

OLD WORLD

NERC Foresees Difficulties over White Paper

THE Natural Environment Research Council is facing "serious difficulty" in attempting to meet the transfers of funds to government departments which are required following the publication last year of the white paper *A Framework for Government Research and Development*.

In its annual report published this week (House of Commons Paper 426, HMSO, £1.20) the council states that "it will not be difficult to meet the first year's transfers (for financial year 1973-74) with applied research projects of direct relevance to departmental interests". But "the possibility can be foreseen from experience of the first year of transfer, that really serious difficulties will arise in later years in fitting NERC programmes, scientific skills and facilities to departmental responsibilities...".

Under the terms of the white paper, £2.55 million was transferred from the council's budget to the customer departments in 1973-74, with a further £3.6 million and £4.8 million due to be transferred in 1974-75 and 1975-76. NERC's customers are the Department of Trade and Industry, the Department of the Environment, and the Ministry of Agriculture, Fisheries and Food.

The council goes on to warn that if the various needs of the customers and of fundamental research are not properly coordinated, the scientific capacity of the country in some fields could be reduced "to a damaging degree".

The difficulty, the council says, is that sometimes two or all three of the customer departments "are concerned with different applications from a field of research that cannot be sensibly subdivided. This difficulty will increase in attempting to meet transfers for the second and third year".

Areas that are likely to be hardest hit in this way are the Geological Survey and practical research in coastal waters—storm surge prediction, coast protection and offshore navigation.

"For these and other fields, which also include a significant amount of fundamental research, it will be necessary to devise a system whereby the various customer requirements and the needs of fundamental research are properly dealt with in a coordinated way."

But even so it is possible that "really serious difficulties" will arise in the second and third year, in trying to fit NERC programmes to departmental needs "in such a way as not to destroy

the balance of fundamental and applied research in many of the sciences of the natural environment. If this were to happen it would reduce the scientific

capacity of the country in some fields to a damaging degree".

The council highlights its problem by pointing out that the £4.5 million

Transfer of NERC Funds			
Recipient	1973/74	1974/75 £m at 1971-72 prices	1975/76
DTI* } for	1.25	1.85	2.50
DOE } commissioned	0.75	1.15	1.50
MAFF } R & D	0.25	0.375	0.50
NCC }	0.30	0.30	0.30
Sub-total	2.55	3.675	4.80
NCC (conservation)	1.1	1.1	1.1
TOTAL	3.65	4.775	5.90

* DTI—Department of Trade and Industry; DOE—Department of the Environment; MAFF—Ministry of Agriculture, Fisheries and Food; NCC—Nature Conservancy Council.

IONOSPHERE

Coherent Project

by our Astronomy Correspondent

THE Science Research Council is being asked to help support a £3-4 million European ionosphere project. This week a group of British ionosphere scientists is applying to the SRC for £18,000 to pay for a design study of a VHF transmitter which, if built, will be the British contribution. It will probably be several months before the decision of the SRC is known, but it is believed that both the council's Geophysics Working Group and Space Policy and Grants Committee have expressed strong support.

The plan calls for the construction of an ionosphere sounding station at Tromsø in Norway which will be able to determine as many as fourteen parameters of the polar ionosphere from a height of 80 km up to 1,000 km. The station will operate on the incoherent scatter technique in which a radio beam directed vertically upwards causes the free electrons of the ionosphere to oscillate and thus radiate a radio wave of approximately the same frequency as the original signal. Because of the small scattering cross-section of electrons and the fact that the scattered wave is emitted in all directions, the signal received back at the ground is weak and so powerful transmitters have to be used.

Other contributions to this programme—known as the EISCAT project—are to come from France (a UHF transmitter), West Germany (the UHF aerials), Finland (a VHF aerial), Nor-

way, possibly Sweden and possibly the Soviet Union. Negotiations have reached different stages in the various countries. In France the design study for the UHF transmitter is complete, and there is thought to be a possibility that funds will be available from 1975. It is believed that the French would favour four equal contributions from France, West Germany, Britain and the Scandinavian countries. In West Germany the design study for the UHF aerials is virtually complete, and although the West German government does not wish to support the project it seems that the Max Planck Foundation may be able to help. The Norwegian Research Council and the Norwegian Physics Council have both expressed support for the project, and Finland is carrying out a design study for the VHF aerial.

The Soviet contribution would be a UHF receiving station near its border with Norway, and it is believed that this project has been approved by the Academy of Sciences although so far there has been no official approval from the Soviet government.

British ionosphere scientists feel that it is high time Britain became involved in the project. The existence of another high-latitude incoherent scatter station which is already in operation at Chatanika in Alaska is said not to detract from the need for the EISCAT project. Although the Chatanika station is less sophisticated than the proposed EISCAT project, the data which it has already produced are said to show how much exciting work can be done in the auroral zone using the incoherent scatter technique.