



14 November 1980

**Address to the Study Week on the Subject
'Mankind and Energy: Needs – Resources – Hopes'**

In discussing the question of energy, the Supreme Pontiff declares that mankind 'must look for new methods in order to use the resources of energy that Divine Providence has put at the disposal of man'. He points out that energy policy must 'promote ecological safeguards' and inhibit harm to man. The Pope also warns against the economic and moral dangers of consumer civilisation and of inequalities in relation to world resources. In its approach to energy, which is a universal good, humanity should strive to work to the benefit of all men and 'respect nature': this is a 'duty of justice and charity'.

Your Excellencies, Ladies and Gentlemen,

You know the value I attach to the research work of members of our Pontifical Academy of Sciences. This tells you how happy I am to meet you here, before the end of your work which honours the Holy See, to express to you myself my esteem and encouragement.

The study week which has brought you together deals with one of the most serious questions that humanity must cope with today. And precisely your analysis of the scientific data on energy is geared to concern with the fate of mankind: 'Energy and Humanity'. I congratulate you, I, who, at the tribune of UNESCO, last June 2, stressed the necessity of preventing the progress of disinterested scientific knowledge from ignoring the responsibilities of consciences.¹

Allow me now to recall before you, in a very simple way, free of technicalities, these data which are, of course, very familiar to you; I do so only for the purpose of manifesting to you my interest in your discussions and of sharing some ethical concerns with you.

In the course of his history, man has developed the forms of energy that he needed, passing from the discovery of fire to ever richer forms of energy, and arriving finally at nuclear energy, which is staggering from so many points of view. At the same time, the progress of industrialisation has given rise, especially in recent times, to ever increasing consumption, to such an extent that some natural resources are becoming exhausted. Our civilisation – above all its scientists and technicians – must look for new methods in order to use the sources of energy that Divine Providence has put at the disposal of man. It is necessary, furthermore, that governments themselves should pursue a unified energy policy, so that the energy produced in one region can be used in other regions.

It certainly seems that the sun, the first source of energy and the richest one for our planet, should be studied more attentively by researchers; it must become one of their main concerns. While it is true that direct use of solar energy is still far away, this prospect must not reduce the efforts of researchers or the support of governments. Moreover, results have already been achieved and are being used to advantage in different parts of the world. Furthermore, other forms of energy, such as wind, marine or geothermal energy, have already been used, even if to a limited extent as yet, and depending on geographical conditions.

I have learned that use of biomass has drawn your attention and that you have dwelt on the necessity of developing studies concerning photosynthesis.

Wood takes its place among the oldest sources of energy. In the developing countries, it will undoubtedly remain for a long time the main source of energy. But it is necessary that use of this traditional and important form of energy should not give rise to deforestation and the destruction of forests, which creates serious ecological imbalances. It would be necessary, therefore, to plan active reforestation, to be carried out by botanists, ecologists and pedologists, and its implementation should be the object of attentive care on the part of planners and politicians.

As regards other forms of energy, such as waterfalls, coal, oil and nuclear energy, their choice is based, of course, on various factors depending on natural and human resources, population growth, ways of development, and the economy. I am sure that you will have considered in your discussions the rules that are necessary to eliminate the dangers that threaten, from far and near, those who are exposed to possible harm due to the use of certain sources of energy, and also always to promote ecological safeguards, the protection of fauna and flora, to avoid the destruction of natural beauty which fills the heart with admiration and poetry.

I myself have seen the harm done to the beauty of nature by industrial installations which could have been placed elsewhere or planned differently. Above all, I have had personal experience of the sufferings of coal miners, whose lungs are impregnated with the dust that poisons the mine tunnels. I hope and trust that, in the name of human rights and for the improvement of the quality of life, new and effective measures have already been adopted for the utilisation of conventional sources of energy, and that in this way we will no longer have to see jeopardised not only the natural environment, but also workers and populations.

Finally it is opportune to reflect on the economic and moral dangers due to what is called the consumer civilisation of today and its structures. As I wrote in my Encyclical *Redemptor Hominis*: 'Everyone is familiar with the picture of the consumer civilisation, which consists in a certain surplus of goods necessary for man and for entire societies – and we are dealing precisely with the rich highly developed societies – while the remaining societies, at least broad sectors of them, are suffering from hunger, with many people dying each day of starvation and malnutrition ...

So widespread is the phenomenon that it brings into question the financial, monetary, production and commercial mechanisms that, resting on various political pressures, support the world economy. These are proving incapable either of remedying the unjust social situations inherited from the past, or of dealing with the urgent challenges and ethical demands of the present. By submitting man to tensions created by himself, squandering at an accelerated pace material and energy resources, and compromising the geophysical environment, these structures unceasingly make the areas of misery spread, accompanied by anguish, frustration and bitterness'.²

The frustrations to which man is subject today due to excessive consumption on the one hand, and the energy crisis on the other, can be solved only if it is recognised that energy, whatever its form or origin, must contribute to the good of man. Energy and the problems that it raises must not serve the selfish interests of particular groups which are trying to increase their sphere of economic and political influence, far less must it divide peoples, make some nations dependent on others, and increase the risks of war or of a nuclear holocaust.

Energy is a universal good that Divine Providence has put in the service of man, of all men, to whatever part of the world they may belong, and we must think also of the men of the future, for the Creator entrusted the earth and the multiplication of its inhabitants to man's responsibility.

I think it can be considered a duty of justice and charity to make a resolute and persevering effort to husband energy resources and respect nature, so that not only humanity as a whole today may benefit, but also the generations to come. We are bound in solidarity to the generations to come. And I hope that Christians, moved particularly by gratitude to God, by the conviction that life and the world have a meaning, by unlimited hope and charity, will be the first to appreciate this duty and draw the necessary conclusions.

I thank you, Ladies and Gentlemen, for having responded in such large numbers to the appeal that the Pontifical Academy of Sciences had made to you in view of your high competence, and I express my best wishes that your work may serve the good of the whole of humanity. I pray to God to assist you in this noble task, at the moment when I am setting out for Germany to commemorate St. Albert the Great, whose scientific work was considerable for his time, as well as his philosophical and theological reflection. I also pray to the Lord to bless you personally and your families.

1 Cf. John Paul II, *Allocutio ad UNESCO*, 20-22, 2 June 1980, *Insegnamenti di Giovanni Paolo II*, III, 1 (1980), p. 165 ff.

2 John Paul II, *Redemptor Hominis*, n. 16.