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### SIXTEENTH MCDUGALL MEMORIAL LECTURE

(Delivered by H.E. Giorgio Ruffolo,  
Minister of the Environment,  
Italy, on 13 November 1989)

Mr Director-General, Distinguished Ministers and Ambassadors, Ladies and Gentlemen, I am highly honoured by the invitation extended to me to deliver the Sixteenth McDougall Memorial Lecture at this Twenty-fifth Session of the Conference of FAO, an organization with worldwide responsibilities for policies and initiatives in the fields of food, agriculture, forestry and fisheries, as well as concerns vital to the environment.

I am particularly grateful to FAO's Director-General, Mr Edouard Saouma, for the extremely flattering words with which he welcomed me and for the invitation to talk to you about the major issue of the environment, an invitation in which he kindly mentioned Italy's increasingly important role in this sector of international cooperation. In approaching the subject, I should like to start, not with an actual critique, but rather with a spontaneous conviction, at present widespread throughout the world, among people in all walks of life: there is a feeling that everything we do, the problems besetting us, the interests that motivate us, and the choices we have to make are somehow out of kilter - that we are overwhelmed by problems and needs to which we are unable to provide adequate responses, even though they concern us directly. I am thinking of hunger in underdeveloped areas, the exclusion of the weak in rich parts of the world, and the ecological threat to the whole world. We feel that these threats are right on our doorstep and too often our reaction is to pull down the shutters. This is, for example, the case of high-income countries where the wealthy protect themselves against violence by erecting "barriers" to ensure their security.

The fact is that in political geography, as in social geography, the limitations often make the response totally inadequate to the scale of the problem, which very often exceeds our capacity to react. A divided world implies "sovereignties" which are more apparent than real, since often enough, the problems far outweigh the capacity to intervene. The strong build up barriers around them so that they can cherish the illusion of living safely in a privileged compound, resisting pressure by those of lower living standards; these barriers, however, have at least two negative consequences.

The first is moral impoverishment, because these living standards are merely the enjoyment of material goods. The second is the insecurity and the threat felt by the haves in the face of the despair of the have-nots.

This gap between what we would like to do and what we can do, and the resulting sense of impotence, originate in the awareness that political power has been outstripped by the extraordinary technological development of recent decades, in which human beings have become a menace to their own biosphere.

In our times the appearance of this force, and the ensuing planetary interdependence - a vast web of interferences and interconnectedness, postulates with increasing precision and urgency the need for "world unity". This is contradicted by the fact that governments do not themselves have unity, the "power at the top" without which this force can be neither governed nor controlled. Today there are at least three major themes of world importance: peace, the environment and Third World development. These are not separate domains but problems and needs with far-reaching and mutual effects. They are by definition world problems: peace, because war has become synonymous with total self-destruction; the environment, because anything that upsets global and regional balances risks suffocating the very stuff of life; Third World development, because you can't build a world when the wealth is concentrated in an economy worth 17 thousand billion lire while elsewhere the population is expanding at a rate equivalent to 90 percent of the total population growth - people living in conditions of underdevelopment with many, 500 million, permanently hungry.

The Brundtland Report, Our Common Future, notes that, for the first time this century, we have been able to see exactly what the earth looks like in space. It is a fragile little ball. This subject was also discussed by Arnold Toynbee in his study of the history of mankind when, in describing the fragility of the ecosphere, he speaks of the thin film of air and vapour which surrounds the globe. On this small, fragile earth, one species, the human species, has become so strong and so numerous in such a short time, because of the extraordinary acceleration of its means of production and its population growth rate, that it constitutes a danger to the very survival of life on earth. The Worldwatch Institute, in its annual publication, the State of the World, puts us on guard against the perils of weakening the very life force of the planet. Forests are dwindling while the desert advances, soils are increasingly eroded, the ozone layer thins and temperatures rise.

If the global challenges of the environment and development are to be met, we must find answers that go beyond the immediate initiatives of international collaboration. Bilateral and multilateral agreements can certainly produce very positive results; but this is a risky path, representing the sum of the interests of national policies rather than a new synthesis of effective, decisive collaboration to provide a universal remedy for "separate abuses".

World organizations and major planetary initiatives have often accomplished important and very useful work in many fields. It is almost superfluous in these surroundings to stress the invaluable role of FAO and its passionate dedication in launching and developing highly useful and effective initiatives in its action for development. I should like to add my voice to that of the Director-General, Mr Edouard Saouma, when he said a few weeks ago on World Food Day, "FAO has done a good job and continues to do so, but its work is hampered by the lack of resources and the cash-flow problem."

In the field of intellectual achievement, I should like to mention here the pioneering work of a great Italian now no longer with us, Aurelio Peccei, also honoured by FAO which struck a medal in his memory, and his Club of Rome, which faced such unfair criticism at the time. Then there is the impressive work done by Willy Brandt and his North-South Commission; lastly, the work of the World Commission on Environment and Development, chaired by Mrs Brundtland. This was an absolutely independent Commission financed by voluntary contributions which conducted research from 1983 to 1987 on world environmental problems.

The Commission consulted innumerable interviews with scientific, cultural, political and technical figures granted to public and private, national and international, institutions and associations concerned with the environment in 23 countries in the four corners of the world. These produced a mine of information, opinions and data which bring the situation into very sharp and sometimes terrible focus. The Commission made proposals that constitute an essential element of environmental policy. The importance of the Report was first recognized by UNEP, and then by the United Nations General Assembly, which requested all those concerned to give it a concrete "follow-up".

And this brings us to the most difficult point: the "follow-up". Despite the goodwill and commitment of international organizations, it is obvious that, with the policy-making power available to them, there is a considerable gap between the scale and urgency of the problems and the political potential to tackle them. This is due to the fact that there is today no responsible political system high enough to deal with the problem, to deal with its interdependence and its complexity, at a structural level above that of nations themselves. World government would obviously be the right answer from a structural point of view. But today - and for how much longer? - this can only be a Utopia, although an attractive and stimulating Utopia. Between world government and the fragile "ententes" of the present time, there is one possible and practicable path: this is the constitution of limited, ad hoc governments to solve specific problems, perhaps by using some of the existing organizations, but going beyond their mandates, still too closely tied to the idea of aid, which projects onto beneficiary countries the production and technology models of the industrialized world. This formula of limited-authority bodies could be used in the field of the environment to administer the great common concerns: the famous "commons". These are interests which, by their very nature, escape wholly or partly from the control of sovereign States. The Brundtland Report calls them "shared ecosystems" or "global common property".

This category includes, for example, the land masses of Antarctica, the oceans which cover over two-thirds of the planet, and of course space, which in only the last few decades has become the fourth great ocean of the world. Considerable progress has undoubtedly been made in this field, if not toward a common government, at least toward management by treaty of this common property, with the Law of the Sea, the Treaty on Outer Space, and the Antarctic Treaty. The Brundtland Report underscores the need to develop these promising but still inadequate measures to reach genuine collective management.

Moving from policies and institutions to the heart of the matter, and bearing in mind the relationship between the problems of agriculture and food and those of the environment, we note the following paradox: agriculture is both the most important source of renewable resources and the sector exercising the heaviest pressure on the environment. It is a "constructed" system but one which is grafted directly onto the life cycle

of nature. If it is not overburdened, it functions in a way very similar to that of the natural system; but when it is overburdened, it is like a factory which of course produces useful things but also emits pollutant discharges and wastes. The four major world agricultural systems - crops, grasslands, forests and fisheries - have, as Jean Mayer pointed out in his McDougall Lecture two years ago, reached their maximum sustainable limit. And the "green revolution" is, and will no doubt be for several years, a process requiring an enormous quantity of capital, energy, fertilizer and water. On the one hand we have this situation of risk and anxiety, and on the other 500 million hungry people, despite the fact that there are world food surpluses; but these surpluses are of course meaningless and a mockery to those who have no access to them. The experts tell us that the food-producing nations could feed the rest of the world satisfactorily. However, even if a sharing mechanism could be put into practice, the consequences for the agricultural economy and society in the poor regions would be devastating. The picture is full of problems and contradictions that cannot be resolved without a major shift in development policies. The case of tropical forests is one example.

Safeguarding tropical forests is one of the major environmental objectives for the planet. This is an area where the issue of environmental policy is on a par with that of international development.

Tropical forests are, as you know, shrinking by 11 million hectares a year, which is an area as big as Benelux. Deserts are advancing by 6 million hectares a year. The loss of topsoil on cultivable land amounts to 26 million tons a year. Deforestation threatens to stifle the ecosphere. Tropical forests are the world's lungs; they absorb carbon dioxide and produce oxygen. Their destruction leads to a sort of ecological emphysema: the atmosphere is poisoned, the temperature rises (the notorious "greenhouse effect"). On top of all this, watersheds are disrupted and the destruction of a million animal and plant species is forecast by the end of the century.

Why are the forests being destroyed? There are two reasons: population pressure and timber marketing. The poor peasants of the Third World, whose livelihood depends on extensive subsistence agriculture, clear and cultivate land normally covered by forest. The land is very soon exhausted, because it contains so few nutrients, and becomes dusty savanna. By exporting tropical timber from the thus-devastated forests to industrialized countries, Third World countries obtain some of the foreign exchange needed to repay their debts. This is the worst possible use for resources of colossal importance. To pay the interest on their debts, the poor countries destroy their ecological capital, making themselves even poorer in the process, and jeopardize the ecological balance of the entire world. Some time ago, an article in The Economist calculated that the still unknown biotopes of tropical forests in the medical field could alone provide greater riches than those at present amassed from the sale of timber and the cultivation of deforested land. Obviously this would require carefully organized and expensive research.

What is being done to break this vicious circle? And what more could be done? Something is being done, but it is obviously too little and too slow. The most important initiative is the Tropical Forestry Action Plan. This operation, in which the World Bank, UNEP and the IUCN are also participating, is, - as the United States Secretary for Agriculture, Clayton Yeutter, mentioned in his speech to the United Nations on the occasion of

World Food Day, 17 October last - a remarkable example of coordinated action to promote forest conservation, reforestation and the development of agroforestry activities. We have FAO to thank for this initiative and for its role as coordinator of the Plan.

An International Tropical Timber Organization has also been established, with headquarters in Yokohama, Japan, which aims at rationalizing the timber trade. But it must be noted first of all that international agreements are very often in flagrant contradiction with national policies (fiscal, financial and administrative policies which encourage rapid use of forest resources and predatory agriculture). Secondly, international agreements are not backed by the structures, financial resources, and political power which could permit a direct attack on the cause of the problem.

What more can be done? First, we must try to find the means to match the problem. These means must be used in a new way, while seeking other development methods that would outstrip the old concept of "development aid", as indeed FAO has already done. And a formula must be found for wiping out external debt, as has already been proposed.

The question of tropical forests, which I mentioned in view of its importance for the environment, leads us on to a more general problem. This concerns the nature of the change in North-South relationships, above all in the field of agriculture, for a general and integrated approach to sustainable development throughout the world.

Our starting point must be the enormous scale of food needs and improvement of living conditions in the least developed regions, where 90 to 95 percent of the world population will be concentrated in the next few decades (there will be about 3 000 million people more in 2025). How can this growing demand be met and what will be the effects on the environment? Critical points are the absolutely intolerable burden of external debt which is at present killing any chance of development for the weakest countries; the continuation of protectionist policies which block food exports from developing countries; and the fact that there is a dearth of infrastructures, transport and technology in the least developed countries. This entails a waste of scarce resources even in conditions of dire poverty, inefficiency, and destructive effects on the environment.

There are already positive signs of a better response to the needs of the least developed countries, particularly as regards the external debt. But from the environmental point of view, it is not enough to regalanize existing development systems: the methods and the quality of development must be changed, not only in the weakest regions but also and above all, for many reasons, in the wealthiest countries.

And it is here that a marked increase in goods and services and incomparable material well-being have led to squandered resources, pollution and an unprecedented accumulation of refuse. This is the result of the unregulated use of raw materials from the soil and the subsoil and from other natural sources. This is where accelerated agricultural production cycles produce surpluses and pollution.

The technologies used are too often heavy technologies, accentuating labour productivity and reducing resource productivity: raw materials, non-renewable sources of energy, vegetation and land. If development and the environment are to be reconciled, a major research effort must be made to find new technologies compatible with the environment. In the field of agriculture, much may be expected from the development of biotechnology.

Transfer of technology is one of the key points in this necessary endeavour to achieve a balance in the new North-South relations. Nor must we forget that the technologies of a developed country are not always useful in a developing country. Technologies must be selected in the light of needs and the type of productive and social organization in the country where they are to be introduced. Italy has finally begun to develop a progressive environmental policy based not only on safeguarding and rehabilitating the environment but also on preventing environmental damage and providing development and environmental guidance, an activity that demands considerable public expenditure. The figure rose from 0.6 to 0.7 percent of gross domestic product in 1987 and now, after two years, we have reached 1 percent. This safeguarding and rehabilitation work is represented in our three-year plan by a number of projects, programmes and actions such as cleaning up the River Po, the Lagoon of Venice, the Adriatic, and metropolitan areas, plus the conservation of parks and reserves, and environmental development, particularly in the South.

In addition to environmental safeguards, we plan to make forecasts for the next 10 years and create a sort of territorial reference grid, giving an overview of conditions in the country, showing the impact on the environment and the land of productive activities, housing, and everything that affects the environment, including production methods and consumption patterns. We want to assess the sectors where the impact is heaviest. Lastly, through the establishment of an environmental tax, we hope to encourage initiative in environmental protection. This tax will be based on the idea that the market is not automatically entitled to squander the natural resources which are a common asset and whose value is not otherwise reflected in market prices.

The method used today to administer environmental resources is based on direct regulation, rules and limits. But we want to go further and use taxation as a form of incentive and dissuasion. The method of price simulation would mean that prices would incorporate and reflect the impact of manufacturing on the environment, and take environmental protection into account. Thus our Finance Bill requests that the Government introduce a whole series of incentive and dissuasion measures to further the protection of the environment. This is a real turning point in environmental policy which will, I believe, find an international echo. And this problem must be dealt with internationally, since it is the true basis for orderly development, and for putting the various countries on the same competitive footing.

This is also why we want to make a proposal to the European Economic Community, a proposal that would be the logical consequence of the measures we are introducing in Italy. We are aware of the primary importance of the great international and world problems which the issue of environmental protection entails. We are participating in a spirit of solidarity with all initiatives to protect the ozone layer and tropical forests, and with Mediterranean plans and EEC regulations, always with a view to better protection of the environment.

Mr Chairman, Mr Director-General, Ladies and Gentlemen, I should like to conclude with a few brief reflections on the grounds for hope in this field. Threats, disasters and appeals to safeguard the environment, obstacles and prohibitions are not the sole reality and the only thing to consider; there is also the rejection of a certain, purely quantitative, type of growth that destroys the ecology, the biosphere and the social basis of solidarity.

An environmental policy should enable us to embark on a different type of development, starting with more sober and intelligent technologies and greater social solidarity.

Obviously, questions and answers must be put forward logically; they must be clear and the environment must not be used to support destabilization policies or fundamentalist ideologies aimed at a mythical paradise leading to a new form of anti-humanism.

We are not expecting development to reject the contributions of technology and science's search for greater material welfare; we are in no way denying the values of the West. In these two years the West has rightly celebrated democracy, the industrial revolution and the technological revolution. All this has brought humanity to a heretofore unknown well-being, but it is also very clear we cannot persist in a development which destroys the ecological resource base.

Environmental issues cannot be reduced to processing wastes or to technology, using or recycling renewable energy; what matters is not merely how resources are used, but rather the way in which we perceive social life. No-one can deny the contribution of aggressive competition to the incredible development of western civilization; but this has frequently been at the cost of other countries and other civilizations, and the resources of the biosphere have too often been neglected.

One thing is, however, certain in the present world of interdependence. Purely aggressive and competitive behaviour among human beings over the planet's resources can only lead to ruin.

The question of the environment also raises the underlying question of solidarity.

Any new civilization will imply not only an increase in the material resources available to humanity, but also a fairer distribution and more intelligent use of these assets. And this should be done, as Stuart Mills said, in order to cultivate life's graces.