Food Needs of the Developing World in the Early Twenty-First Century

Study Week

In November 1991 the Pontifical Academy of Sciences organised a Study Week on the subject of *Resources and Population*. The papers and deliberations of this conference were subsequently published by the Clarendon Press of Oxford and received a great deal of attention. Since that date the Academy has, during these years, continued its discussion of the issues connected with underdevelopment, and in doing so has concentrated in its approach on two principal areas: the questions and problems relating to population on the one hand, and those connected with the availability of goods and resources on the other. The last conference in this field was held jointly with the Royal Society of London in 1995 and was concerned with a specific subject which has received relatively little attention from international research: maternal breastfeeding. From 27 to 30 January of this year the Academy held a study week on *The Food Needs of the Developing World in the Early Twenty-first Century*.

The members of the Academy represent a broad spectrum of scientific expertise and knowledge and come from a wide range of geographical areas. This means that the Academy is able to secure the participation of the most important world experts, people who have rich and multifaceted professional experience and direct knowledge of particular local realities in its discussion of the subjects which it proposes for debate. This fact was taken advantage of to the full during the study week which was held a few days ago. This meeting gathered together agronomists, geneticists, agrarian economists, demographers, and many others, almost thirty people from ten countries, many of whom belong to important international institutions (FAO, the World Bank, the International Research Institute on Rice, the International Research Institute on

Maize etc.). The conference should be seen as following on from a similar initiative held in 1988 which examined the global developments of agriculture and quality of life. On this occasion, however, the focus was more specific, and in essential terms was concerned with the so-called problem of "hunger in the world" and the solutions which can be found to this problem in the realm of agriculture.

The importance of the rapid increase in population has become less marked since the mid 1970s, but there remain major imbalances in the availability of resources between the different regions of the globe and between developed and nondeveloped countries. The concern of the Academy to achieve a more precise diagnosis of these differences and of their origins, and at the same time to throw light on the means by which to eliminate them, is in line with and links up with the condemnations which John Paul II has been repeatedly engaged in for some time, and which he stressed again during his last apostolic visit to the continent of America when he condemned continuing forms of waste and injustice.

During the four days of the conference the most recent studies on the subject were presented and discussed. The participants heard a series of objectives which were proposed in order to overcome these difficulties. Certain data in this area are truly dramatic: over eight hundred million people suffer from malnutrition, but what is most alarming is that hundreds of millions of children suffer from food deficiencies which threaten in a fundamental and irreversible way their capacity for physical and mental growth. In this context not much comfort is offered by the aim of the United Nations to reduce the number of those most in distress by a half by the middle of the next century. Regret was also expressed at the fact that in the decade 1986-1996 aid given to agricultural and rural development was reduced by about 50% in real terms. And we should be aware of the fact that this took place – as was observed during the conference – in a situation where the promotion of growth and development and the reduction of pockets of poverty favours exports from the less developed countries but at the same time also encourages the agricultural exports of the richer countries.

At the centre of the debate was so-called "food insecurity", that is to say conditions of insecurity concerning the spatial and temporal availability of sufficient food. The possible routes to be taken to tackle this problem and overcome it were the subjects of a detailed discussion. On the one hand, a mixed array of positive and negative aspects was drawn attention to from many different angles, and on the other, detailed proposals were advanced each of whose advantages and disadvantages were assessed and evaluated. Attention was chiefly directed towards the sphere of cereals (rice, wheat, maize etc.), which are the essential basis of the food of the most underprivileged populations. The other questions which were addressed, such as lack of micronutrients and its consequences, were of lesser importance. Certain important related questions were also given prominence, such as food energy and protein requirements or the functional consequences of poor nutrition for women. A number of papers emphasised the impact of the various forms of climatic change on the agricultural production of the less developed countries. The disastrous consequences of such exceptional events as El Niño, or the floods in China, were repeatedly referred to, and reference was also often made to the trends relating to changes over time in the temperature of the soil brought about by the greenhouse effect.

A general survey of a broad number of regions brought out the different realities which are involved and illuminated a wide range of problems. It was seen that after the disastrous drought of 1970 the nine countries of the Sahel created a political coordinating body to facilitate bilateral agreements for the rational exploitation of water resources. In contrary fashion, in central and southern Africa political instability and serious conflicts gave rise to a fall in production per capita. Attention was drawn to advances in agricultural production in southern Asia which in certain cases and in relation to certain foodstuffs had transformed countries which were previously sufferers from food deficits into actual food exporters. But reference was also made to the fact that in regions such as Latin America increases in national production had not reduced levels of poverty and malnutrition in the poor sections of the population because of persistent inequalities in income distribution. The food is there but many people do not have the means to buy it, and even more importantly, are not even organised in a political sense to make their voices heard.

With reference to the practical policies proposed to solve these difficult situations in a gradual way, objectives may be cited of primary importance which have a general purpose and which received unanimous agreement. Such objectives are, for example, the following:

- investment in research in favour of agriculture and the rural population from an overall perspective. This research should be promoted in the right national and international forums;
- the creation or the strengthening of suitable infrastructures: the organisation of markets, transportion, storage and conservation centres, for example, but above all the extension of irrigation systems in order to achieve an improved defence of crops against meteorological conditions, in addition to the securing of access to supplies of drinking water for everybody;
- professional education and training to make those engaged in agriculture more open to innovations and more able to have a better understanding of cost/benefit ratios and to apply them in a productive way;
- education, in particular of women, and with a concomitant raising of their social status;
- the reduction of inequalities at least in terms of access to adequate food supplies;
- attention to be paid in particular to poor farmers and small concerns. Development should be fostered by internal elements and not by dependency on external relationships which come from on high;
- to respond to the challenge posed by the need to increase production and productivity; and at the same time to realise that in order to fight poverty an increase in production is not sufficient: public health, social stability and the fair distribution of wealth are subjects which must also be addressed and tackled.

A sensitive subject which gave rise to a certain anxiety was the attitude to be adopted towards biotechnology, and in particular towards genetic engineering. Quite apart from the technical aspects and a comparative assessment of respective advantages and disadvantages, the tendency towards the taking out of patents on biological material and related increased private investments in this area gave rise to marked concern. The need to examine the ways by which developing countries can gain access to these new forms of technology was deemed urgent. In general, this requires finding the right methods by which to balance general public interests with the search for gain by private individuals or concerns.

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