basis of the preliminary results of practical experience, that only under socialism could mankind overcome the random character of its relations with nature and raise them to a level of conscious, scientifically based activity, ensuring the harmonious development of nature and human society along the path of prosperity and power.

161. This fact has been confirmed in practice by the pattern of the development, in socialist countries, of social production, based on the public ownership of means of production and on its planned expansion, with a view to ensuring that the material and spiritual needs of all members of society are satisfied as fully as possible. Only socialism, by developing the national economy on planned lines, creates favourable conditions for the solution of problems of the utilization and protection of natural resources, both vegetable and animal, on a strictly scientific basis. Nevertheless these problems are not easy to solve even under socialism, they require work, resources and concentrated effort. The measures taken by the socialist States offer a vivid example of a scientific approach to the question of the conservation of natural resources. The entire world is aware of the gigantic scale of Communist

construction, which has changed the face of our country and created a new type of man—the author of tremendous achievements. Indeed, measures to bring about beneficial changes in the development of the biosphere and in the working and living conditions of members of our society have been introduced on an enormous scale in our country. At present, in accordance with the directives of the Communist Party and the Soviet Government, an extensive, rational and carefully substantiated study of nature is being carried out in our country to ascertain what can be taken from it, not by destroying, but by increasing its productive usefulness in the interest of the development of human society.

162. Our country is, of course, prepared to share the experience it acquires with other States through international co-operation, with a view to solving the problems of the human environment.

163. It goes without saying that the extent of our country's contribution in this connexion will depend not only on the creative impetus and efforts of our society, but also on the international situation. The peaceful endeavours of each country can be stimulated only in conditions of peace and provided that all States give practical evidence of their desire for peace.

164. These remarks sum up the Soviet delegation's attitude towards the substance of the Swedish proposal on the item concerning problems of the human environment at the present stage of consideration of this proposal. The Soviet delegation naturally supports the decision to convene an international United Nations conference not later than 1972 with a view to concentrating efforts on a study of problems of the human environment. We are now studying the draft resolution contained in documents A/L.553 and Add.1-4; according to our understanding, its adoption should in no way lead to the establishment of any form of international control over the development of science and technology, nor should operative paragraph 3 in any way prevent the Secretary-General, when preparing his report on the problem of the human environment, from using, in addition to other sources of information, the very valuable information and experience acquired in this field by one of the most highly developed States in the world—the German Democratic Republic, which is the first socialist State of German workers and peasants in history.

165. Mr. GARCÍA-PINTOS (Uruguay) (*translated from Spanish*): My delegation believes that this draft resolution [A/L.553 and Add.1 to 4] is one of the most pertinent which this Assembly could adopt. It enjoys unanimous support, since it is inspired by biological determinism, namely, the preservation of the human species.

166. Problems of the human environment and of man's surroundings are uppermost in our minds. The world is shrinking as a result of population growth. Former generations and ancient civilizations could not have had any understanding of this problem; when they had exhausted the resources of one area they settled in another. Today we view with concern the subsistence problems of future generations, and it is our responsibility to leave them a world in which they can develop.

167. We see in many regions how former generations abused the land by unsound farming practices, how they

abandoned it to erosion, exploited and impoverished it, killing the life which stirred within it, upsetting its ecological balance and leaving it inert. Today's generation must restore that life.

168. Fortunately, the science of agronomy and the techniques available to us are helping nature to restore its balance. Man, once a harvester, has become a cultivator. Instead of a policy of spoliation, he is now applying one of improvement. The farmer's art must consist in interpreting and helping nature—and fortunately he has the necessary means to do so at his disposal. The earth is alive, and like every living organism it must be cared for. The following definition by Joaquín Costa points the way to the farmer's attitude and responsibility: "Agriculture is the art of extracting bread from the living rock".

169. In the beginning, the earth was rock. The elements and life imbued it with life-giving force and formed the soil. A whole delicate mechanism conditions that force. Man must achieve a complete understanding of the elements which nature used to create the earth, intervene in that process and speed it up. Whereas it took nature alone centuries and centuries to create one centimetre of fertile earth, this can now be done with man's assistance in an amazingly short time. Man, by helping to create a habitat which is suitable for all living organisms, including the fauna which enriches the humus, speeds up the fertilization process to an almost miraculous extent.

170. In Uruguay, techniques are being applied which, by maintaining the biological balance, are helping to create soils, increase harvests and leave the earth enriched, as man is in duty bound to do. Phosphorous is the chief agent in this creative process. The radicicolous bacteria which live in symbiosis with leguminous plants, such as clovers, fix atmospheric nitrogen and create organic matter which is incorporated in the soil. By increasing the density of the vegetation which controls moisture and temperature, man creates a favourable environment in which the microflora and the microfauna of the earth can fulfil their enriching functions. These are man's great allies, which must be cherished.

171. A whole process is set in motion by stimulating the life of the earth's microflora and microfauna. Inert matter, by being converted into organic matter, provides nutrition for vegetation, and incorporated waste enriches the earth. This is the marvellous process by which humus is formed and endowed with physical characteristics favourable to the overall scheme of things. Clay loses its sterility and the earth becomes highly fertile.

172. This agronomic approach excludes fire as a conditioning element, and the destruction of wealth and the pilfering of the earth's riches is an agronomic crime. Surpluses must be returned to the earth as a means of increasing its fertility. A suitable approach will prevent two types of erosion; not only will it preserve the land, but enrich it even more.

173. These techniques have made it possible to increase and expand the earth's fertility, and the wealth of newly created fertile zones can be transferred to other regions, without compromising the fertility of the former, thus

enabling them to fulfil their catalytic function. By working fertile land, removing the top-soil and distributing it in underdeveloped areas, the elements are stimulated and a process of enrichment is set in motion. Today we have in our possession the tools with which to maintain and increase the fertility of the land. There is a vast amount of literature on this subject, and the new agronomic theory has been expounded quite clearly by Fauldner, Hutson and Voisin.

174. The owner of land has a tremendous responsibility, and he is not entitled to exploit, erode or denude it. Nor may he work it if, by doing so, it becomes sterile. When he hands it over to the next generation it must be at least as, and even more, fertile than when he inherited it. The landowner is merely a custodian.

175. These are the principles which should govern the farmer's attitude. Title to property is nothing more than a certificate authorizing the owner to make use of his land. But the heritage is mankind's, and future generations have the inalienable right to enjoy that heritage, for it constitutes the environment in which they have to live and develop.

176. Consequently, development policies should not aim solely at enriching the present generation, for it is our responsibility to safeguard the happiness of future generations. Land improvement, afforestation, and water management are all essential factors in the improvement of the environment. The human milieu must be preserved and improved.

177. My delegation therefore considers that the problem before the Assembly today is most relevant, and that it should be tackled at the national and international level. The preservation of the natural resources which sustain mankind should be obligations; we have no right to bequeath to our children an impoverished earth, and an arid and ugly environment which would compromise their happiness. By setting all the wheels in motion with a view to improving the human environment, we shall be doing no more than our duty.

178. Our delegation wished to stress this aspect of the resolution. My country lives by the land which it has inherited and desires to cherish, and hopes that the Assembly will show its concern in this connexion.

179. Mr. MICHELET (France) (*translated from French*): The reasons which induced Sweden to take the initiative in requesting the Economic and Social Council⁵ and our Assembly to study the problems of human environment have been recognized as fully valid by the French Government.

180. Indeed, France has been presenting similar arguments in international organizations for many years. For example, it drew attention to the fundamental importance of the problem of the conservation of the natural environment during the Economic and Social Council's consideration of the study entitled "Current Trends in Scientific Research"⁶

at its thirty-second session. The memorandum submitted⁷ on that occasion, namely, in 1961, stated that the study of that question had assumed capital importance as a result of the imprudent exploitation of certain natural resources and the exponential increase in man's material needs. In our opinion, the expansion of industrial zones and conurbations called for urgent research and regulations at the international level in order to put an end to the pollution of air and water.

181. It was in the same spirit that the French delegation took a very active part in the discussions at the Economic and Social Council's thirty-ninth session on the conservation of natural resources and on pollution and in the adoption of the resolutions which gave rise to the two reports now before the Economic and Social Council.⁸

182. It is therefore not surprising that the spokesman for the French delegation at the forty-fifth session of the Economic and Social Council, Professor Laugier, who, as the most senior members of this Assembly will remember, played a prominent part in preparing its early work, supported the intention of the Swedish authorities to refer these problems to the United Nations and its proposal that we should seek the most appropriate solutions for them.

183. I should like to reiterate that the French Government is anxious to see an end to the deterioration of the human environment and is prepared to take all necessary steps—either alone or in association with others—to prevent the aggravation of a situation which is already dangerously compromising human life on our planet.

184. My Government therefore recognizes that a joint study of these problems can, in many respects, encourage and prepare us, each in his own particular sphere, to take, or have our respective Parliaments take, the necessary steps to apply the measures required. It also recognizes that some of these measures, to be effective, must be adopted not at the national level, but simultaneously by several, if not all, countries.

185. Thus the definition of the problems to be solved, comparisons of the knowledge already acquired and its possible dissemination, the formulation of an ecological policy and the search for appropriate methods of preventing pollution, reducing noise, protecting nature and humanizing our cities are, in our view, all objectives which take high priority and are worthy of an extensive and collective effort on our part.

186. The reason why I felt I should mention France's attitude on the substance of the problem was because I wished to state from this rostrum that our views coincide with those of the many countries which have co-sponsored the draft resolution [*A/L.553 and Corr.1 and Add.1 to 4*]. Nevertheless, no agreement, however broad, on the objectives of our work and on the need for multilateral action necessarily implies that we should all adopt the same attitude on the nature of the methods to be used. The solutions open to us are so numerous and the human and

⁷ E/3362/Rev.1 (mimeographed).

⁸ UNESCO and FAO, "Conservation and Rational Use of the Environment" (E/4458-mimeographed); and WHO, "Environmental Pollution and its Control" (E/4457 and Add.1-mimeographed).

⁵ *Official Records of the Economic and Social Council, Forty-fifth Session, Annexes*, agenda item 12, document E/4466/Add.1.

⁶ Study published by the United Nations and UNESCO in 1961.

financial resources at our disposal so limited that we took the view, when the Economic and Social Council studied this problem, that we should insist on the need to scrutinize all possible solutions before expressing ourselves in favour of any particular one.

187. In adopting resolution 1346 (XLV), the Economic and Social Council apparently endorsed this viewpoint, because it recommended that our Assembly should consider ways and means to further the objectives set out by the co-sponsors of the resolution. The prudent attitude of the Economic and Social Council was explained by its desire not to decide, *a priori*, which methods should be adopted, but to wait until the Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere had met, because at first sight it had a direct bearing on the problem before the Council.

188. In the view of my Government, and in the light of the results of the Conference on the Biosphere, the General Assembly could have simply requested the Secretary-General to report to it through the Economic and Social Council and decided, at its twenty-fourth session, on the measures to be taken, including, of course, the possible convening of an international conference on problems of the human environment.

189. After listening carefully and sympathetically to the brilliant statement of the Swedish representative, I gather that such is not the wish of the majority of this Assembly which, on the contrary, wishes to decide here and now that this international conference should be convened in 1972. The lucid explanations given by Mr. Åström, the conviction and moderation he displayed this morning [1732nd meeting] when submitting his draft resolution are, I must say, such as to allay some of the misgivings we might have had. The idea of the co-sponsors is doubtless somewhat different from that which we ourselves might have had. In our view, it would have been preferable to prepare a scientific conference over a longer period, whereas the co-sponsors consider that, after the scientific preparations have been made, a conference can be convened as the culmination, so to speak, of the work accomplished by United Nations bodies and Member States between now and 1972. The nature and scope of the Conference are thereby considerably modified. Be that as it may, in view of the importance of the problem, which has been so ably and forcefully brought out by all those who have spoken before me, and the desire to ensure unanimity when the United Nations General Assembly takes up for the first time the study of this vital matter which concerns mankind as a whole, the French Government will refrain from voicing the procedural objections which it raised previously.

190. My delegation will therefore adopt a favourable attitude towards the draft resolution. However, it will not abandon its objections; it will reserve, in particular, its right to revert to this matter next year when the Economic and Social Council and the General Assembly consider the Secretary-General's report, especially in the light of the estimates which will then be submitted on the cost of the conference.

191. Those are the few considerations I wished to put before this Assembly. I should not like to conclude without

paying tribute to the Swedish delegation and its distinguished representative, Mr. Åström, who, by their unremitting efforts since last spring, have managed to draw the attention of the United Nations to the gravity of the situation facing us today and to the need to combine the efforts which we are all, I am sure, ready to make in order to put an end to the rapid deterioration of the environment in which we live, or, in other words, to keep the earth habitable.

192. Mr. ROSSIDES (Cyprus): I take the floor at this late hour only to register our grave concern about this matter of changes in the environment of man, a subject which has occupied our minds for a long time. We live in New York, possibly one of the most polluted cities in the world. From 1954, when I first came here, to 1964 we noticed a tremendous change for the worse. It appears that there has been some improvement in the last year or two, but we hope that much more will be done to reduce pollution.

193. The first remark which I should like to make with regard to draft resolution A/L.553 and Add.1-4 concerns the date fixed for the relevant international conference to be held, namely, the year 1972. We feel that that is too far away—more than three years from now. Of course, we realize that much has to be done in the meantime, such as a report from the Secretary-General on the progress of the work until now; on the main problems facing developed and developing countries; the preparation for the conference, including the time and place; also the range of financial implications, as well as a report after consultations with Governments. All these matters require some time. But since this question is so grave and so urgent—when we see the growing dangers from pollution every day—surely these preparations could be completed with a sense of urgency. I would suggest, with all humility, that the date should be fixed for 1971.

194. I take this opportunity of expressing our deep appreciation of the work done by the Swedish delegation, and particularly by the representative of Sweden, Ambassador Åström, who has devoted so much effort to bringing this subject before the General Assembly. Sweden has been in the forefront of all efforts towards saving humanity from threatening dangers in one way or another; and, while speaking on this subject, I should like to express our admiration for that country.

195. We know, of course, that there is pollution in the air, on the land and in the waters of seas and rivers. The most serious source of pollution is radiation. And then there are carbon dioxide fumes and other poisons from industries, motors and so on. Radiation, of course, exists in nature; for instance, there is shortwave radiation from the sun and from certain rocks. There was a time, as we all know, when this earth was spinning round the sun lifeless, because of the degree of radiation.

196. I remember that when I visited the Grand Canyon, the guide explained its stratification in relation to life on this globe. He said that at one period there was no life on this globe; subsequently, one stratum indicated where vegetable life began; an upper stratum showed the beginning of animal life, and finally in the higher stratum we find the emergence of human life. When I asked by what

criterion they ascertained this evolutionary process from the various strata of the Canyon, I was told that it was from the degree of radiation. Thus at one time on this globe, there was radiation which prevented the existence of life. Gradually, with the reduction of radiation through millions of years, a stage was reached when the environmental conditions made life possible on this planet. Now man, with his ingenuity and the progress of his knowledge, has developed the means of bringing radiation back in an unnatural way.

197. Of course, radiation may lead to the total extinction of life on the globe in case of nuclear conflagration, but even without that there is a threat to the life and health of humanity through the nuclear tests that are carried out, whether in the atmosphere, underground or in the sea.

198. Another important source of pollution is the carbon dioxide which poisons the air every day. To combat this kind of pollution there are devices that could eliminate it both in industrial plants and in motor cars; but it is only a question of expense. Is it really sound and logical that, for considerations of money, life and health must be sacrificed? That is why I stress the urgency of this matter.

199. Then there are the chemicals—those synthetic creations of man, of his inventive mind, which have no counterpart in nature. Endless streams of new chemicals—about 500 every year—fill the markets of the United States and enter our food, and in various other ways affect our lives. Sprays and aerosols are spread universally to gardens, farms and forests. DDT started the whole escalation of chemical pesticides. These pesticides penetrate everywhere, carried by the winds and waters. Even in the Antarctic DDT has been found in the bodies of penguins. It is now in the body fat and in the nerve tissues of all living beings.

200. I do not wish to take up too much time; I am not an expert on this matter. The exposition given by the representative of Sweden and others who have preceded me have placed this question eloquently before the General Assembly. It is a matter of regret that so little concern or interest has been shown, and this is evidenced by the meagre attendance in this hall during the discussion of this subject. Therefore, I would request that emphasis be given to this question by changing, if possible, the date of the international conference to 1971, at the latest. We would have co-sponsored the draft resolution in the first place but we felt we could not agree to that date. I wished to have the opportunity of saying how strongly we felt that an earlier date should be fixed.

201. Mr. ÅSTRÖM (Sweden): I have asked to speak only to say how much I appreciated the constructive and helpful intervention just made by the representative of Cyprus and also to reply to one point which he raised. It concerns the date of the suggested United Nations conference on human environment. The date suggested in the draft resolution [A/L.553 and Add.1-4] is, as Members know, 1972. That date was chosen by the sponsors after giving considerable thought to the matter. First of all, it is a fact that the General Assembly had earlier 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

United Nations conferences over the next few years, 1972 seems to be the first available year. Secondly, having in mind the preparations necessary for the conference, we felt that three years would be an appropriate time. It is suggested in the draft resolution that the preparations should take place in two stages: the first, through the Secretary-General and the Economic and Social Council; the second, to be decided by the General Assembly next autumn.

202. It is our view that the time spent in preparation is in no way lost time. On the contrary, we feel that the preparations for the conference will to a large extent serve the same purpose as the conference itself; that is, among other things, to draw the attention of Governments and international organizations to the urgency of the problems and to make them intensify and co-ordinate their work. At the same time, it is obvious that the decision in principle to hold a conference should in no way hinder or delay such work as is already being done by Governments or international organizations. In those circumstances, I should be most grateful to the representative of Cyprus, in view of his constructive interest in the proposal as such, if he would not make his suggestion a formal proposal.

203. Mr. ROSSIDES (Cyprus): I wish to thank the representative of Sweden for his explanation, which is cogent and puts the argument very well for having the conference in 1972. It would be better if this conference were given preference over other international conferences in view of the importance of this subject, but I believe that this is not possible. My suggestion was not intended to be put as an amendment, but I hope that it has at least aroused greater interest in the urgency of holding the conference.

204. The PRESIDENT (*translated from French*): The representative of Cyprus has just informed us that he did not intend his suggestion as an amendment to the draft resolution before us. I should therefore like to invite the Rapporteur of the Fifth Committee, Mr. Meyer Picón, of Mexico, to report to the General Assembly on the financial implications of the draft resolution.

205. Mr. MEYER PICÓN (Mexico) (*translated from Spanish*), Rapporteur of the Fifth Committee: Under rule 154 of the rules of procedure of the General Assembly, the Fifth Committee has studied the Secretary-General's note [A/C.5/1197] on the financial implications of the resolution now before the Assembly. On the basis of that document and the verbal comments submitted by the Chairman of the Advisory Committee for Administrative and Budgetary Questions, the Fifth Committee decided to inform the General Assembly that the application of the resolution would call for an increase of \$25,000 in budgetary expenditure for 1969.

206. However, the Fifth Committee also decided that the Secretary-General should meet that expenditure from the amounts which have already been recommended by the Advisory Committee for chapters 3 and 5 of the 1969 budget.

207. The PRESIDENT: The Assembly will now vote on draft resolution A/L.553 and Corr.1 and Add.1 to 4.

208. It has been suggested that, since no formal objection has been raised to the draft resolution, the Assembly might adopt it without opposition. May I take it that the General Assembly adopts the draft resolution without opposition?

The draft resolution was adopted without opposition (resolution 2398 (XXIII)).

209. The PRESIDENT: We have thus completed our consideration of agenda item 91.

210. The 1968 United Nations Pledging Conference for the Industrial Development Organization will be held tomorrow.

211. Before adjourning the meeting, I give the floor to the representative of Sweden.

212. Mr. ÅSTRÖM (Sweden): I have asked to speak at this time only in order to express the deep satisfaction and gratification of the sponsors of the resolution which has just been adopted unanimously—and I think I may be allowed to speak in the name of all the sponsors. I also want to say, in the name of my own delegation, how grateful we are to all those delegations which have worked with us in such a constructive, imaginative and skilful manner to bring about this result. We feel that the unanimity with which this resolution has been adopted is a happy omen for the work that is now going to begin. It is indeed of the utmost importance that this matter, which concerns the interest of us all, can begin with the support of all of us.

The meeting rose at 6.35 p.m.