

## THE ENVIRONMENTAL PROTECTION AND CONSERVATION OF THE MEDITERRANEAN

by

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Many times in the past, on different occasions and by different philosophers, politicians and others, it has been aptly said that one thing in the world is invincible - an idea whose time has come. Such an idea, in our day, is the protection of man's environment, or, in a word - conservation. Awareness of the decisive importance and disturbing vulnerability of man's natural environment is bursting upon most alert and public-spirited people, just as, I am sure, it does upon all of us in this Conference. The long struggle of a few to secure conservation has finally been overtaken by a broad wave of awakening mass opinion, reacting against the conventional maltreatment, degradation and exploitation of the environment by capitalism. Now, man finds that he needs his natural environment as much as any other living creature. Also, by going as far as he has towards taking over the earth from nature, inevitably he finds that not only should he manage nature, but also henceforth, himself as part of nature.

Nature is man's ancestral home and nurse, and the landscape is his modern mirror. Already, after only a few decades, the brief authority, prestige and dominance of the man-made wilderness of the great cities is collapsing. Yet, even today, it is still commonplace, indeed almost universal, to speak as if man's main environmental problem were to bend nature to his will by the use of bigger and better technology. Friedrich Engels, in his "Dialectics of Nature", says: "Occurrences remind us in every step of our life, that we do not conquer nature as someone outside of it, but rather that we belong to it with our flesh, blood and brains".

Our only practical choice is between continuing to permit nature to function unhampered, or, by adopting an exacting, man-nature partnership on quite new lines, using nature's processes and resources, so far as is possible, to serve man's varied needs. Having long ago rejected the first of these choices, we have, whether we know it or not, whether we like it or not, opted for the second. That is the only direction in which we can go from here. And, in

order to meet present and future needs, we might accept as the only choice, CONSERVATION, to which we attach the widely accepted meaning: "All that man thinks and does to soften his impact upon his natural environment, and to satisfy all his own true needs, while enabling that environment to continue in healthy working order". The harmony between man and nature, in realistic terms, is no longer a mystical and abstract but rather a practical and pressing matter.

It may be that the rot has already gone too far. The exploitation of our planet by the capitalists for profit may outrun the most that ingenuity can now achieve towards restoring its equilibrium through the sensitive and healing use of the natural environment, thereby enabling man to make the great readjustment now required of him for a higher quality of living and for the fulfillment of the potentialities of each and all. However, the achievement of a fresh recognition by mankind of the potential for the renewal and healing of a sick society through creative intimacy with the natural environment, as being the only option, could bring a transformation of the kind and scale our degenerate and power-drunk civilization urgently needs. One thing, to all of us here, is clear; the vote of no-confidence in the vainglorious religion of big capitalism is too clear to be any longer denied.

The ultimate success of our efforts for conservation will depend on many factors. However, the most important factor, the decisive factor, will be the type of social conditions that will develop in this area. The president of PASOK, Dr. Andreas Papandreou, in his address to the second Conference in Malta, said, "... We choose to follow the road that leads to the socialist transformation of our societies. In the context of capitalism, it is impossible for us to seek and achieve a balanced, autocentered development that will serve the needs of our peoples. Socialism is the necessary condition for success". The "Document of Malta", too, pinpoints that "The ideological orientation of the Mediterranean peoples..... must be guided by the spirit and ideals of socialism.....". This must be the basis upon which our struggle for the harmonious coexistence of man and his social and natural environment must be waged.

Having set the general parameters for conservation and the social framework

upon which our efforts will ultimately meet with the desired success, we must now examine the state of our threatened microcosm, namely the area of the Mediterranean, and we must determine the short and long range actions that will lead to the realization of our objectives. The Mediterranean Basin, now, as in past history, is one of the great pivotal areas of the world, a bridge between Europe and Africa, and between the Atlantic Ocean and the Mediterranean Sea.

A complete description of all types of environmental pollution in the area, namely air, water and land pollution, cannot be made in this paper for reasons of limited space and time. However, since most pollutants eventually end up in the water, it would be adequate to confine our description only to that of the Mediterranean Sea. As an initial step, this also has the first priority since all of us share it, and, therefore, it directly affects every country in the Mediterranean basin.

The Mediterranean Sea is the largest, most self-contained, most ecologically and economically significant and most historically famous of the earth's fourteen major seas ancillary to the four oceans. It has an area of 2.97 million squared kilometers ( $\text{Km}^2$ ) and a volume of 4.24 million cubic kilometers ( $\text{Km}^3$ ). The complete renewal of its water is accomplished in about 75 years, and most of its losses, due to the high evaporation (115,400 cubic meters of water per second), are replenished from the Atlantic Ocean through the Straits of Gibraltar (net inflow of about 70,000 cubic meters of water per second).

From the Atlantic, a strong surface current comes into the Mediterranean, which sweeps along the North African coast and slows considerably before it reaches the eastern Mediterranean, where it continues on, counter clockwise. In addition to this main current, there are secondary, counter clockwise currents in several areas. In general, the coastal currents are not strong.

On the basis of the surface and subsurface water currents existing in this area, one may infer that, in the open sea, pollutants which stay in the upper layers (down to 600 meters) will be dispersed and diluted. However, pollutants discharged into bays and harbors will not, in most cases, be sufficiently diluted or dispersed. In addition to this system of currents, there is a mechanism that transports pollutants to greater depths in some areas, such as the

Liguro Provençal, the upper Adriatic and the Aegean, which are also called the "lungs of the Mediterranean" because they are responsible for the oxygenation of the waters, thus allowing them to support marine life. This mechanism, however, even though it increases dilution, leads to dangerous accumulations of toxic substances in the sediments at the sea bottom. Such a development should be given serious consideration because the Mediterranean is a particularly vulnerable sea on account of the scarcity of nutrients and poor production of primary organisms which nourish higher organisms, including fish for human consumption. Due to such factors, it takes a relatively long time for the Mediterranean marine environment to recover from contamination and toxicity effects in the food chain. Special consideration should be given to the eastern Mediterranean for, as Ritchie Calder points out, the "eastern Mediterranean is worse than the western, having only about a quarter of the nutrient elements and even less oxygen...".

Thus, having said this much, one can say with certainty that the solution to the pollution problem in the Mediterranean Sea through dilution, a method which is being used by almost all respective countries, no longer can be continued without grave consequences.

These are, generally, the geographic, hydrographic and other characteristics of the Mediterranean Basin, on the basis of which one may clearly see its potential of self-purification from pollutants and its ability to continue functioning in healthy order. From what will be said further, it will be seen that the potential of self-purification in most areas no longer is sufficient, and in those areas, the sea no longer functions in healthy order.

All around the Mediterranean coast, the main urban and industrial centers still discharge enormous quantities of mostly untreated wastewater into the sea. The French coast and parts of the Spanish and Italian coasts are by far the most populated and most industrialized of the whole Mediterranean region. From these areas are discharged into the sea more than 70% of all the pollution load, and, it can be said that these areas have the most serious pollution problems. Due to the large amounts of untreated domestic sewage discharges, the situation is particularly severe in the northwestern basin, in the north Adriatic and along the Lebanese and Israeli coasts. The

pollution and the widespread damages to the aquatic life of the Sea, due to the industrial wastes, is more acute. This is so because these wastes spread over larger areas due to their persistency and to the dumping activities into the open sea. It must be stressed that the damage to living resources from industrial wastes also depends upon toxic components of the waste, such as heavy metals, and upon solid substances. Here again, the harmful impact of these wastes is more pronounced in the western than in the eastern Mediterranean.

The Food and Agricultural Organization (FAO), in one of its reports, documents the destruction of aquatic life due to industrial pollution in the Mediterranean Basin. This report cites the wide-spread disappearance of whole fish stocks in many coastal areas in the northwestern basin, in the Tyrrhenian Sea and Gulf of Taranto, in the Adriatic and Aegean Seas, the Sea of Crete and in the Levant Basin, and it clearly demonstrates a correlation between the increase of discharge of industrial wastes and the diminution of commercial fish stock. The most disturbing fact, however, in this report, is that increased levels of some industrial pollutants have already been observed in open parts of the Sea and that the concentration of some heavy metals (e.g. mercury) in water and edible marine organisms is at, or even slightly above, the acceptable safety level.

Most of the industrial pollutants come mainly from the production of chemicals, textiles, leather, food, beverages, the paper, metal, wood and mining industries, and the shipyards and refineries. To these pollutants, one must add pesticides that result from their use for agricultural purposes, radioactive substances, plastics, polychlorinated biphenyle (PCB) and oil.

The majority of beaches and harbors, at least in the western part of the Mediterranean, are moderately or severely polluted by oil and its tar-like residues. The Bay of Muggia (Trieste and Ravenna), with its complex of refineries and other industrial plants, is probably the most dramatic example of how ecology can be destroyed by pollution. Biologically, the area must be considered a desert. In the vicinity of many areas in the basin, polluted by oil, the taste of fish and shellfish has been affected to the extent of making them inedible, and populations of many species have diminished or just disappeared.

The health situation around the Mediterranean, as a result of water pollution, has been severely affected. The Mediterranean Sea, as a recipient of raw sewage, serves as a reservoir for many infectious agents, and, for this reason, the effects on human health are both widespread and diverse and account for a rich and varied pattern of morbidity among the populations located along the Mediterranean coast.

The FAO and other reports conclude that the state of pollution in inshore waters of the Mediterranean, due to the high quantities of domestic and industrial sewage discharged into it, has reached a critical level. The short and long range consequences will be catastrophic to man and his environment if no immediate, corrective action is taken.

Public opinion and the governmental authorities in most countries are now fully aware of the seriousness of the problems connected with water pollution, and because these problems transcend national boundaries, the United Nations, since 1972 when it announced its Environment Program (UNEP) at its Stockholm Conference, has taken certain actions in order "to ensure that emerging environmental problems of wide international significance receive an adequate consideration by governments". At that Conference, it was agreed that the most efficient way to attack the problem lay at the regional level. Through the initiative of UNEP, an Intergovernmental Meeting on the Protection of the Mediterranean was convened in Barcelona, Spain, (28 January-4 February, 1975), which was attended by sixteen states that border on the Mediterranean Sea. On the basis of proposals presented by UNEP, these 16 states approved an Action Plan consisting of four components: legal, scientific assessment, integrated planning and institutional and financial arrangements. The UNEP Barcelona Convention, an important framework for international environmental law in the Mediterranean area, is an interesting development that can provide the ingredients for regional cooperation "to save the Mediterranean Sea and its ecosystems from the threat of pollution and over-exploitation".

The Mediterranean "United Front of Socialist Forces" can and should play a decisive role in implementing and enhancing the objectives of such a program. The "Malta Document" clearly states that the Mediterranean nations form one, indivisible entity as a result of their common heritage. It is this Mediterranean consciousness that constitutes the natural basis for cooperation

and progress in this and other fields.

Today, the Mediterranean socialist forces, because of their nature, are charged with the responsibility of promoting and strengthening the concept of the Mediterranean consciousness and certainly, of resolving the "contradictions" between modern man and his environment, which he has been purposely, artificially conditioned to see merely as topographical in nature.

From our experience, we know that it will not be possible to harmonize human development with the natural environment on the grand scale needed if it is left to the whims of the politicians, administrators, managers and technologists of the capitalist states. Their main priority is to ensure hefty profits for the multinationals and big capital through exploitation of man and the resources of nature.

We can improve our total environment, but it is vital that we look now, clearly, at the world in which we live and ask ourselves these questions: What is the state of our environment? Do we accept this state of our environment? If we do not, what shall we do about our environment? What do we want from our environment? From what has already been said, I am sure, we know what we have and certainly we don't approve of it! Capitalism has improvised, without foresight, a steel-and-cement wilderness which is in most ways more frightening and uncongenial to man than the natural wilderness from which he sprang. Despite the immense investment in megalopolitan steel-and-cement, remarkably little research has been undertaken to see if it does, indeed, provide man with the sort of home he wants and needs. Most of the intelligent discussions of this problem that are going on these days lead to the wise conclusion that the course to which current civilization has become overwhelmingly committed is simply not viable.

For these reasons, it is our responsibility to find, within the social framework proposed earlier, a new, healthy and positive dynamic pattern for society, through a fresh, but necessary, equilibrium between development and conservation for human fulfillment. In the long run, the only way for man to adjust to his natural environment is by resolving, collectively, to do so, and, by making the necessary effort.

In contrast to every other human approach to a region and its uses, as the

well-known environmentalist, Max Nicholson, suggests, the conservation approach begins by asking some key, long-term questions. What is the character, the potential and the status of this area? Is any proposed use consistent with the answers to that? Is this use, in fact, the most desirable of all the existing alternatives in this area? Will its biological productivity, and any unique qualities which it has, survive the use unimpaired? Is it in any way so unique that it ought to be withheld from any active use whatever, or restricted to one which conforms to that unique quality? Given that a certain use is acceptable, are there practices or incidental accompaniments which ought to be ruled out for the good of the area or of its animal, plant or other forms of life?

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If there are right and wrong ways of fulfilling a certain use, how do we determine what they are and how do we ensure that they are known and observed? By starting from such a responsible and thoughtful standpoint, as opposed to the commonplace, hasty, slipshod, inconsiderate and greedy attitudes of capitalism, we start with the possibility at least of getting the right answers.

By examining the above questions, it can be seen that the multiplicity of the tasks which we must undertake in order that we may not be wholly defeated in the struggle to fulfil our environmental responsibilities, is enormous. In preparing the way, a great deal can be achieved by efforts of persuasion, pilot projects and demonstrations of the needs and the potential, but that alone would not be enough. In the field of science and technology, as is explicitly stated in the "Malta Document", the exchange of data and specialists should be promoted. A high priority must be accorded to such activities, for it is the key to effective advances in scientific conservation in support of human welfare in our area. Under the present circumstances, such activities can begin immediately.

All such activities, however, will not take place merely by chance. They require planning, coordination, and certainly must be based on carefully prepared programs which themselves cannot be developed on an ad hoc basis. For these reasons, a long-term approach to finding the solutions to our many needs in this area must include, as a prerequisite to all others, the formation of a modern Research Center of the type proposed by the president of PASOK, Andreas Papandreou, in his address to the Malta Con-

ference. Through this Research Center, scientists and technologists, and such background professions as economics and law, will be able to:

- a) make a full running audit of the existing conditions and needs throughout the area.
- b) evaluate the potential of the existing scientific and technological manpower resources.
- c) examine the ways these resources can be utilized efficiently and effectively for the purpose of advancing the necessary technological know-how.
- d) define in detail the make-up of a conservation program in the Mediterranean area by taking into consideration, also, the fact that "pollutants are resources in the wrong places".
- e) promote research projects on energy, and, in particular, on the methods of harnessing and utilizing the solar energy so abundant in this area.
- f) determine, in concrete terms, the methods of coordination and implementation of the different joint, regional and national projects and programs.

Today, this conference has the obligation and the opportunity to offer to this generation the hope for its survival, and to the generations to come, a Mediterranean society that can become a stimulus to all other societies which, as was the case in the past, can draw from its source. The work that must be done rests more on the shoulders of the socialist and progressive movements rather than on the governments in this area.

The institution and development of the necessary scientific and technological infrastructure will provide the means for cooperation of our peoples on the many fronts of science, technology and development, and, more important, by it will strengthen the struggle for national independence and socialism in

the Mediterranean. This is what the creation of a Mediterranean Research Center means to PASOK, and we shall vigorously work for its realization.

We believe that all the participants to this 3rd Conference of the Socialist and Progressive Forces in the Mediterranean agree with this proposal, and that all of us in this historic phase of our struggle will put the stamp of approval on it. A stamp that not only will advance the concept of our cooperation to the level of practical and meaningful actions, but also will both help to strengthen the concept of the Mediterranean consciousness and will provide to our peoples, new avenues of endeavor and a proper and safe environment in which to live and prosper.