



the department for Enterprise

CONFIDENTIAL

PRIME MINISTER

## GLOBAL CLIMATE

Ref A.  
At our meeting on 12 January, we agreed that the question of the United Kingdom's support for the proposed second European Remote Sensing satellite (ERS-2) should be reconsidered urgently.

2 Satellites will play a vital role in the monitoring of global climate change. We must obviously work in the context of international collaborative programmes. But the UK does have particular strengths in atmospheric and ocean modelling, in stratospheric dynamics and chemistry, and in the development of advanced satellite instrumentation for measurement of environmental variables. The European Space Agency (ESA) ERS-1 satellite, scheduled for launch in 1990, will be the Agency's first major venture into remote sensing. The satellite will demonstrate the potential (for commercial and public sector uses) of all-weather earth observation by synthetic aperture radar: it will also produce the basic data needed for global climate modelling. The UK contribution to ERS-1 (15% of the total mission cost) consists of approx £70m from the DTI, with a further £5m from SERC for the development of advanced scientific instrumentation.

3 Realistically, the whole payload of ERS-1 cannot be expected to operate for more than three years. The next major ESA venture to which we are currently committed is the Columbus Polar Platform, scheduled for launch in 1997. This will provide a quantum leap in earth observation capability both for commercial applications and for advanced climate monitoring. The DTI has allocated £250m to this project, primarily in recognition of its



commercial potential (including funds for commercial instruments and the ground segment). SERC are considering funds to develop scientific instruments.

4 But there could be an awkward gap between 1993 and 1997. ESA proposes to fill this gap with ERS-2 (to be launched in 1994). We have hitherto been reluctant to support what was conceived as a simple repeat mission, feeling that, while the break in continuity of data reception would be inconvenient, it would not conclusively inhibit commercial applications since other satellites (eg the Canadian RADARSAT) could provide comparable data in the mid-1990s. We preferred to husband our funds for Columbus. But I am told that continuity of data is essential for climate modelling purposes: no other satellite will provide the same data as ERS-1. In addition, it may be possible to modify ERS-2 to enable it to carry a new atmospheric chemistry instrument - highly relevant to our current concerns. (This cannot be done for ERS-1 as the design is already frozen).

5 Most of the other members of ESA see ERS-2 as essential, but a UK refusal to support would put the project in doubt. I have therefore reconsidered the case for participation. It is principally for others to assess the scientific benefits of the project. But in view of the increasing importance we attach to monitoring the atmosphere and the global climate, I think a case can be made for our participation especially if ERS-2 is adapted to carry the new atmospheric chemistry instrument.

6 UK support for ERS-2 would, in my view, be well received internationally as an indication of the seriousness with which we now take our concern for the atmosphere and the global climate. Conversely, non-participation in ERS-2 would be damaging to our stance on environmental matters. A positive decision could form a major part of the package of measures you hope to announce at



the London Conference on 5-7 March. I am confident that British industry and British Scientists will be able to play a leading role in making a success of ERS-2. But we shall need an early decision if we are to take this particular opportunity.

If the UK were to contribute to ERS-2 on the same basis as ERS-1 (ie a 15% share) and to develop in addition an atmospheric chemistry instrument, the cost would be broadly as follows:

£m

89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97
4.5	11.5	12.5	13.0	9.0	5.5	2.5	1.0

7 Final ESA cost estimates are not yet available and these figures could be subject to some modification.

8 I do not have headroom for this expenditure in the budget allocation by DTI to the British National Space Centre. We are already committed to Columbus and I believe we should maintain our expressed policy of encouraging the commercial exploitation of earth observation. But climatic monitoring should now be an important additional strand in our policy. If, therefore, colleagues agree that participation in ERS-2 could make a valuable contribution to climatic research, I would be prepared for DTI to meet up to half of the above costs (on an annual basis) because of the benefits to UK industry. Subject to Treasury agreement, I will cover the necessary increase in the DTI space budget by transferring funds from other DTI cash-limited programmes. This will require some re-ordering of priorities. But it will be necessary for colleagues to find the other 50% of the required funding. The departments with the greatest direct interest include DOE, DES (with their responsibility for the Research Councils), MAFF and MOD (much of the UK expertise is in the Meteorological Office).



the department for Enterprise

9 I am copying this letter to the Secretaries of State for the Environment, for Foreign and Commonwealth Affairs, for Defence, for Education and Science, for Transport and for Energy, to the Chief Secretary, to the Minister of Agriculture, Fisheries and Food, to the Paymaster General, to the Minister for Housing, Environment and Countryside, to Sir Robin Butler and to John Fairclough.

A handwritten signature in blue ink, appearing to be 'Nuf'.

DY

1 February 1989

DEPARTMENT OF TRADE AND INDUSTRY





ENV. AFFAIRS: Acid Rain Pt. 6

1000

