

For example, the production of electricity from nuclear reactors has now reached the state where it is possible to contemplate the building of large generating stations wherever there is a demonstrable need for large amounts of electrical power, and where the power generated can be brought to bear effectively on the solution of existing problems. The question is: how many developing countries can meet these criteria?

We have all heard of the "agro-industrial complex" and particularly the project that is under study in India. This would involve the use of nuclear power to pump deep underground water to the surface for irrigation. As I understand it, nuclear power would also be used for the local production of fertilizer. If successful, such a complex would offer the potential for a major new step in the "Green Revolution" that has already had such beneficial effects in the Indian sub-continent. Its success could open an important new chapter in the story of man's fight against hunger and malnutrition.

The application of nuclear energy to the large-scale desalting of sea-water is another, and a more difficult, question. The need undoubtedly exists, and this could be the concept that will start new Green Revolutions in the deserts of the world. But just as nuclear energy is not always the most economical means of generating electricity, so we must be careful not to mislead peoples and governments into believing that the dream of desalting sea-water is just about to become a reality.

In the course of the next days, you will devote much of your time to the large-scale use of atomic energy for the production of electricity and for the desalting of sea-water. You will also consider the numerous applications of isotopes and radiation -- in research, in industry, in agriculture and in medicine. There have been remarkable achievements, particularly with the new nuclear techniques for the diagnosis and treatment of cancer and of some of the other diseases that afflict mankind. You will seek to evaluate what contributions these can make to the improvement of life in the developing countries.

Isotopes and radiation are tools -- their use is not an end in itself. We must, as I have said, identify what our aims are and then see whether atomic energy provides the best tool for achieving them. For example, the developing countries have a great need to find better ways of preventing the wastage of food in storage. Pests and various forms of decay destroy a large fraction of what is produced. Irradiation may help to conserve this food, but until this has been demonstrated and its economic feasibility established, better known techniques -- dehydration, canning or refrigeration -- are still probably more appropriate in most situations.

Another problem is the provision of sterile medical supplies, often under adverse conditions remote from the facilities of modern hospitals. One technique is now well established: it involves first sealing medical supplies in hermetic packages and