

Labour Minister to solve the problem. I have every hope that a meeting between the Chief Minister and the Union Labour Minister will be held today.

I wish to thank the Chief Minister and the Union Labour Minister for their kind intervention. The employers should now be told to settle this matter immediately because most of them are producing defence articles in their units. It is they who are standing in the way. I hope, the powerful Union Labour Minister and the Chief Minister, who belong to the same party, will assert themselves and see that the strike is withdrawn. Since the Labour Minister is here, I would request him, if he could possibly do so, to say a good word, some word.

THE MINISTER OF LABOUR AND REHABILITATION (SHRI R. K. KHADILKAR) : I have carefully gone through the statement read out by the hon. Member here. Since yesterday I have tried my best to contact the Chief Minister of UP who is concerned with this question. Unfortunately, so far I have failed. In case I succeed in contacting him, I am prepared to spare some time and lend my helping hand to resolve the dispute. Beyond this I am not in a position to say.

SHRI S. M. BANERJEE : Last time the Chief Minister told me that he would like to consult Shri Khadilkar. He is here and a man like the Chief Minister does not escape the notice of the Union Minister.

MR. SPEAKER : If you stand outside Vignyan Bhawan, he will be traceable.

13.02 hrs

DEMANDS* FOR GRANTS 1972-73—Contd.

(1) DEPARTMENT OF SCIENCE AND TECHNOLOGY—Contd.

MR. SPEAKER : Now we will take up the Demands of the Department of Science

and Technology for discussion and voting. We have a balance of 1 hour and 5 minutes. How much time would the Minister like to take for his reply ?

THE MINISTER OF PLANNING AND MINISTER OF DEPARTMENT OF SCIENCE AND TECHNOLOGY (SHRI C. SUBRAMANIAM) : About 25 to 30 minutes.

MR. SPEAKER : So, there are about 40 minutes left for Members and the Minister can start his reply at 2:40. At 3 O'Clock we will take up the next item.

We are very tight on our time schedule and have to abide by that.

There was no Member on his legs. All the parties have exhausted their time. Only a few Congress Members are left. Shri B. V. Naik. He may start after Lunch.

13'03 hrs

*The Lok Sabha adjourned for Lunch
till Fourteen of the Clock.*

*The Lok Sabha reassembled after
Lunch at eight minutes past
Fourteen of the Clock.*

[MR. DEPUTY-SPEAKER in the Chair]

DEMANDS FOR GRANTS 1972-73—Contd.

(1) DEPARTMENT OF SCIENCE AND TECHNOLOGY—Contd.

SHRI B. V. NAIK (Kanara) : Mr. Deputy-Speaker, Sir, I support the Demands for Grants of the Department of Science and Technology. I support them all the more because in the last few years we have seen the impact of science on our society. There has been the 'Green Revolution, and that has virtually made us turn the corners of our national economy, so much so when we say today about a possible and permanent self—

*Moved with the recommendation of the President.

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sufficiency in food, there is no credibility gap as it used to happen about ten or twenty years ago; each year we used to say that there would be self-sufficiency and then we used to blame the monsoons or the other vagaries of nature. Besides the Green Revolution of which we have not been able to get a scientific or clear or elucidative reply whether the Green Revolution has been all for the good or all for the bad or whether it has any adverse effect as such, we have also seen the impact of the radio the electronic revolution, the impact of the radio particularly on our methods of mass communication, in which our country has been recently awakened and has been able to carry out a substantial amount of political changes in the country... (Interruption) particularly in the establishment of a stable Government, good for Mr. Pilloo Mody, good for the people on the opposition side, good for all of us and good for the country. These are only one or two instances which I would like to quote as an illustration of the impact of science and technology, in particular, on our Indian society.

SHRI JYOTIRMOY BOSU (Diamond Harbour) : One Nation, one Leader and one Party.

SHRI B. V. NAIK : I don't want to apologise for the failures of the Opposition. But they have their options still open to rectify their defeats, if they can.

Coming back to the establishment of this independent Department of Science and Technology, I welcome it. But, at the same time, in the requirements of the various Ministries, whether it be the Ministry of Industrial Development or if it be the Ministry of Agriculture, I hope it does not have the effect in as much as a separate and alienated section of scientists and scientific workers do not enter into an ivory tower. In other words, I hope that the requirements of the various Ministries, in other words, the requirements of the various sections and various economic facets of our national life are not lost sight of. There is the possibility of a tremendous amount of inbreeding of the ideas with the scientific community coming together and getting isolated from

the masses. I hope this Ministry or this Department does not enter into that sort of an ivory tower situation. And, in this behalf, I would like to draw your kind attention to certain things, in regard to the composition of the National Committee of Science and Technology. We find that there is, of course, the Minister of Planning. We have a physicist we have the people from the Planning Commission. We have people from medical sciences, from the Indian Agricultural Research Institute. But, any science, if it is to be all-encompassing, we cannot content ourselves with the scientists drawn from the physical and biological sciences alone. I find that there is a conspicuous lack in this National Committee of the people being drawn from one of the social science like the science of Economics or the sociologists. I hope that this can be bridged. All the more it should be bridged because I read one of the terms of the reference of this Committee is :

"Preparation and continuous updating of national scientific and technological plans, both Five-Year Plans and as Perspective Plans. This would have to be carried out in close association with Planning Commission and be intimately related in terms relative priorities of allocations and resources, to the national socio-economic development plans;

It is a very huge order virtually.

This Committee will have to function as a sort of a brains trust for the Planning Commission. Therefore, I would like to say that the composition of this Committee, besides being composed of pure scientists from specified sciences like Metallurgy and Chemistry and Physics, it should also be made all-encompassing. Some of the work that this Committee is doing has been very commendable. There is some work of a historical nature Botanical and Zoological Surveys, but some of the mass-based demands like the low-cost tractor of 10 to 12 horsepower or attachments to the back-mounted engines, I think, it is on these lines...

श्री सुबलचन्द्र कल्याण (सुरेन्द्र) : उपाध्यक्ष महोदय, सदन में गणपति नहीं है।

MR. DEPUTY-SPEAKER : The bell is being rung.

...Now, there is quorum. The hon. Member may continue.

SHRI B. V. NAIK : In regard to all these matters, the Ministry's attention should be drawn to the demands of the common man and to the problems of the common man and we have to conduct a certain amount of research into the areas of consumer satisfaction which are so very important for us. For carrying out this work we basically need certain things. We now lack the resources. We have today about 65,000 to 70,000 people engaged in scientific pursuits, in the service of the community as such, but still we have a tremendous amount of gap in regard to employment and there are still 1,00,000 people, qualified technologists, engineers as well as others, in science faculties, and I think we should bridge this gap—this employment gap—in regard to qualified talents which is going to waste in this country. I would like to draw the attention of the Minister to the so-called problem of 'brain drain.' So much has been said about 'brain drain'. We send our students for training abroad, but when they return, we do not have conditions which will suit their aspirations and they do not find the opportunity congenial. If we cannot meaningfully employ them here, let us not put an embargo on these people being trained abroad at all. They get in touch with the open society, western society or affluent society; having trained them and given them the opportunity, we ask them to come back and settle here where we have no opportunities. I think we would not have had an eminent scientist like Hargovind Khorana if we had not sent some of our scientists for training abroad, if we did not have a sort of brain-drain. Under these circumstances we are not able to give these scientists and doctors and engineers and technologists meaningful and purposeful employment and we have not created conditions for the same. The conditions are not comparable with the western standards. So, let us not go with the slogan that there is a brain drain in this country. Even in spite of the drain there is adequate talent in the country, and adequate ability, resourcefulness etc.

Therefore, let us create conditions that

are good for these people. I say this because these people will have to have an opportunity and let us not curtail our own opportunity for employment and advancement for the existing people. We should not have apesh imitations of hallowed ideas from the west.

Whether it is the Planning Commission or we in general, we have the scientific options. They are hard options. They may not be pleasant options or popular options; they may be unpopular options also. But we have to make such options. We have made a green revolution; we have created conditions for a green revolution. We have created a situation of surplus in certain commodities like wheat in the country. When it comes to a question of hard decision, a Committee of Experts is appointed to go into the question in detail of fixing the price and cost of production. At the end of it all we say it is not possible to get away from a position of subsidising. If we are going to subsidise the wheat-grower, we will have to subsidise the rice-grower. What I am trying to say about this formula of the powerful wheat lobby is this. If it is a question of scientific option,—we have to remember that the States have become soft,—we have to invest our money on worthwhile objects. There is this amount of Rs. 135 crores. You may invest part of it in a project in my own constituency like the Kali Hyrdo Electric project or in any other project which is going to provide facilities for irrigation in wheat growing areas. Let us know what employment potential you are going to generate out of this amount of Rs. 135 crores, so that, in course of time, this may not become an impossible situation. So, here I want to say that it is rather the soft State which presents itself with a problem and then when it comes to it, it is most likely and musty prone to take an unscientific decision. I wish that our Planning Commission as well as our scientists have the necessary amount of pressure not to yield to unscientific pressures and lobbies.

SHRI PILOO MODY (Godhra) : Moral courage.

SHRI B. V. NAIK : It is existing and it has to be given an opportunity.

The immediate requirement of our

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country, I would suggest, is that the scientists as well as the planners as well as science will have to bridge the gap between our thinking at a particular level as well as the masses. In this, I think that we have to get rid of the communication gap that is there in our society at present and reach out to the masses and ascertain their requirements and come to certain conclusions.

In conclusion, I would say that this scientific approach ultimately will have to revolutionise our thought patterns and thought processes. I think that the scientist of today is just the beginning of the new type of technocrat who will be able to take the decisions, and since scientific decisions will not be popular decisions, it is for the ruling party or the people in charge of the decisions to sell it in the market-place, that is, to sell these unpopular decisions. I think one of the worst consequences, as our friend Shri Jyotimoy Bosu has said, of the unscientific planning which is thoroughly associated will be the regional imbalances. Imagine that within about 20 or 25 years there will be areas of prosperity in certain parts of the country because of sheer advancement due to their natural as well as other advantages, and there will be certain areas with regional disparities and poverty. From the point of view of the interests of the nation and the integrity of the nation and the co-ordinated development of the country as a whole, this will be disastrous for us. Therefore, I would say in the ultimate analysis, though our Marxist friends to my right will say that a State rich is more scientific is a Marxist State, that we need not go to that extent, but we can rectify our steps even at this earlier stage.

With these words, I support the Demands of the Department of Science and Technology.

SHRI SAMAR GUHA (Contai) : It is a welcome decision on the part of the Government to have set up this Department of Science and Technology. I hope, Sir, you will remember that on several occasions I had raised this matter in this House. It was rejected at first, but I am very happy now that wisdom has ultimately prevailed. But I am very sorry to say that a purposeful dis-

ussion on this subject has been denied to us, because the report was circulated to us only last evening. We find that out of Rs. 37 crores of the grants, Rs. 25 crores go to the CSIR. But you know, Sir, that there was a big storm in this House about the structure and functions of the CSIR, as a result of which there was an inquiry committee and that committee submitted its report with sweeping recommendations suggesting both structural and functional changes in the CSIR. Without that report, as I said earlier, the discussion today will not be very purposeful...

SHRI C. SUBRAMANIAM : It has already been placed on the Table of the House.

SHRI SAMAR GUHA : But it has not been circulated to us. The full report has not been circulated to us.

MR. DEPUTY-SPEAKER : Everything placed on the Table of the House need not necessarily be circulated. Some are circulated and some are just placed on the Table, and those hon. Members who are interested in any particular document can ask for it.

SHRI SAMAR GUHA : I am glad to know this, but I had no idea of it. However, I would only request that an opportunity should be provided for a thorough discussion of the inquiry committee's report...

SHRI C. SUBRAMANIAM : It has already been implemented.

SHRI SAMAR GUHA : It may have been implemented, but we have a right to have our say on the process of implementation, because it was on the basis of the demand made in the House that an inquiry committee was appointed and its recommendations were submitted, and so, we should have the right to say whether those recommendations are proper or not. The report of the department of Science and Technology is naturally not a record of its achievements. But this enunciates certain functional and structural principles for this depart-

ment. I will confine my observations to the functional and structural features only.

It has been said that the main objective of this department is to make our economy self-sufficient and self-reliant. I would add another word and say that it should also be self-propellent.

SHRI R. V. BADE (Khargone) : The report was discussed in 1970 when it was placed before the House.

SHRI SAMAR GUHA : Only the first part. The second and most important part, which was later laid was not discussed.

It has been stated that the main objective of the Department of Science and Technology is the promotion of R & D for defence, import substitution, and allied matters. I would add one more in the light of the statement of the Minister of Planning that the main objective of the next Plan will be to provide more jobs, and the Plan will be employment or job-oriented. If we have to do that, we have to devise a new technology of industrial development, or a decentralised technology of industrial development. In short, the objective of this Department should be to devise a new industrial technology, a new engineering technology, a self-reliant technology for defence production, both for armament and explosives, and also, as I have already said, some kind of a decentralised technology. This will make our plan job-oriented.

I must say that the whole objective of this Department should be to concentrate in the present phase of our technological development on applied science and applied technology, not on basic or fundamental science. The latter should not be brought within its purview. This should be left if the objective is to make our economy self-reliant, self-sufficient and self-propellent. Then only a sense of urgency will be imparted to the functioning of this Department of Science and Technology. Then only will we be able to develop a technology which will be based on applied science. Therefore, I should suggest that research and fundamental science and also fundamental technology should be left to university laboratories and post-graduate research institutions.

The functional task before this Department has been made too general, too heavy, too bulky and I should also say, too diffusive. A set of 21 tasks have been assigned to the Department. Tasks like ecology, environmental science, oceanography are listed as its task, which should not have been there. I should say subjects like family welfare and health, agriculture, meteorology should not have been included in the list of the works of Science and Technology Department. If we want to impart a sense of urgency and immediacy into this department, if our object is to make the country self-sufficient, and if we want to substitute our imports by indigenous production as early as possible, these subjects should not be included in the purview of the department. If we have to diffuse and decentralise and make it job-oriented, we have to have sharp, concentrated and purposive objectives before our applied scientists. Of the 21 tasks assigned, only these should remain for urgent handling by the Department of Science and Technology : fuel and power, heavy engineering, chemical industries, machine tools and agricultural equipment for agro-industries. Mining, steel and metallurgical industry, aeronautics, transportation, defence and space, electronics, and in respect of education, only scientific research, should be there. Why are you going to bother about the environment and ecology, oceanographic survey, etc. as subjects for this Department? Those should be left to the other departments of Education Ministry. As you have said, if you have a purpose, to make our industry self-sufficient, self-reliant and, as I said earlier, self-propellent in the shortest space of time, so that we can stand on our own feet in applied science and applied technology the mind of the technocrats and the scientists should be polarised on some specific tasks to be fulfilled within a certain specific period.

MR. DEPUTY-SPEAKER : The hon. Member's time is up.

SHRI SAMAR GUHA : Please give me some minutes more. I am also a student of science. It is astonishing to see that this department is to deal with foreign powers in respect of certain cultural agreements. That means, you have to exchange your scientific matters through the attaches attached to different missions. I do not

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know why it should be the function of this Department. It will diffuse the concentration and purpose and the objective and even the energies of this Department.

Then, as have said out of the 21 tasks or functions assigned to the Department only 11 functions should be there, and the other tasks should be given to the education or other departments. But you should have a co-ordination to know what are the requirements and needs of the Department of Science and Technology and what it should undertake as urgent tasks. Naturally, certain co-ordination should be necessary, and a co-ordinating committee should be associated with the Planning Commission and the Ministry of Industrial Development should also be associated with it. Also, if you want to be purposive and time-bound, in implementing objectives and if you want to stand on your own feet, to have an independent economy and to develop your own science and technology to serve our purpose, then the objective should be limited and should not be diffusive as it is found in the list of tasks of the Science and Technology Department.

Then, about the structure, and the structural pattern of this Department, I should say that this department should be entrusted to certain specific Minister. It should not be under the Minister of Planning who has so many huge problems to deal with. The choice of a Minister for the Department should be made from among the scientists; he should be a man with capability to deal with men of scientific erudition, scholarship and a certain scientific sophistication like the specialised technocrats and scientists.

Then, I should say that these applied scientists and also technocrats should be treated as a special community. They should be given better salaries, better emoluments and they should have better amenities. You know that in Russia today, if there is any privileged class in communist society and it has become the fashion in our country to refer to the communist countries—if there is a most-favoured class or community there, it is the scientists and the technocrats. As my

hon. friend has said already, a lot of brain drain from our country is there, and it could be stopped if you make the work of the Department of Science and Technology purposive and see that those who will deal with work of science and technology, they should have nothing else except development of technology, science and a quest for discovery so that we can make our industry self sufficient, and to this end, you should give the scientists better emoluments.

Then, there is the National Committee on Science and Technology which is the hard core organisation for dealing with this department. But I am sorry to say, and I do not understand why it should be composed of so many part timers, why on the committee of eleven, the members are to be drawn from the different departments. They are already employed in different departments with specific work to do. They will be part-timers in the Science and Technology Department. How can you expect them in one month, two months or three or four months, to meet regularly and give a decision? It cannot be done. Make this a small committee on which a few whole-timers—scientists and technocrats—who will devote their whole time, attention and energy could function properly to serve specific purposes. Also, at the same time, the composition of the sub-committees or the group committees of the core committee is absolutely unpurposive. It cannot discharge or fulfil the objectives. This group is drawn from the different scientists.

MR. DEPUTY-SPEAKER : Please conclude.

SHRI SAMAR GUHA : I am concluding. If they are taken from different departments, how can they contribute their energies and pay attention and look after the tasks in an integral perspective. Therefore, make it a small committee with whole-timer scientists and technocrats, the sub-committees should also be composed of whole-timers from among specialised technocrats, and scientists, so that your objective may be really time-bound and purposive. They have done a great injustice to Dr. S. K. Mukerjee, the Director of the Zoological

garden in Calcutta who was an extraordinary man in that line. They assigned him certain task, to develop certain things according to the Fourth Plan but he has been replaced by another less qualified director.

MR. DEPUTY-SPEAKER : Do not bring in personalities. And try to conclude.

SHRI SAMAR GUHA : In conclusion, I am astonished to see this list. Among the eleven persons you have chosen for your hard core committee, I am sorry to say, those scientists, 50—60 per cent of whom presided over different sections of the Science Congress for over last 25 years, there is no representative from that group of scientists, there is not one Bengali representative... (Interruptions) Their contribution is there and if I could get time in this House I could show you, I can produce documents. It is my national duty to draw the attention of the House to this matter.

SHRI V. N. P. SINGH (Phulpur) : I am faced with a scientific and technical problem of expressing myself within five minutes. This is an age of miniaturisation so I shall also try to miniaturise my speech also.

If on the national scene the place of the scientist was on the periphery, their voice was still more distant. It was the vision of the great Jawaharlal Nehru that gave our scientists a place on the national stage and it was the determination and wisdom of our Prime Minister that has given them a voice and powerful voice at that, by way of the National committee on Science and Technology. By yoking the N. C. S. T. to the Planning Commission, we have ensured that the best talents of our scientists are harnessed to our social goals that in the labyrinths of abstract thinking shall echo the aspirations of the teeming millions that intellectual adventure shall not be divorced from its social context, and that learning and pathos shall go together.

Different social objectives demand different technological approaches. For this I would refer to one instance. We have a sub-committee under N. C. S. T. for agricultural equipment. Now our agricultural equipment and agricultural technology has to be

in consonance with final social order that we envisage in the rural area. If we are going to have small land holdings, we should go in for small tractors. Big tractors will become only museum pieces. Conversely, if we are to utilise the technology of big harvesters, combines and tractors, then we should go in for collective or co-operative farming. So it is our social goals that should dictate our technology.

Suppose the Sub-Committee on Urbanisation and Transportation under the Committee on Science and Technology considers the Bombay traffic problem, persons whose eyes are glued to and glamourised by the West, will suggest that we should widen the roads, that we should have fly-overs and free-ways, etc. But if we change our social perspective and focus on the humble pedestrians, we will not be thinking first of widening the roads, but of widening the sidewalks. Instead of pondering over traffic jams created by private cars and vehicles we will be thinking of evolving mass transportation systems like underground circular trains and electric buses. So, our technology here again will have to be conditioned by our social objectives.

Coming from broad principles to details, it is a happy thing to note that the urgent needs of defence, of import substitution of other non-defence products essential to our economy have been given a due place by the NCST. I have no detailed advice to give to our scientists on these counts. In the matter of anti-tank ammunition whether they choose the plastic type explosive or the liquid core type, it is their choice, for developing thallic anhydride, what catalyst they select is their choice; for the guidance of missiles whether they prefer the inertial or the magnetic system of control, again it is their choice. But I would remind our scientists that beyond all this there stands on the periphery of our society the landless labourer who has not had any share in the green revolution, and who will not receive much of a share in the "grey" revolution of capital intensive imported technology either. I would request our scientists to keep him in mind, to go out and reach him, and if they do so, I am sure that they have a country, a Parliament and a Prime Minister behind them.

THE MINISTER OF PLANNING AND MINISTER OF DEPARTMENT OF SCIENCE AND TECHNOLOGY (SHRI C. SUBRAMANIAM) : I am really happy that almost all the Members welcomed the now Department of Science and Technology and also made very useful suggestions for its successful functioning. This is a young department, a new department. As a matter of fact, we do not have even a proper house to live in, but this department has proved, and the National Committee on Science and Technology also has proved, that even without these basic amenities, if only you have the will, you can turn out a good deal of work. I would like to express my appreciation for the good work that has been turned out during these few months.

Some doubts were raised with regard to the wisdom of combining science and technology with planning. In my view, this is a wise decision. The Plan has to influence science and technology, as pointed out by the last speaker, and science and technology should influence planning. It is for the purpose of this mutual reaction that it has been put under the same Minister. Whether a proper Minister has been chosen for that purpose is matter of subjective judgment. I am prepared to agree with Shri Guha that perhaps the Prime Minister has made a bad judgment in this regard. That is quite a different thing. But the combination by itself is a good thing for our country and for planning.

The tasks are really challenging and immense because if self-reliance is not to be a mere slogan, it can be only on the basis of our scientific and technological competence. Today if we depend on foreign assistance, it is a reflection of our scientific and technological backwardness. That is why to achieve self-reliance, science and technology have to play a crucial role. That is why this department has been brought into existence.

Some other hon. Members in their enthusiasm said that the whole field of scientific activities should be brought under this Department of Science and Technology. I would like to say, it is not an umbrella ministry under which the whole science and technology and its various aspects are placed. As a matter of fact, it was considered whether such a ministry for science and

technology should be created. After a good deal of discussion, we came to the conclusion that perhaps it is not desirable.

This Department of Science and Technology has been brought into existence for bringing about coherence and coordination in the scientific activities being carried on not only in the Government departments and Government institutions but in the nation as a whole. That is why it has not only to function as a department but it has to react and coordinate with various departments and influence those departments, so that we have a meaningful scientific and technological effort made in our country and I am hoping that it will be possible for us to bring about this coordination with regard to our scientific and technological activities. If you look at the function of this department from this aspect, hon. Members would realise why we are dealing with so many subjects and why we have appointed so many sub-groups for considering various subjects coming under science and technology. Therefore, it is not just a question of picking up a few areas and reaching excellence in those areas by concentrating them under this department. This department has to take an overall view and bring about meaningful and coordinated scientific and technological activities, which would be beneficial to our social and economic development in the country as a whole. It is from this point of view that we are reacting with the various agencies which are involved in scientific and research work in our country today.

Scientific education is a subject which the Education Ministry deals with, but still we are interested in the development of manpower. Therefore, we have to react with the Education Ministry so that we have a meaningful, rational system of scientific education from the very beginning, so that we may produce eminent and talented scientists. That is why you will find in the NCST there is a committee relating to education and scientific man-power. It is from this aspect that the Department of Science and Technology is functioning. CSIR is directly under the D.S.T. It is just a coincidence. It could be elsewhere, but we thought that for seeing that it functions properly, because it has a big role to play in the present context. A committee has been already appointed to go

into the working of the CSIR. It is not as if any institution functions in a perfect way. There are defects and deficiencies. A comprehensive report has been prepared and submitted to the Government, which has already been placed on the Table of the House—both the reports. I may inform the hon. Member that the report has been circulated to all the members on 27.12.71. I do not know how he missed it.

As far as the recommendations of the Sarkar Committee are concerned, they were immediately taken up for consideration and there was absolutely no delay. The report was placed before the directors of the various laboratories. In the meeting of the directors decisions were taken as to which of them should be accepted in toto, which will have to be modified to a certain extent which will have to be rejected, which will have to be further studied and so on. If the hon. Members are interested in knowing the figures, there were 96 recommendations, out of which 37 were major recommendations relating to the structure of the CSIR. All those 37 recommendations have been fully accepted. Then there were 37 recommendations relating to the personnel policy. They made a recommendation that a special committee should be appointed for that purpose and that committee should go into the personnel policy. That committee has already been appointed and it is on the eve of presenting its report. Only 8 recommendations we found it not possible to accept. But they are marginal recommendations which do not affect the main recommendations with regard to the structuring and the functioning of the CSIR. There are 14 other recommendations which concern other departments also. Therefore, we have referred them to the various departments and Ministries for their reactions. As soon as their reactions are received we would be able to take action on them. Perhaps, we can claim credit for this that all the recommendations of the Sarkar Committee were considered, decisions taken and implemented expeditiously. As a matter of fact, the report was received in November 1971. We set targets for consideration and implementation of the various recommendations. I am glad to inform the House that those schedules were kept up and now the CSIR is functioning on the basis of the implementation of those recommendations.

Some hon. Members have referred to certain defects in the functioning of CSIR. Perhaps, they relate to an earlier period. Even though it is not going to become perfect, I can assure the hon. Members that past mistakes will not be there. If at all mistakes are committed, they will be new mistakes. We will always be prepared to realise past mistakes and whenever any mistakes are pointed out we will rectify them as soon as possible.

PROF. MADHU DANDAVATE (Rajapur) : Modernisation of the mistakes !

SHRI C. SUBRAMANIAM : Coming to the NCST, some criticism was made with regard to the composition of it. Some people thought that it consists of only theoretical scientists. It is not so. As a matter of fact, you will find in that consultants, technologists who are involved in production and research of various kinds, Director of the All India Medical Research Institute and so on. In my view, it is an assemblage of representatives of various sections. The criterion that I have applied here is that, as far as possible, there should be young scientists. While experience is good enough, knowledge of the fast advancing science and technology is the privilege of the younger generation. So, if we want to keep abreast with regard to modern science and technology, while we do take advantage of the experience of the older scientists who have done some service to the community in the past, we have to depend on the coming generation, the younger scientists.

Then, it is not as if these 11 people represent the entire scientific wisdom in our country. But we have to make some choice and we have made the best choice we can. They have decided to bring about various groups to consider the various areas. Science is such a vast subject that even 21 groups would not be adequate to cover all the aspects. Perhaps, many more groups would be necessary. So, you will find that in each area there are sub-groups. Ultimately, you will find that thousands of scientists would be involved in identifying the action to be taken on research programme and various other things.

One suggestion was made that they should all be full-time people. We tried to

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get some full-time people, but when you want a person who is eminent in that line, he is already engaged in an activity which is important to the nation as a whole. So, we have to make a decision whether to disturb him from that post and take him away from that to the NCST or to try to get him on a part-time basis but with the commitment that he should devote at least a minimum time with the NCST. As a matter of fact, the commitment that they have made is that they will provide a minimum time for the purpose of functioning in the NCST. On that basis, every month the formal meeting of the NCST takes place for two or three days. In addition to that, everybody works at least a week in a month for the purpose of working on this plan and the various functions which the NCST has to discharge. I wish, we had such eminent people and we could have all of them as full-time members. But that would mean that we would be disturbing the activities in which they are already engaged. That is the justification for having part-time members.

Various suggestions have been made that for improving the quality of our scientists constantly opportunities should be given to them to upgrade their knowledge. As a matter of fact, this is kept very much in our mind and in the CSIR, what is called, sabbatical leave is given every seven years so that they may upgrade their knowledge.

In addition to that, we hold seminars where they interact with each other. They are allowed to go abroad to be exposed to the new ideas and discoveries that are being made in the field of science. Therefore, we are quite well aware of this aspect of the question and we are trying our best not only to have scientists produced but to keep these scientists, as far as possible, up to date in their knowledge so that they may contribute their best to the community as a whole.

In addition to that, what is now important is the management of science which itself is becoming another science, a science of sciences. Particularly when we want to enlarge our activities, unless we have a proper management of science we may not be able to

use the resources available in the country, whether human material or physical materials, in the best way possible. It is in this field that there is scarcity of personnel and perhaps we will have to train them. But with the few persons that we have we are trying to find out how best to manage the science and technology of our country.

Fortunately, in our country we have a large reservoir of scientists, technicians and technologists. It is unfortunate that some of them are today unemployed. I have made the commitment that our first duty will be to see that at least all these scientists, M. Sc.'s and above and the engineering graduates—I am not saying, every diploma-holder—get fully employed within the next few years. As a matter of fact, I have given the target that before the end of the Fourth Plan all these people should be properly employed. That means, two years, which is not far away. The NCST has given me that assurance. It is not an impossible task which has been given to them. It is possible to have an employment programme for this purpose.

In this, particularly the survey of our natural resources has to play a big role, because ultimately science and technology is for the purpose of exploiting the natural resources of the earth. Therefore, a survey of our natural resources is a big thing which we have got to do. For this we have appointed task forces and very soon, within the next six months, we hope to have an overall plan for the survey of our natural resources in which thousands of our technically trained people could be employed in a very meaningful way.

This is how we are approaching the problem. Therefore, while we have only made a beginning and are not in a position to place before the House the record of our achievements, even then within this short time I think, we have organised it in such a way that in the coming years, particularly before we reach the Fifth Plan, we will have a proper science and technology plan to match our socio-economic objectives which we are laying down in our Fifth Plan.

15 hrs.

In the Fifth Plan, as we all know, we have laid for ourselves the main task of removing poverty in the sense that we will provide basic minimum needs to the people. Therefore, our technology also is not for the purpose of reaching the moon or exploring the planets. It is for the purpose of providing the basic minimum needs. This will have to get priority in our science and technology plan. That is why it is closely linked up with the planning programme in our socio-economic field. Our science and technology will have to be oriented to find out means and methods so that the realisation of this provision of basic minimum needs is achieved in a very quick, efficient and effective manner. So, the National Committee on Science and Technology will have to react to our basic approach to the Fifth Plan and, when they plan, they will take this into account and, on that basis, try to fill the gaps as far as science and technology is concerned.

Shri Indrajit Gupta has made very many relevant points with regard to the substitution of foreign technology with indigenous technology. It is a very difficult and complex problem, particularly, in an atmosphere where we have a craze for everything foreign, not only technology but even goods which are produced abroad and are supposed to be more valuable, more beautiful and more durable than goods produced within the country even though, in fact, it may be otherwise. Therefore, that craze will have to go and that can be done only by a certain amount of discipline in our industrial licensing, in our industrial producing and in our industrial programme.

I want to give an assurance, because I hold some position as the Planning Minister with regard to planning of industries also, that it will be my endeavour to see that indigenous technology is used more and more and, whenever indigenous technology is available or indigenous technology is in sight, it will be my endeavour to see that foreign technology is not allowed to come into the picture. It is not merely a question of indigenous technology being introduced newly. We have imported a good deal of foreign technology and the upgrading of technology is also important. Till now, we used to import technology and even for slight impro-

vements again we used to go to the source to get those new developments. As long as we continue to depend upon the foreign source for this purpose, we are not going to achieve scientific and technological eminence. That is why, one of the main tasks of the N. C. S. T. is to set up R & D in the existing industry for the purpose of upgrading technology, whether it is imported technology or indigenous technology. This is a very important aspect of our effort.

Another task is to try to find out what are the things which are being imported today and how those things could be produced within the country within a very reasonable time. That exercise has been not only very gainful but it has been very profitable because, when we look into the articles which are being imported, particularly, in chemicals, we find that we have the technical know-how and, in some cases, we have the equipment to produce them but, in spite of that, we have been importing these articles. Therefore, we are trying to find out from all these aspects how to have technological competence, how to have import substitution and how to improve our capacity to deliver the goods to people in the sense of bringing to them a better life, by providing them at least the basic minimum amenities.

I am glad the House has taken a welcome view and have encouraged the establishment of this Department. One point was made with regard to the availability of finances. I have given an assurance to our scientists, not only in the N. C. S. T. but in various other platforms, that hereafter, our scientific effort is not going to be bogged down for want of financial resources. If there is any worthwhile project the finances will be made available. This is not a tall order, I have made a calculation about it as to how much we will require it. It is not beyond our reach. Therefore, the financial resources are not going to stand in the way.

The same thing was said about the brain drain also. It is not as if we can employ all the persons who are functioning abroad today because they have got specialised knowledge, some of them, in very narrow areas, which may not be applicable to our area. Still there are a large number

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of people with talents and merit functioning abroad who could usefully contribute to our scientific and technological competence. It would be our endeavour, after having identified the areas where we are going to concentrate, to bring from abroad all those people who are functioning within the priority areas. Therefore, it is not a question of brain drain but utilising the brain that we have, the indigenous brain which is functioning within the country or abroad, and utilising it to the best advantage. But on that account we need not bring the people whom we may not be able to use profitably here. This is the broad approach to our science and technology effort. I am glad, Parliament is taking an enlightened view, but it should not be an interest at the time of discussing the Demands for Grants alone. I hope it should be possible for us to revive the Science Committee of Parliament and to have meaningful discussions every year. If Parliament takes an *enlightened interest*—I would like to underline 'enlightened interest'—then alone scientists would prosper. But we can, by our interference, also spoil the growth of science and technology as there are some people, even in the scientific field, who carry tales, who carry all sorts of false propaganda, and if we fall a prey to that false propaganda, we will only be discouraging the scientists and, perhaps, demoralising them also. Therefore, before hon. Members take a position with regard to the news they may get, I would request them to send it to me and I am prepared to give the correct version as to what had happened in that area. And even after that if they are not satisfied, it is open for Members of Parliament to raise it in various ways in Parliament. For example, with regard to our electronic laboratory at Pilani, various Cut Motions have been given by Shri Chandrappan. I am constrained to say, the hon. Member would pardon me for this—that, evidently, he has been carried by some tales which were brought to him from that laboratory or elsewhere. It is not as if I am saying that the Director is a man very eminent in management, very eminent in the scientific field. He is very eminent in the scientific field; there is no doubt about it. But I cannot say the same thing about his administrative capacity. Still he has been

functioning well, he has been achieving results. And to come and create a situation, an atmosphere, in which it requires another big investigation by a committee, would only demoralise the scientists who are functioning there and, perhaps, frustrate the efforts our scientists there. Therefore, I hope that Mr. Chandrappan, while he has served the purpose by bringing this to the notice of the House and to the notice of the Minister, would not press those Cut Motions because that would only further frustrate the scientists in that laboratory and particularly the Director of that laboratory. Now that all this has been placed before the House, I hope, as a gesture of goodwill to the scientists, the hon. Member would withdraw his Cut Motions.

SHRI K. P. UNNIKRISHNAN (Badagara) : May I address just a question to him, Sir? I did not get an opportunity to speak.

MR. DEPUTY-SPEAKER : Yes.

SHRI K. P. UNNIKRISHNAN : I belong to a State which spends more than a third of its revenue on education—primary education and university education. We have also the largest percentage of science graduates in the country. But, unfortunately, ours is the only State that has been left out, that does not have even a single laboratory out of the 34 national research laboratories that we have in this country. I would like the hon. Minister to take note of this and also let us know why we have been treated like this in the past. For our industrial development as well as for training of our scientific personnel, I would request the hon. Minister to take note of the present position and establish immediately at least a regional research laboratory.

SHRI C. SUBRAMANIAM : The establishment of a regional research laboratory in all the States where there are no research institutes is under consideration and I shall try to see that Kerala gets some priority in this.

MR. DEPUTY-SPEAKER : Mr. Chandrappan, are you withdrawing your cut motions?

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of Science and Techno.) Communications

SHRI C. K. CHANDRAPPA (Telli-
cherry) : No, Sir.

MR. DEPUTY-SPEAKER : So, I will
put cut motions Nos. 1 to 5 to the vote of
the House.

*Cut motions Nos. 1 to 5 were put
and negatived.*

MR. DEPUTY-SPEAKER : Now, the
question is :

"That the respective sums not exceeding
the amounts shown in the fourth column
of the Order Paper be granted to the
President to complete the sums necessary
to defray the charges that will come in
course of payment during the year
ending the 31st day of March, 1973, in
respect of the heads of demands entered
in the second column thereof against
Demands Nos. 96 to 98 relating to the
Department of Science and Technology."

The motion was adopted.

[The motions for Demands for Grants
which were adopted by the Lok
Sabha, are reproduced
below - Ed.]

DEMAND NO. 96—DEPARTMENT OF SCIENCE
AND TECHNOLOGY

"That a sum not exceeding
Rs. 2,95,25,000 be granted to the Presi-
dent to complete the sum necessary to
defray the charges which will come in
course of payment during the year end-
ing the 31st day of March, 1973, in
respect of, 'Department of Science and
Technology'."

DEMAND NO. 97—SURVEY OF INDIA

"That a sum not exceeding
Rs. 7,42,45,000 be granted to the Presi-
dent to complete the sum necessary to
defray the charges which will come in
course of payment during the year end-
ing the 31st day of March, 1973, in
respect of 'Survey of India'."

DEMAND NO. 98—GRANTS TO COUNCIL OF
SCIENTIFIC AND INDUSTRIAL RESEARCH

"That a sum not exceeding
Rs. 20,61,08,000 be granted to the
President to complete the sum necessary
to defray the charges which will come in
course of payment during the year end-
ing the 31st day of March, 1973, in
respect of 'Grants to Council of Scien-
tific and Industrial Research'."

15.22 hrs.

(ii) MINISTRY OF COMMUNICATIONS

MR. DEPUTY-SPEAKER : The House
will now take up discussion and voting on
Demand Nos. 87 to 90, 136 and 137 rela-
ting to the Ministry of Communications for
which four hours have been allotted.

Hon. Members present in the House who
are desirous of moving their cut motions
may send slips to the Table within 15
minutes indicating the serial numbers of the
cut motions they would like to move.

DEMAND NO. 87—MINISTRY OF
COMMUNICATIONS

MR. DEPUTY-SPEAKER : Motion
moved :

"That a sum not exceeding
Rs. 61,87,000 be granted to the Presi-
dent to complete the sum necessary to
defray the charges which will come in
course of payment during the year end-
ing the 31st day of March, 1973, in
respect of 'Ministry of Communications'."

DEMAND NO. 88—OVERSEAS
COMMUNICATIONS SERVICE

MR. DEPUTY-SPEAKER : Motion
moved :

"That a sum not exceeding
Rs. 4,36,70,000 be granted to the Presi-
dent to complete the sum necessary to
defray the charges which will come in
course of payment during the year end-