



The Met. Office

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# Annual Report and Accounts

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1991/92



The Meteorological Office  
Executive Agency

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## *Foreword*

After eight years as Director-General and Chief Executive of the Meteorological Office, my predecessor, Sir John Houghton, retired at the end of December 1991. Following my assumption of the duties of the Chief Executive in January 1992, I present this Report on the operation of the Meteorological Office for the year 1991/92.

The Office's history began in 1854 with the setting up of the Meteorological Department of the Board of Trade to be followed by the conferment of its present title in 1867. Meteorological Branches were set up for each of the Armed Forces in 1914. It became part of the Air Ministry in 1926 which in turn became part of the Ministry of Defence in 1964. On 2 April 1990 the Office became an Executive Agency.

It gives me great pleasure to emphasize that the vigorous and healthy state in which I find the Office, which is reflected in the figures and data included within this Report, is due to the dedicated work and leadership of my predecessor; Sir John Houghton in his own distinctive way added to the work of his illustrious predecessors, from Admiral FitzRoy onwards, in moving the Office towards its present high standing and in encouraging the dedication of its staff.

Because it is taking advantage of the freedom and opportunities placed upon it as a Next Steps Agency, the Office is becoming more responsible for financial and general management, personnel policy and training. One important step in this direction last year was the publication and widespread agreement within the Office of a document to guide the personnel, pay, and staff development policy over the next three years. We are taking note also of performance-related initiatives.

Substantial progress was made towards the introduction of our new computer-based financial and management information system to provide for improved monitoring, control and future planning of all our resources. In order to ensure that the Office is continually improving its management and all its procedures, a policy of Total Quality Management has been introduced; a new Quality Improvement Council, which I chair, and a newly appointed senior manager are now responsible for this initiative.

As the impact of investment in automation and improved observing systems begins to gather fruit, then the staffing structure of the Office will change and we must plan for that now. We need to harness the new technologies, such as those involving satellites, which are becoming available both in making measurements, and processing data; they also enable us to move into new areas of environmental and climate work where demands will be increasing.

There has been considerable success in our research and development activities. A notable example being the new nuclear dispersion model used to assess the impact of the nuclear incident near St Petersburg earlier this year. There has also been development of the climate prediction work at the Hadley Centre which contributed to the Second Report on Climate Change issued in 1992 by the Intergovernmental Panel on Climate Change.

The Office cannot forget that it is a service organization and I am pleased to report improvements, brought about by our new unified model for forecasting, in the accuracy of weather forecasts and in the quality of services to a wide range of customers, and that most of our operational targets were met. We must not forget that these forecasts and services depend on a worldwide data collection system, including satellites, and which includes the efforts of many voluntary observers. Although the United Kingdom's Defence Services will be reduced and modified, as stated in the policy of Options for Change, they will remain the biggest customer of the Office, absorbing some 35% of resources.

The Office will need to grasp new commercial opportunities which become available. Our record is good. Even at a time of economic recession, commercial services income increased by 13% on that of last year; perhaps more important, the gross contribution of commercial services income increased to £5.9M. We are taking a key role, through our recognized expertise and knowledge, in working with other European meteorological services to open up opportunities for commercial collaboration in Europe through setting up an economic interest group, whose proposed name is ECOMET. It is planned to reach final agreement, with other European meteorological services, on ECOMET's formation by the end of 1992. This is an example of the widespread international activities of the Office.

I should like to pay tribute to the excellence of the service provided by our meteorological outstations, whether to meet the demanding requirements of defence operations or the many varying and special needs of commercial customers.

Finally our aim is to continue to provide for all customer groups – the public, Defence Services, civil aviation, commerce and the Department of the Environment – the best services possible within the agreed resources.

(The Report continues on pages 3 to 13.)

# *Aim and Objectives*

(Taken from the Framework Document of the Meteorological Office Executive Agency)

## **Aim**

The aim of the Meteorological Office Executive Agency is to provide for United Kingdom military and civil users an effective, modern and efficient National Meteorological Service.

## **Objectives**

In fulfilling its aim, the principal objectives of the Meteorological Office shall be to:

- Provide a range of meteorological services to meet the requirements specified by the British Armed Forces and the Ministry of Defence.
- Provide under contract meteorological services to the Civil Aviation Authority.
- Make available warnings, forecasts and other meteorological services to shipping, the general public and others as may be required by the Secretary of State for Defence.
- Offer, and provide on payment, meteorological services to other Government Departments, commerce and industry.
- Provide information and advice to Ministers as required by them on matters related to meteorology.
- Represent and maintain British interests within the World Meteorological Organization and other relevant international bodies.
- Maintain an up-to-date National Meteorological Library and Archive.

In meeting these objectives the Meteorological Office will:

- Aim to achieve progressively more demanding quality of service and efficiency targets.
- Pursue research to attain those levels of capability and expertise necessary to meet its objectives economically and on repayment to meet customer requirements.
- Develop and pursue profitable commercial outlets for its services within Departmental guidelines.
- Maintain and renew the buildings and equipment needed for its operation in the light of forward plans agreed with the Ministry of Defence.
- Ensure that it recruits, trains and retains the right level and mix of personnel to meet its objectives in accordance with good employer practices.



# Management Organization

## Defence Meteorological Board

As the Chief Executive, I am directly accountable to the Secretary of State for Defence for all aspects of the management of the Office, and for the handling and control of its allocated budget. The Secretary of State has delegated the supervisory task to the Defence Meteorological Board, whose membership on 31 March 1992 was as follows:

Chairman	Mr J.M. Stewart CB <i>Second Permanent Under Secretary of State</i>
Members	*Mr F.J. Benton <i>Retired Managing Director, IMI Yorkshire Alloys Ltd.</i> Mr R.L.L. Facer CB <i>Deputy Under Secretary of State (Personnel and Logistics)</i> *Professor B.E.F. Fender CMG <i>Vice-Chancellor, University of Keele</i> Air Marshal Sir Kenneth Hayr KCB KBE AFC RAF <i>Deputy Chief of the Defence Staff (Commitments)</i> Professor J.C.R. Hunt FRS <i>Chief Executive, Meteorological Office</i> Professor E.R. Oxburgh FRS <i>Chief Scientific Adviser</i>
Secretary	Mr T. Knapp <i>Assistant Under Secretary of State (Infrastructure and Logistics)</i>

Sir John Houghton CBE FRS, as Chief Executive, was a member until his retirement on 31 December 1991.

I have the support of the *Meteorological Committee* which exists to provide advice on the Meteorological Office programme activities and to further good liaison between the Meteorological Office, its customers, and the scientific community. The memberships of the Committee and its Research Subcommittee were as follows:

## Meteorological Committee

Chairman	*Sir Peter Swinnerton-Dyer KBE FRS
Members	*Professor R.L. Bell *Professor H. Charnock CBE FRS *Mr D.A. Davis *Mr R.L.L. Facer CB *Mr D. Filkin *Professor P.H. Fowler DSc FRS *Mr M.A. Gamester *Mr G.C. Howell



\*Dr H. Hughes  
 Professor J.C.R. Hunt FRS  
 \*Mr J. Miller FIOB  
 Captain D.C. Murray RN  
 \*Baroness Platt of Writtle  
 \*Mr R.A. Smith  
 Air Vice-Marshal C.J. Thomson CBE AFC RAF

**Research Subcommittee**

Chairman	*Professor H. Charnock CBE FRS	
Members	Group Captain R. Bogg RAF	Professor J.C.R. Hunt FRS
	Dr D. J. Carson	*Mr R.D. Hunter
	Dr M. J. P. Cullen	Dr P.J. Mason
	Dr P. D. Curtis	Captain D.C. Murray RN
	*Professor B.E.F. Fender CMG	*Dr V.G. Roper
	*Dr D. Fisk	Dr P. Ryder
	*Professor J. E. Harries	Dr P.W. White
	*Professor B. J. Hoskins FRS	*Dr J.D. Woods

\* Not employed within the Ministry of Defence (MOD).

**Meteorological Office Management Board**

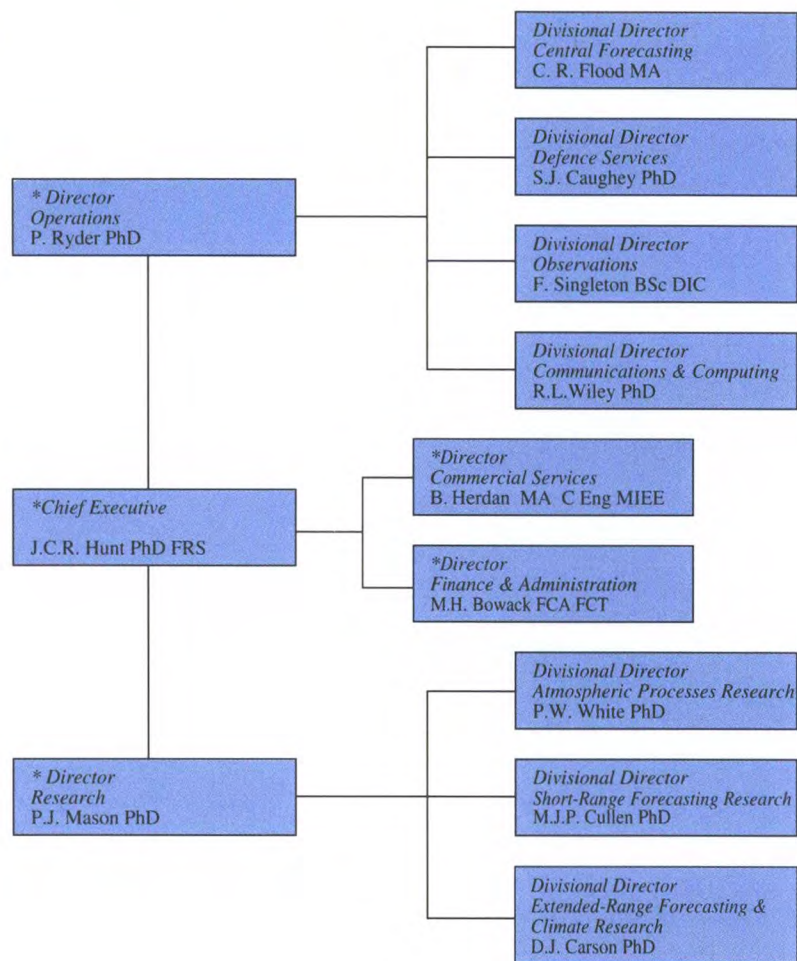
Apart from myself, the Management Board consists of four Directors, being:

Dr Peter Ryder, *Director of Operations*  
 Dr Paul Mason, *Director of Research*  
 Mr Bernard Herdan, *Director of Commercial Services*  
 Mr Michael Bowack, *Director of Finance and Administration*

The Office comprises nine divisions, each headed by a Director or Divisional Director who report to the Management Board. In this way the special needs of service provision to the five major customer groupings of Defence Services, Public Meteorological Service, Civil Aviation Authority, Department of the Environment, and Commercial Services, and the supporting central functions, are monitored and balanced against available resources. This management organization makes for taut control, delegated authority and accountability.

The directorate and divisional management structure is set out overleaf.

# Directorate and Divisional Management Structure



\*Member of the Meteorological Office Management Board.

On 1 October 1991 Dr P.J. Mason became Director of Research in place of Dr K.A. Browning PhD FRS who commenced a year's sabbatical leave at the University of Reading. Dr M.J.P. Cullen was appointed as Divisional Director for Short-Range Forecasting Research on the same date.

It is a pleasure to record that Dr Browning has been elected as a Foreign Associate of the National Academy of Engineering of the United States of America, and that Dr Mason has been elected as the next President of the Royal Meteorological Society.

## Personnel

At the end of the year there were 2504 staff employed by the Office and, with staff costs representing 49% of Total Expenditure, the Directors devote considerable effort to ensure the maintenance of an effective staff support for all the Office's activities. During the year there were 175 recruits to the Office of whom 45 were graduates.

High priority was devoted to professional training, provided to recruits and on an ongoing basis to existing staff at the Office's Training College. The facilities of other training organizations were utilized where training expertise was not available within the Office.

Personnel policies have been fully reviewed by the Directors during the year, and a programme of change is being implemented in accordance with the flexibilities of employment policy allowed by HM Treasury. To provide greater awareness to staff of financial effectiveness, a Group Incentive Scheme was introduced for all staff for the financial year. This provides bonus payments to staff when efficiency savings in excess of challenging targets have been made across the Office as a whole. No award was payable for the financial year ended 31 March 1992. The Office provides career opportunities to those of all ethnic backgrounds and to those who are disabled. The Office's in-house monthly newsletter *Mercury*, issued to staff, has been enhanced during the year, and in addition there are other frequent publications, for example *Meteorological Office Science & Technology Review* and *Training News*, which are available to all; all these provide updates covering a wide spectrum of information.

Honours

The following appointments were made:

Queen's Birthday Honours List:

Dr J.T. Houghton CBE FRS, lately Chief Executive	Kt
F.E. Underdown, lately Publications Manager	MBE

Gulf War Honours List:

J.B. Lawson, formerly Deputy Chief Meteorological Officer, Headquarters RAF Strike Command	OBE
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Key Targets

Challenging key operational and financial targets were endorsed before the commencement of the year by the Defence Meteorological Board who advise the Under Secretary of State for Defence. These key targets were supported by underlying targets for all areas of the Office and performance for the year against these targets is described later in this report. All key targets were achieved apart from two of the financial targets which were narrowly missed. Nevertheless, in a period of somewhat unpredictable recessionary times, this was a most satisfactory performance.

- To achieve high standards in each of the major customer groupings.

The following have been achieved.

- The National Severe Weather Warning Service has continued to work well throughout the year with over 75 FLASH messages of severe



weather being issued successfully. In particular, timely and accurate warnings were given for the stormy spells in October and December over Northern Britain, the cold and foggy spell in December in England, and the extensive and heavy rain in January in Scotland. Discussions have been held with the national media authorities to ensure maximum coverage is given to the public for exceptionally severe weather; this has led to improvements put in place at the start of the coming year. An objective scoring scheme on the success and false-alarm rates of warnings issued under the National Severe Weather Warning Service is being prepared.

- For services to the general public, an accuracy of 84% was achieved for the 24-hour forecasts broadcast at 1755 by BBC Radio 4, equalling the target.
- A customer satisfaction rating of 85% was achieved for services to Defence supplied by some 50 forecast offices, and was above the target of 80%.
- For military aviation a success rate of 79% for weather warnings issued 6 – 9 hours ahead was better than the target of 75%; the false-alarm rate of 17% was better than the target of 25%.
- For efficiency in the provision of Defence services based on the fractional improvements in quality, increases in output and decrease in input costs, taking account of organizational change, an increase of 1.3% was achieved. This result is anomalously low due to the output of the base year, 1990/91, being excessively high due to the Gulf War. When this is taken into account, the efficiency increase achieved was 2.9%.
- Quality of service for customers taking the OpenRoad service, as measured by predicting frost/no frost on roads, achieved a success rate of 89%, better than target by 2%.
- For British Gas, the errors for the 24-hour temperature forecasts being within 3 °C were used as the service quality indicator. These forecasts met the criterion on 97% of occasions, better than target by 1%.
- Commercial customer satisfaction, based on services delivered to at least 3 customers in 3 different market sectors at Weather Centres, has been measured by customers routinely since mid 1991. Results show a rating by customers of 92% for very good/good quality and 8% for poor quality service.
- For civil aviation the root-mean-square error for 24-hour forecasts of winds over the North Atlantic and north-west Europe at airliner cruising height was 12.1 knots which just missed the target of 11.8 knots. Further work is in progress to reduce these wind errors to target or below. The timeliness target for issue of global wind and temperature forecasts for civil aviation was achieved.
- Also for aviation, an automated Terminal Aerodrome Forecast verification scheme has been tested and will be implemented in the



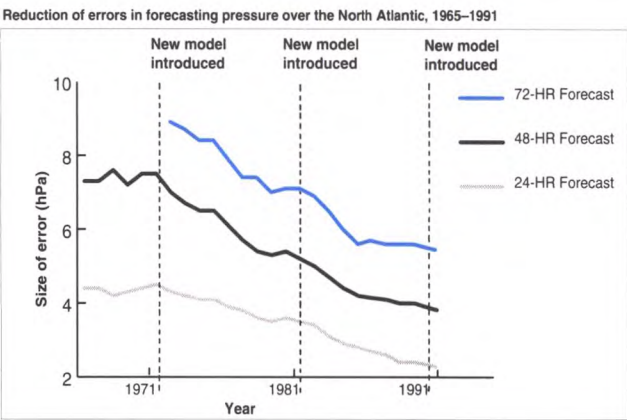
coming year. This will be used to assess the accuracy of landing and take-off weather forecasts at any airfield in the United Kingdom. Initially a target success score of 80% has been set for the major civil airports.

- For shipping, an accuracy of 85% for gale warnings issued 6–12 hours ahead was achieved and bettered the target by 5%. The false-alarm rate was 15%, better than the target of 30%; for the coming year the target maximum false-alarm rate has been reduced to 20%.
- The Meteorological Information System (MIST) tested successfully last year at RAF Marham is on track for imminent operational implementation at Aberdeen airport in direct support of North Sea helicopter operations, and shortly also for the Army Air Corps at Detmold. A commercial version of MIST has just been launched.
- To provide authoritative advice on climate change issues nationally, and more widely through the auspices of the Intergovernmental Panel on Climate Change.

The substance of the contribution by Working Group I, chaired by Sir John Houghton, to the 1992 Intergovernmental Panel on Climate Change (IPCC) Supplement was agreed at the third plenary session of the IPCC WG I, held in Guangzhou, China, in January. The full Panel subsequently approved this, and the final text of the background scientific material supporting the 1992 Supplement was completed also; both of which were published in time for the Earth Summit Conference held in Rio de Janeiro in June 1992.

- To exploit the new unified weather prediction model in improving the quality of forecasts.

The new unified numerical weather prediction model entered operational service in June. This was later than planned, and was delayed by resources being diverted to provide operational support for the lead up to the Gulf War and throughout its duration. Overall the new model is performing well and notably has given very good guidance in forecasting the strength and evolution of the early autumn and winter storms.



The target root-mean-square error of 3.9 hectoPascals or less in the surface pressure weather pattern over the North Atlantic and north-west Europe is being achieved regularly. The target accuracy for the mid-tropospheric height field is not quite being achieved yet. Further reductions in forecast errors are expected, in line with past experience following introduction of a new model.

Additionally, the key financial targets for the year and performance to meet them were:

- To encourage greater overall efficiency in the use of resources the Met. Office had a target to reduce net operating costs by 3%.

The target was not quite met. There was a reduction of 2.5% in net operating costs when account is taken both of lower than budget funding and other decisions outside the control of the Office made by the Ministry of Defence and other Government bodies.

- To achieve a 16% increase in the uptake of meteorological services, as measured by revenue generated from commercial services to the public, industry and commerce (excluding the Civil Aviation Authority).

The target was just missed. Revenue for commercial services totalled £15.0M, an increase of 15% from the previous year's total of £13.1M. This is an excellent performance.

- To achieve an increase of 18% in the gross contribution of commercial services revenue to offsetting core costs and overheads.

The target was exceeded. The gross contribution of commercial services revenue increased by 26% to £5.9M.

**Note:** The financial targets are extracted from the Business Plan, 1991–92, which is based on the Ministry of Defence cash accounting requirements aligning with the Net Voted Expenditure shown in the Reconciliation To The Appropriation Account on page 16. The individual performance against targets cannot be readily identified with the Accounts as these include accrual accounting, depreciation and other adjustments in accordance with the Guidelines issued by HM Treasury.

## *Development of Operational Infrastructure*

The Met. Office sought to provide measurable improvement in the productivity and effectiveness of operational support services through the use of new technology, automation, integration of functions, underpinning research and improved administration facilities. These include the following achievements.

### **Observations**

- Fifteen semi-automated meteorological observing systems became operational. The productivity of manpower engaged in generating surface weather observations has improved by 9% during the year against a target of 5%.
- Three weather radars covering Scotland were integrated into the operational network for the United Kingdom; the new weather radar



to be installed in Devon and the replacement system for the radar in Shropshire are expected to be operational by the end of the year.

- Introduction of single manning at 3 radiosonde stations and collocation of upper-air and surface observing functions has resulted in a reduction of 17 junior staff in line with planned savings.
- The offshore ocean buoy network covering the north-west and south-west approaches to the British Isles has been completed.

#### Telecommunications

- The programme of improvements to the facilities and networks for the transfer of operational data into, within and from the Met. Office has increased the service level to over 99%. This is above that agreed with customers, and has reduced the unit cost of telecommunication services by 14% which is 9% better than the target.

#### Central Computing

- The programme of enhancing the central computer-based facilities has increased the service level to over 99% which is above that agreed with customers, and has reduced the unit cost of these services by 12% which is 2% better than target.

#### Central Forecasting

- A prototype system has been delivered for the planned automation in the Central Forecasting Office. This is expected to increase the speed of access to graphical products, as well as the range of such products. If successful this will permit a reduction in numbers of support staff and of expenditure on consumables.

#### Underpinning Research

- Work on the development of the global version of the Nuclear Accident Modelling Exercise (NAME) has been completed and is under final trial.
- The Meteorological Research Flight C-130 aircraft was used to calibrate ERS-1 satellite-derived sea surface temperature and surface winds; and was deployed to measure the radiation of volcanic dust from Mount Pinatubo.
- The successful launches and deployments of the UARS and ERS-1 satellites allows the provision of new sources of data. Research with data from both satellites is expected to lead to improvements in both climate and weather forecasting models.

## *Financial Performance*

The financial performance of the Office is shown in the Accounts on pages 14 to 24. Comparative figures for the previous year have been restated, as detailed in Note 1(A) to the Accounts, to recognize adjustments mainly following the validation of fixed asset records during the year and noted in the Report prepared for the year ended 31 March 1991.

Pending completion of a review of the policy for the accounting treatment of satellite equipment development expenditure, costs as incurred have been written off to the Income and Expenditure Account.

Net Expenditure of £77.8M for the year was £6.9M higher than in 1990/91. Income of £44.2M was £4.9M higher than the previous year while expenditure of £122.0M compared with £110.2M in 1990/91.

Services provided to the Civil Aviation Authority, and to the Department of the Environment (DOE) for the Climate Prediction Programme, were maintained and increased income was received in accordance with their agreements. Income to Commercial Services on services provided to the public, industry and commerce increased by 13% to £13.9M for the year which, in a period of economic recession, is nevertheless regarded as an outstanding performance. In total, income was 12% higher than in 1990/91.

Expenditure is dominated by staff costs which increased by 8% to £59.4M. The average number of employees during the year increased by 1% over the previous year, and there were 2504 employees at the end of the year. The total of research costs incurred in supporting operational activities and the DOE Climate Prediction Programme, together with staff costs, equipment, satellite development and accommodation charges, were held within budget. Within the Income and Expenditure Account, overall costs rose by 8%, when account is taken of the previous year's provision of £2.3M by the DOE for capital funding of Office computers and related accommodation charges. After this adjustment, the balance of Net Expenditure rose by 6% in the year.

The total of Assets less Liabilities of the Office was £53.9M at 31 March 1992; this comparing with the restated value at 31 March 1991 of £51.8M.

A revaluation of land and buildings has been carried out by the Valuation Office. Values have been reduced by £3.0M during the year as a result of lower property values in the Bracknell area where most of the Office's properties are situated. Furthermore, as referred to earlier, a comprehensive validation of the capitalized equipment has been made during the year and, to bring the valuation in line with the underlying records, an adjustment of £13.8M has been made to the previous year's book values. Additions of £11.0M to Tangible Fixed Assets during the year were made in the normal course of business.

Working capital levels have been controlled. Stores values have been reduced following a rationalization of the central stores at Bracknell, trade debtors have been reduced and lower creditors reflect outstanding amounts due to third parties and deferred income at the end of the year.



The Reconciliation to the Appropriation Account summarizes the cash movements of the Office expressed through Net Voted Expenditure. When the collection in 1990/91 of a significant and previously overdue debt at March 1990 is taken into account, the Net Voted Expenditure of the Office increased from £64.1M to £71.1M.

## *The Future*

The Business Plan, 1992–93, contains plans for the development of the Office, including key operational and financial targets shown below, and has been endorsed by the Defence Meteorological Board and approved by the Under Secretary of State for Defence. The plans have been prepared by the Office to meet the agreed requirements of the main customers of the Office against a background of stringent limits on finance and continuing improvements in our efficiency. There have been no significant events to date outside this programme. Any further significant funding cuts, beyond the usual efficiency measures which the Office is constantly seeking, will jeopardize our customers' satisfaction.

The Office will seek to:

- Achieve high standards of quality of service for each of the five major groupings of customers – general public, Defence, civil aviation, industry and commerce and DOE-funded research into climate change.
- Increase efficiency by 3% through improvements in quality of service, increased service volumes and reduced unit costs.
- Reduce net operating costs to £38.0M.
- Achieve an increase in the uptake of meteorological services to £17.2M, as measured by cash revenue generated from commercial services to the public, industry and commerce (excluding the Civil Aviation Authority).
- Achieve an increase to £6.0M in the gross contribution of commercial services invoiced revenue to offsetting core costs and overheads.
- Provide authoritative advice on climate change issues to Ministers and the general public. (See note below.)

*Financial targets are expressed at 1992/93 values.*

Note: In particular, the Office will provide the most up-to-date assessment of climate change to the Department of the Environment in support of the United Kingdom's position in world fora (e.g. United Nations Conference on Environment and Development, June 1992) charged with formulating policies about climate change. Further input to the international debate on climate change will continue to be through the auspices of the Intergovernmental Panel on Climate Change and by other means.



J.C.R. Hunt  
Chief Executive  
7 July 1992

## *Income and Expenditure Account For The Year Ended 31 March 1992*

		1992	1991
	Note	£M	(Restated) £M
<b>INCOME</b>	2	<u>44.2</u>	<u>39.3</u>
<b>EXPENDITURE</b>			
Staff costs	3	59.4	55.1
Accommodation charges	4	10.1	10.1
Other costs:			
Operational activities – Observations, Central Forecasting, Data Collection & Processing	5	25.4	23.3
Commercial, Research and Administration	6	19.8	13.8
International Subscriptions	7	4.3	4.2
Interest charge on Capital	1	<u>3.0</u>	<u>3.7</u>
Total expenditure		<u>122.0</u>	<u>110.2</u>
<b>NET EXPENDITURE</b>		<u>77.8</u>	<u>70.9</u>

The Notes on pages 17 to 24 form part of these Accounts.



## *Statement Of Assets And Liabilities*

### *At 31 March 1992*

	Note	1992 £M	1991 (Restated) £M
<b>TANGIBLE FIXED ASSETS</b>	8	<u>47.9</u>	<u>47.0</u>
CURRENT ASSETS:			
Stocks	9	2.1	2.9
Debtors	10	<u>7.7</u>	<u>8.4</u>
		9.8	11.3
CURRENT LIABILITIES:			
Creditors	11	<u>3.8</u>	<u>6.5</u>
<b>NET CURRENT ASSETS</b>		<u>6.0</u>	<u>4.8</u>
<b>TOTAL ASSETS LESS LIABILITIES</b>		<u>53.9</u>	<u>51.8</u>

The Notes on pages 17 to 24 form part of these Accounts.

The Accounts were approved by the Directors of the Meteorological Office on 7 July 1992.



J.C.R. Hunt  
Chief Executive  
7 July 1992

## *Reconciliation To The Appropriation Account For The Year Ended 31 March 1992*

	<b>1992</b>	<b>1991</b>
	<b>£M</b>	<b>(Restated) £M</b>
<b>INCOME AND EXPENDITURE ACCOUNT</b>		
<b>converted to cash basis</b>		
Net Expenditure, from the Income and Expenditure Account	77.8	70.9
Adjustments for items not involving movements of funds:		
Pension costs	(7.4)	(7.2)
Departmental overhead charge	(2.3)	(1.8)
Depreciation	(6.1)	(6.0)
Loss on disposals of Tangible Fixed Assets	(1.0)	—
Contribution in lieu of rates	(3.2)	(3.1)
Interest charge on Capital	(3.0)	(3.7)
<b>NET CURRENT EXPENDITURE IN YEAR</b>	<b>54.8</b>	<b>49.1</b>
Movements in net current assets:		
Stocks — (decrease)/increase	(0.8)	0.2
Debtors — (decrease)	(0.7)	(6.1)
Creditors — decrease/(increase)	2.7	(1.0)
<b>NET CURRENT CASH EXPENDITURE</b>	<b>56.0</b>	<b>42.2</b>
Net capital expenditure, excluding Value Added Tax	11.0	10.1
Net Value Added Tax	4.1	5.7
<b>NET CASH EXPENDITURE OF THE OFFICE</b>	<b><u>71.1</u></b>	<b><u>58.0</u></b>
<b>SOURCE OF FUNDS</b>		
Voted Expenditure in year	118.5	104.1
Voted Receipts in year	(47.4)	(46.1)
<b>NET VOTED EXPENDITURE IN YEAR</b>	<b><u>71.1</u></b>	<b><u>58.0</u></b>



# Notes To The Accounts

## 1 ACCOUNTING POLICIES

### (A) BASIS OF PREPARATION

- (i) The Accounts for the Meteorological Office (Office), together with the Notes, have been prepared with regard to HM Treasury Guidelines and the Companies Act 1985, as amended by the Companies Act 1989, in so far as the Act applies to a HM Government Vote-funded Executive Agency. Accountancy standards, issued by the Accounting Standards Boards, are also applied through directives issued by the Director General of Defence Accounts. The Accounts follow the accruals concept of accounting and the historical cost convention, modified to include revaluations of Tangible Fixed Assets and Stocks as set out in Notes 1(E) and 1(F).
- (ii) Comparative figures for the financial year ended 31 March 1991 were not subject to audit verification. They are as included in the Accounts for that year restated to reflect adjustments, mainly as a result of verification of the records of Tangible Fixed Assets, which are summarized below.
  - (a) The policy for the accounting treatment of income received from various authorities with collaborative arrangements made on the capital installation of weather rainfall radar systems by the Office has been changed. Amounts received are now credited as deferred income within Creditors until Tangible Fixed Assets are acquired. Accordingly Income, from Commercial Services, Note 2, has been reduced by £0.7M, and Creditors, Note 11, have been increased by this amount.
  - (b) Creditors, Note 11, have also been increased by the inclusion of £3.9M, mainly relating to capitalized computer equipment installed but unpaid at 31 March 1991.
  - (c) Adjustments have been made to Tangible Fixed Assets totalling £21.5M, Note 8. A valuation of land and buildings was made by the Valuation Office and a reduction of £7.7M has been incorporated. A reduction of £13.8M has been included within plant and equipment to bring the Accounts in line with the underlying book values following the verification of the records made during the year.
  - (d) Unissued stocks valued at £0.6M, held centrally as reserve equipment and capitalized on issue, have been included within Stocks, Note 9.
  - (e) A contribution in lieu of rates of £3.1M has been included in Accommodation charges within the Income and Expenditure Account.

- (f) Prepayments of £0.8M for computer maintenance have been included within Debtors, Note 10.

## **(B) VALUE ADDED TAX**

The Office is not registered for Value Added Tax (VAT). All VAT collected and expended is accounted for centrally by the MOD. Amounts included in the Income and Expenditure Account and in the Statement of Assets and Liabilities are shown excluding VAT.

An amount credited to the Office by MOD, for the first time in the year ended 31 March 1992, on account of the VAT collected by the Office for customer repayment activities has been applied to partially offset VAT arising on expenditure. This net amount is a reconciling item in the Reconciliation to the Appropriation Account.

## **(C) INCOME**

Income arises from transactions with the private sector and Government Departments other than MOD. No value is attributed in the Accounts to services provided to MOD, including the Public Meteorological Service, although funding of the Office by MOD is shown in cash terms as Net Voted Expenditure in the Reconciliation to the Appropriation Account.

## **(D) NOTIONAL CHARGES**

### **(i) Interest charge on Capital**

A notional charge is included in the Income and Expenditure Account. In accordance with MOD accounting policy this has been calculated at 6% on the average value of Tangible Fixed Assets and Stocks.

### **(ii) Pension costs**

Excepting overseas locally employed civilians, all staff, both past and present, are covered by the provisions of the Principal Civil Service Pension Scheme. Although no payment is made by the Office into the Consolidated Fund, a percentage, currently 17%, of staff pay excluding certain allowances is included in staff costs in the Income and Expenditure Account to reflect the notional contribution from the Office.

### **(iii) Departmental overhead charge**

A notional amount is included in the Income and Expenditure Account for MOD charges in respect of central administrative costs, personnel management, the payment of salaries and allowances, the payment of contracts, legal and internal audit services, and insurance charges.

## **(E) TANGIBLE FIXED ASSETS AND DEPRECIATION**

### **(i) Land and buildings**

- (a) Departmental Estate is treated as an asset of the Office although legal ownership rests with the Secretary of State for Defence. This policy reflects the Office's position as the principal beneficial user of such property.
- (b) A valuation of Departmental Estate has been carried out by the Valuation Office in accordance with the Statements of Asset Valuation Practice and Guidance Notes issued by The Royal Institution of Chartered Surveyors, see Note 8(iii).
- (c) All leasehold property is held under operating leases as defined by the Statement of Standard Accounting Practice, SSAP21. Major refurbishment expenditure is capitalized.
- (d) Depreciation of buildings is charged on the basis of the remaining useful life, not exceeding 50 years. Freehold land is not depreciated.

### **(ii) Plant and equipment**

- (a) Plant and equipment, including computers, are capitalized where items have a purchase value excluding VAT exceeding £4,050 and an expected life of 5 years or more.
- (b) Certain meteorological equipments installed in commercial aircraft or at sea are not capitalized as they are outside the direct control of the Office and have an uncertain operational life.
- (c) Major items of capitalized plant and equipment are revalued using the Gross Domestic Product Deflator Index. Other plant and equipment is not revalued owing to technological changes.
- (d) Depreciation is charged on the basis of the expected useful lives of plant and equipment which range from 5 to 10 years. Mainframe computers are assumed to have a useful life of 7 years.

### **(iii) Depreciation**

Depreciation is calculated to write off the cost, or valuation, of Tangible Fixed Assets by equal instalments over their estimated useful lives, as categorized in the Accounting Policies shown above, although a residual



value equal to one year's depreciation is retained. Asset lives are periodically reviewed for obsolescence caused by technological development.

**(F) STOCKS**

Stocks, including centrally stored inventories of scientific and Office supplies and reserve equipment held unissued, are valued at the lower of current replacement cost or net realizable value. Specialized stocks for the Office are valued at historic cost.

**(G) RESEARCH AND DEVELOPMENT**

- (i) All research and development expenditure incurred during the year is charged to the Income and Expenditure Account, except where capitalized in accordance with the accounting policy on Tangible Fixed Assets, see Note 1(E).
- (ii) Costs of research carried out for the Department of the Environment and other customers outside the MOD are recoverable.

**(H) SATELLITE EXPENDITURE**

All satellite expenditure incurred during the year is charged to the Income and Expenditure Account within other costs. This policy is being reviewed.

**2 INCOME**

Income represents the invoiced value, excluding VAT, of services provided during the year to customers outside MOD. The main sources of income were:

	1992 £M	1991 £M
Civil Aviation Authority	24.6	21.9
Department of the Environment	5.7	5.1
Commercial Services	<u>13.9</u>	<u>12.3</u>
	<u>44.2</u>	<u>39.3</u>

Income from other Government Departments is included within Commercial Services.

Note: Income for 1991 has been restated, see Note 1(A).

**3 STAFF**

- (i) The staff costs were:

	1992 £M	1991 £M
Salaries, wages and allowances	48.5	44.6
Social security costs	3.5	3.3
Pension costs	<u>7.4</u>	<u>7.2</u>
	<u>59.4</u>	<u>55.1</u>



(ii) The average number of staff employed in Civil Service grade bands during the year were:

	1992	1991
Unified Grades 2-7	178	164
Other grades:		
Scientific	1804	1798
Technical	153	151
Administrative and support	322	307
Locally employed civilians overseas	42	45
	<u>2499</u>	<u>2465</u>

There were 2504 staff employed at 31 March 1992, 1991 2490.

(iii) Sir John Houghton, the Chief Executive until his retirement on 31 December 1991, received total emoluments, including pension contributions, of £61,000, 1991 £68,000.

Professor J.C.R. Hunt, the Chief Executive appointed on 2 January 1992, received total emoluments, including pension contributions, of £19,000, 1991 nil.

The emoluments, excluding pension contributions, of other higher paid employees, Civil Service grade 5 and above, fall into the following ranges:

	1992	1991
£30,001 – £40,000	5	9
£40,001 – £50,000	7	4
£50,001 – £60,000	1	–

(iv) Apart from executives of the Office, whose emoluments are included above, no emoluments were paid by the Office to members of the Defence Meteorological Board, the Meteorological Committee and its Research Subcommittee.

4 ACCOMMODATION

These costs include rents, utilities, maintenance charges and a depreciation charge for buildings of £0.4M, 1991 £0.3M.

5 OBSERVATIONS, CENTRAL FORECASTING, DATA COLLECTION AND PROCESSING

These costs include equipment and material supplies, services required to collect and process data for the production of forecasts, and depreciation charges of £5.7M, 1991 £5.7M. Costs incurred in the development and maintenance of satellite equipment were £7.8M, 1991 £9.0M.

## 6 COMMERCIAL, RESEARCH AND ADMINISTRATION

These costs represent equipment, materials and services supporting the commercial, research and administration activities. Also included are Departmental overhead charges of £2.3M, 1991 £1.8M.

## 7 INTERNATIONAL SUBSCRIPTIONS

The costs of subscriptions are included for the European Centre for Medium-range Weather Forecasts and the World Meteorological Organization.

## 8 TANGIBLE FIXED ASSETS

(i) The movements in each class of assets were:

	Land and buildings	Plant and equipment, including computers	Total
	£M	£M	£M
Cost or valuation:			
At 1 April 1991	28.4	45.8	74.2
adjustment, see Note 1(A)(ii)	(7.7)	(4.4)	(12.1)
At 1 April 1991 Restated	20.7	41.4	62.1
Additions	1.4	9.6	11.0
Disposals	—	(5.9)	(5.9)
Revaluation	(3.0)	—	(3.0)
At 31 March 1992	19.1	45.1	64.2
Depreciation:			
At 1 April 1991	—	5.7	5.7
adjustment, see Note 1(A)(ii)	—	9.4	9.4
At 1 April 1991 Restated	—	15.1	15.1
Charged during year	0.4	5.7	6.1
Disposals	—	(4.9)	(4.9)
At 31 March 1992	0.4	15.9	16.3
Net Book Value:			
At 1 April 1991	28.4	40.1	68.5
At 1 April 1991 Restated	20.7	26.3	47.0
At 31 March 1992	18.7	29.2	47.9

(ii) Freehold land with a book value of £9.2M has not been depreciated.



- (iii) Certain of the land and buildings, included in (i) above, were revalued by the Valuation Office at 31 March 1991 and 1992 on either the basis of open market value for existing usage or, for specialized property, on the basis of depreciated replacement cost. The original cost is not available.

## 9 STOCKS

Stocks comprise:

	1992 £M	1991 £M
Meteorological equipment	1.3	2.0
Reserve equipment	0.5	0.6
Consumable stores	<u>0.3</u>	<u>0.3</u>
Total	<u>2.1</u>	<u>2.9</u>

Note: Stocks for 1991 have been restated, see Note 1(A).

## 10 DEBTORS

Debtors comprise:

	1992 £M	1991 £M
Trade debtors	2.5	3.8
Prepayments	<u>5.2</u>	<u>4.6</u>
Total	<u>7.7</u>	<u>8.4</u>

Note: Debtors for 1991 have been restated, see Note 1(A).

## 11 CREDITORS

Creditors comprise:

	1992 £M	1991 £M
Amounts falling due within one year:		
Trade creditors	1.7	4.6
Accruals and deferred income	<u>2.1</u>	<u>1.9</u>
Total	<u>3.8</u>	<u>6.5</u>

Note: Creditors for 1991 have been restated, see Note 1(A).



12 CAPITAL COMMITMENTS

Capital commitments comprise:

	1992	1991 (Restated)
	£M	£M
Contracted	1.8	1.4
Authorized, but not contracted	2.6	5.4
Total	4.4	6.8

13 CONTINGENT LIABILITIES

A contingent liability exists in the event of any damage arising from the improper use of a computer leased by the Office.

14 KEY FINANCIAL TARGETS

The performance against the key financial targets included in the Business Plan, 1991–92, is described on page 10.

## *Audit*

Although good progress has been made with the development of the Office's accounting systems, the Accounts for the second year of Agency status on pages 14 to 24 are not verified by independent audit. A formal Accounts Direction requiring audit and Accounts will be issued by HM Treasury when the Office's accounting policy on satellite expenditure is settled and complete accounting information is available. It is expected that the Direction will be issued for the third year of operation.









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