

Atomic Energy Commission had raised the possibility of a large-scale use of radiation for the preservation of food ; and

(b) if so, the targetted period or date of first experiment ?

THE PRIME MINISTER, MINISTER OF ATOMIC ENERGY, MINISTER OF ELECTRONICS, MINISTER OF HOME AFFAIRS, MINISTER OF INFORMATION AND BROADCASTING AND MINISTER OF SPACE (SHRIMATI INDIRA GANDHI) : (a) and (b). Feasibility studies have been completed on radiation technologies relating to sprout inhibition and prevention of spoilage in stored potatoes and onions, disinfection for insect control and prevention of losses in stored wheat, and preservation of certain sea foods. The Department of Atomic Energy envisages establishment in a phased manner of pilot-scale irradiation facilities for these processes from 1973 onwards. Implementation of this programme is awaiting clearance from the Ministry of Health to whom an application has already been made.

Memoranda Given by opposition Parties of Haryana Against the Chief Minister

2256. SHRI ISHWAR CHAUDHRY : Will the PRIME MINISTER be pleased to refer to the reply given to Starred Question No. 578 on the 12th April, 1972 regarding the charges against the Chief Minister of Haryana and state :

(a) whether the Memoranda have since been examined ; and

(b) if so, the action proposed to be taken in the matter ?

THE MINISTER OF STATE IN THE MINISTRY OF HOME AFFAIRS AND IN THE DEPARTMENT OF PERSONNEL (SHRI RAM NIWAS MIRDHA) : (a) and (b). The Memoranda submitted to the President on the 27th October, 1971 and the 24th February 1972, containing certain allegations against Shri Bansi Lal Chief Minister of Haryana and others, are still under examination.

Export of Thorium Compounds

2257. SHRI VISHWANATH PRATAP SINGH : Will the Minister of ATOMIC ENERGY be pleased to state :

(a) the total amount of Thorium and

Thorium compounds exported in the last three years ;

(b) the terms of export ; and

(c) the countries to which exports were made ?

THE PRIME MINISTER, MINISTER OF ATOMIC ENERGY, MINISTER OF ELECTRONICS, MINISTER OF HOME AFFAIRS, MINISTER OF INFORMATION AND BROADCASTING AND MINISTER OF SPACE (SHRIMATI INDIRA GANDHI) : (a) The total quantities of Thorium compounds exported during the last years are as follows :

Years	Quantity (in Kilograms)	Value (in Rupees)
1969-70	37,263	9,78,451
1970-71	35,832	9,83,968
1971-72	12,400	3,90,519

(b) The terms of export differ from country to country. Payment terms range from payment against documents to 180 days' credit.

(c) The exports were made to the Arab Republic of Egypt, the Federal Republic of Germany, Hong Kong, Iran, Japan, South Vietnam, Sri Lanka and the United Kingdom.

Benefits of Satellite Communications to the common man

2258 SHRI VISHWANATH PRATAP SINGH : Will the PRIME MINISTER be pleased to state whether, to bring the benefits of future satellite communications to the common man development work has started on the following items :

(i) cheap solid State community Television receivers for the rural areas ;

(ii) practical inexpensive antennas for the same ; and

(iii) front-end converters for direction reception ?

THE MINISTER OF STATE IN THE MINISTRY OF HOME AFFAIRS (SHRI K. C. PANT) : (i) The Electronic Systems Division (ESD) of the Indian Space Research Organisation (ISRO) at Ahmedabad has developed Solid state TV receivers which will be used for direct reception of TV programmes from the ATSF geo-stationary Communi-

ation Satellite expected to be located over the Indian Ocean in mid-1975. Parallel developmental activity on this aspect is being carried out at Electronics Corporation of India Ltd., (ECIL) Hyderabad a wholly Government owned Public Sector Undertaking under the Department of Atomic Energy. The sets to be used in Indian rural areas need to be rugged, with minimal maintenance and power requirements. These sets will be made by ECIL. These sets will need special chickenmesh antennas and front-end converters to receive the extremely weak signals from the satellite and show these on the TV screens.

(ii) The chicken-mesh antennas needed for this have been developed by the Experimental Satellite Communication Earth station (ESCES), another Division of (ISRO), at Ahmedabad.

(iii) The ESD has also developed the front-end converter required for direct reception. This is under final test.

Fabrication of Heavy Equipment for Atomic Power Plant at Narora

2259. SHRI VISHWANATH PRATAP SINGH : Will the Minister of ATOMIC ENERGY be pleased to state :

(a) whether the Atomic Energy Department proposes to fabricate, on site, the heavy equipment required for the atomic plant at Narora ; or these are to be transported to the site ; and

(b) whether the strengthening and widening of the necessary bridges and culverts and has started so that there may not be any bottlenecks in the transport of heavy equipment to Narora ?

THE PRIME MINISTER, MINISTER OF ATOMIC ENERGY, MINISTER OF ELECTRONICS, MINISTER OF HOME AFFAIRS, MINISTER OF INFORMATION AND BROADCASTING AND MINISTER OF SPACE (SHRIMATI INDIRA GANDHI) : (a) It is proposed that certain pieces of equipment will be partially fabricated in shops and then finally completed at site. Certain equipment like the turbine generator will be fabricated at manufacturers' workshops and then moved to site.

(b) Strengthening and widening of bridges and culverts will be taken up at the appropriate time.

Marine Propulsion Reactor

2260. SHRI VISHWANATH PRATAP SINGH : Will the Minister of ATOMIC ENERGY be pleased to state :

(a) whether a Marine Propulsion Reactor has been designed ; and

(b) if so, the main features thereof ?

THE PRIME MINISTER, MINISTER OF ATOMIC ENERGY, MINISTER OF ELECTRONICS, MINISTER OF HOME AFFAIRS, MINISTER OF INFORMATION AND BROADCASTING AND MINISTER OF SPACE (SHRIMATI INDIRA GANDHI) : (a) and (b). A marine propulsion reactor has not been designed. However, a project report has been prepared outlining the development work involved in nuclear propulsion for marine application.

Report of the Science Plan Committee on National Science Policy

2261. SHRIMATI SAVITRI SHYAM : DR. RANEN SEN :

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state :

(a) whether attention of the Government has been drawn to a news-item in the *Indian Express* dated the 24th July, 1972 that the Science Plan Committee set up by the Government has submitted its report to the Government ; if so, the recommendations made by the Committee ;

(b) the time Government will take to implement those recommendations ; and

(c) the estimated expenditure to be incurred on the plan and the extent to which the output in the country will be increased ?

THE MINISTER OF INDUSTRIAL DEVELOPMENT AND SCIENCE AND TECHNOLOGY (SHRI C. SUBRAMANIAM) : (a) and (b). The Government has seen the news-item in the *Indian Express* dated the 24th July, 1972 under the caption "SCIENCE PLAN GETS FINAL TOUCHES". The National Committee on Science and Technology is currently engaged in the formulation of a Science and Technology Plan. To cover the various sectors of S & T, the NCST has constituted 22 Panels. The Science and Technology Plan will be based on a detailed assessment of the existing knowledge and competence in each of the above sectors and the potential for develop-