

Annual Report and Accounts

1992/93



The Met.Office

**An Executive Agency of the
Ministry of Defence**

Annual Report and Accounts 1992/93

*Presented to Parliament in pursuance of section 5(1) of the
Exchequer and Audit Departments Act 1921*

*Ordered by the House of Commons
to be printed on 21st July 1993*



Met. Office Charter

**Our purpose is to excel
in providing meteorological services
that satisfy our customers' current and future requirements.**

To fulfil this purpose, we commit ourselves to:

- Serving our customers — the United Kingdom government, the public, the defence forces and our aviation, maritime and commercial customers — by meeting their agreed current and future requirements for meteorological, climatological and environmental services, forecasts, information and advice in a cost-effective manner,
- Serving the community and the United Kingdom economy by increasing the benefits of our services to as wide a range of users as possible,
- Helping our customers to get maximum benefit from our information, advice and services,
- Providing customer services through the application of science, to a high standard of business practice and in a competitive manner,
- Maintaining an integrated National Meteorological Service for the United Kingdom,
- Continually striving to improve our forecasts, particularly their accuracy,
- Using modern, well-proven technologies in our operations,
- Aiming for excellence in the advancement of the science of meteorology,
- Playing a leading role in the development of meteorological science and operations through national, European and international collaboration.

To do this we must:

- Secure appropriate resources and use them cost-effectively,
- Honour our commitments both inside as well as outside our organisation,
- Set high professional standards for ourselves and continually strive to improve our performance,
- Practice openness and supportive leadership at all levels in our organisation,
- Give greater individual responsibility to all staff by delegating authority together with the means to exercise it,
- Provide an environment that helps staff to perform well and achieve satisfaction and fulfilment in their jobs,
- Manage the effective recruitment and placement of staff, provide appropriate training and encourage the development of all staff,
- Have an outward-looking view, desiring to seek, accept and act on advice from both within and outside the Met. Office.

Signed
on behalf of all staff

J.C.R. Hunt
Chief Executive

Date: 11 February 1993

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Review of the Year

Looking back on my first full year as Chief Executive, I am very pleased to report that the Met. Office has carried out its business with considerable success, and to thank, once again, our staff for their dedication and professionalism. We have an established position as one of the world's leading Meteorological Services. We have operational commitments to observe and forecast the weather which, while focused on Europe, require and result in global capabilities. Our services were maintained without a break, around the clock and throughout the year. Our scientific abilities are high and are essential to underpinning the quality of our meteorological services to the public, our customers in defence, aviation, commerce and the public services.

This Review highlights some of our work over the last year. For example, as the UK's national meteorological service we provided warnings of severe weather; procedures for these have recently been strengthened to ensure more accurate and timely advice for the public and emergency services. Our early warnings of storm surges which affected Canvey Island on 25 January and the coast of East Anglia on 21 February, enabled action to be taken which, according to the National Rivers Authority, prevented damage to property of about £18 million on each occasion. Timely warnings of heavy rain and flooding in South Wales and forecasts of high winds affecting the Dartford Bridge over the Thames also allowed the authorities to implement safety and preventative measures successfully.

By contrast, predictions of settled weather enabled critical engineering projects, such as construction of the second River Severn bridge and launch of a Trident submarine, to be carried out safely and efficiently. Fair-weather forecasts for film makers in Italy helped save time and costs. Longer-range forecasts of rain and temperature for 15 to 30 days ahead enabled UK

forces with the UN in Bosnia to plan their activities saving time, money and even lives.

Examples like these, at home and abroad, demonstrate a growing appreciation of the benefits of accurate, specific and timely weather predictions.

Our largest single customer is the Ministry of Defence, for whom we provide forecasts for training and military operations anywhere in the world. In the past year this included air and ground forces in Northern Iraq and in Bosnia. We have continued to develop improvements to our tactical advice concerned with the impact of meteorology on weapons, sensors and military operations generally.

As one of two World Area Forecast Centres for Civil Aviation, many leading civil airlines use our global forecasting capability to plan their routes both to save fuel costs and avoid areas of severe weather and turbulence. We also provided warnings to aircraft on the distribution of dust following the eruption of Mount Pinatubo in the Philippines in 1991.

Environmental issues continue to play an important role. We have been designated as a regional centre for predicting atmospheric dispersion of chemicals or pollutants. Under contract to the Department of the Environment our Hadley Centre for Climate Prediction and Research continued to play a very full role in advising the UK Government and international community on the impact of increasing greenhouse gases. We continued to be key players in the Intergovernmental Panel on Climate Change (IPCC) whose scientific assessments underpinned the Climate Convention signed by the UK at the UN Conference of Environment and Development (UNCED) at Rio de Janeiro in June 1992.

Despite the recession we achieved an impressive growth in our commercial activities with a 22% increase in invoiced revenue and a corresponding growth in contribution to the core costs of the Office. Growth in international sales has been substantial and progress has been made towards a European agreement (ECOMET) for wider commercial provision of meteorological services throughout Europe.

Good observations are the foundation of good forecasts. In 1992 we strengthened our observing network over the ocean to the west of the British Isles; on land we increased the number of automatic and semi-automatic observing stations. We continue to benefit greatly from the observations made by our partners in the World Meteorological Organization.

Good progress has been made towards completing and testing our Microwave Humidity Measuring Instruments (AMSU-B) being built under contract by British Aerospace, and a new weather radar, co-funded by the National Rivers Authority, was installed in Devon. A new European Community Collaborative (COST) programme has begun to ensure that the weather radars in all European countries are compatible and contribute to improving short-range forecasting throughout Europe.

A 10% improvement in forecast accuracy was achieved in March following the correction of a subtle error in our global "unified" forecast model. The error was revealed when the model was being used in climate studies, indicating the benefit of using the same model for weather forecasting and climate research.

Our research programme also led to further developments in our range of weather prediction models; we successfully introduced an operational model for producing local and regional forecasts for the British Isles. It is a measure of our

international standing that by the end of 1992 many other national meteorological services were using our global forecasting model.

Collaboration with private-sector companies has been an essential element in our approach to developing new products, an early demonstration of the effectiveness of appropriate market testing of Met. Office policy. This has led to important developments such as METFAX, which distributes up-to-date forecasts and weather information to pilots and schools. In association with British Aerospace our PC-based Meteorological Information System (MIST) has been introduced, giving military and commercial customers ready access to meteorological data and forecasts.

Following the introduction early in 1992 of a Quality Improvement (QI) programme, we have reviewed the aims of our organization and prepared a Met. Office Charter for staff. Quality Improvement provides a systematic plan to continue to improve the quality of our products, services and working practices. I have been explaining these and other changes at a series of consultation meetings with staff around the country.

This *Annual Report and Accounts* reviews our management and reports performance against targets as well as presenting our accounts. The accounts have been audited formally for the first time by the National Audit Office. This report is accompanied by separate more-detailed publications, the *Annual Review* of services and activities and the *Scientific and Technical Review*.

Through all this activity, we demonstrate that by encouraging and developing our staff and by national and international collaboration, the Met. Office will continue to provide the world class meteorological service that the public and our customers have come to expect.

Aim and Objectives

These are taken from the Framework Document (1990) of the Meteorological Office Executive Agency. The document has been revised and is awaiting approval; only minor changes have been proposed.

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.

Improving Quality

One of our key targets is to achieve high standards of quality of service for each of the five major groupings of customers. In this context, last year we embarked on a Quality Improvement initiative which has since developed strongly with the aim of continuously improving performance across the Agency.

In line with many successful Quality companies in Europe, the key to achieving this purpose is to instil the philosophy of Quality Improvement in all members of staff.

During the past year some 38 Quality Improvement projects were set up, involving over 270 staff. These were directed and guided by senior managers at Board level, acting as the Quality Improvement Council. Quality targeted team projects have led to the Board and senior management changing significantly their working practices, resulting in fewer but better focused meetings. Most of the activities were conducted through teams of staff that were empowered to investigate issues and make recommendations for improvement in their own areas. Several teams were set up to investigate Agency-wide issues. One of these, a Quality Audit Team looking at staff perceptions of the management of change, conducted a major survey of attitudes among all staff which revealed significant trends in staff attitudes, and which will be used as the benchmark for future such studies.

An Office Charter which interprets the formal aims and objectives in the Framework Document, and provides staff with guidance on what we do and how we do it, has been introduced (see page iii.).

The emphasis is now beginning to shift towards a focus on customers and projects that enable staff to take on more local

authority and responsibility or 'empowerment'. Managers are beginning to conduct their own Quality Improvement activities designed for their own special needs. Quality Improvement is beginning to become an organic part of the Agency.

Citizen's Charter

The Office has sought to improve the performance and responsiveness of its public services in line with the Citizen's Charter. I have appointed an Enquiries and Complaints Officer as a focal point for public access, who will notify problems that require the intervention of senior management, and instituted an annual wide-ranging survey of customer satisfaction.

Information on services, and how they are provided, is published in an easy to read brochure entitled "*... here's the weather forecast*" which is available free of charge to members of the public. Staff in direct contact with the public receive training aimed at improving courtesy and helpfulness and, to maximize convenience, services are provided to all public media on a 24-hour basis.

We undertake several interrelated tasks for the benefit of the public as a whole, primarily to minimize the risk to life and property from hazardous weather but also to inform everyday decisions and policy options which are sensitive to weather and climate. I have therefore undertaken to produce the Office's own Charter standard for the Public which explains more precisely the level of service to which we are committed.

The Charter Standard is reproduced on page 6.

Met. Office Charter Standard for the Public

We aim to serve the public by providing:

Up-to-date weather information and forecasts

We will provide weather information and forecasts through radio and television, newspapers, telephone and facsimile services.

Warnings

We will issue warnings of severe weather through radio and television and to emergency organizations such as the police and fire services. We will provide warnings of adverse road conditions to the police and to local and national radio. We will provide gale warnings and marine forecasts for radio.

Advice in emergencies

We will provide warnings of coastal flooding to the National Rivers Authority and the police. We will provide weather advice for the statutory authorities regarding pollution emergencies caused by the release of toxic chemicals into the atmosphere, oil spills and nuclear accidents.

Weather and climate information

We will maintain the National Meteorological Library and Archive at Bracknell which you may visit free of charge, develop low-cost publications containing basic weather and climate information for schools and the general public.

To enable us to achieve this we will:

Operate around the clock

To keep our forecasts up to date we work 24 hours a day, every day of the year.

Monitor the weather continuously

We will maintain a comprehensive UK network of observing stations. We also have access to observations from all other parts of the globe through our membership of the World Meteorological Organization. If we do not know what is happening today, we cannot forecast for tomorrow.

Be at the forefront of meteorological science

We are proud of our international reputation for the quality of our research which underpins all services to our customers. The Hadley Centre plays a leading role in the prediction of climate change and the effects of global warming.

Exploit modern technology

The Met. Office uses modern, well-proven technologies in its operations. The computers which run our numerical weather prediction models are among the most powerful in the world.

Play a leading role internationally

We play a full part in the development of meteorological science and operations through international collaboration. The Met. Office is a world centre for the provision of forecasts to civil aviation.

To measure how well we are doing we will:

Ask you in public surveys

These are conducted regularly by independent consultants among a representative sample for the public. They give you an opportunity to comment on our performance and say what weather services you use, how they could be improved, and what new ones you would like. We welcome your opinions and criticisms and will react positively to them.

Monitor our forecasts

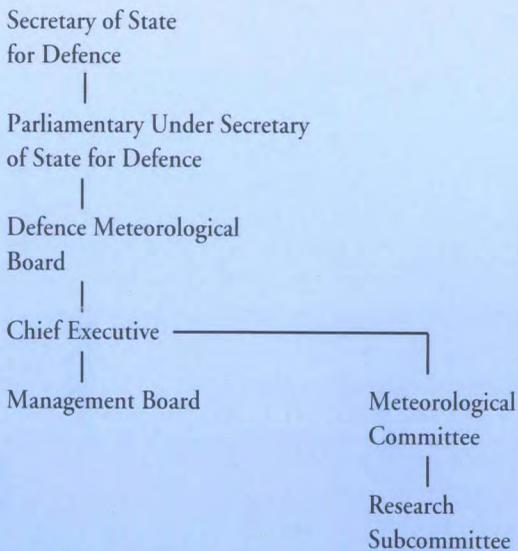
We continually monitor all aspects of our performance. We compare the weather forecast with what is observed and measure its accuracy. Forecasts have been steadily improving over the years.

Set performance targets

Our performance targets are set each year. These, and our performance against them, are published in our *Annual Report and Accounts*. Some of these targets are based on the results of our public surveys and measure how satisfied you are with our performance.

Organization

Official Status



The Meteorological Office is an Executive Agency within the Ministry of Defence. The Secretary of State for Defence is responsible for the Agency and for determining the policy and resource framework within which it operates, but he does not normally become involved in the day-to-day management of the Agency. The minister with direct responsibility is the Parliamentary Under Secretary of State for Defence.

The Secretary of State, as owner of the Agency, is advised by the Second Permanent Under Secretary with the support of a Defence Meteorological Board which includes external members with relevant scientific and commercial experience. The Board endorses the 5-year corporate plan and the annual business plan which sets performance and financial targets. It monitors and assesses the progress of the Agency on the basis of reports provided quarterly by the Chief Executive.

The Meteorological Office remains vote-financed within the Ministry of Defence and receives funds directly through the Department's budget allocation process.

Membership of the Defence Meteorological Board at 31 March 1993 was:

Defence Meteorological Board

Chairman

Mr J.M. Stewart CB
Second Permanent Under Secretary of State

Members

- * Mr F.J. Benton
Retired Managing Director, IMI Yorkshire Alloys Ltd.
- Mr R.L.L. Facer CB
Deputy Under Secretary of State (Personnel and Logistics)
- * Professor B.E.F. Fender CMG
Vice-Chancellor, University of Keele
- Vice Admiral The Hon Sir Nicholas Hill-Norton KCB
Deputy Chief of the Defence Staff (Commitments)
- Professor J.C.R. Hunt FRS
Chief Executive, Meteorological Office
- Sir Ronald Oxburgh FRS
Chief Scientific Adviser

Secretary

Mr T. Knapp
Assistant Under Secretary of State (Infrastructure and Logistics)

Retiring member

Air Marshal Sir Kenneth Hayr KCB KBE AFC RAF

Advisory Committees

I am advised by a Meteorological Committee, whose chairman is appointed by the Secretary of State, and by its Research Subcommittee. These committees represent the wider interests of the nation in its requirement for meteorological services and ensure that scientific standards are maintained. They also serve to promote good relations with customers and the wider scientific community.

Membership of the Committees at 31 March 1993 was:

Meteorological Committee

Chairman

* Sir Peter Swinnerton-Dyer KBE FRS

Members

Air Vice-Marshal A.J.C. Bagnall RAF

* Professor R.L. Bell

* Dr P. Brooker

* Professor H. Charnock CBE FRS

* Mr D.A. Davis

Group Captain J. Evans RAF

Mr R.L.L. Facer CB

* Mr D. Filkin

* Professor P.H. Fowler DSc FRS

* Dr H. Hughes

Professor J.C.R. Hunt FRS

Captain M.J.R. Nestor RN

* Mr G. Paulson

* Baroness Platt of Writtle

* Mr R.A. Smith

Retiring members

* Mr M.A. Gamester

* Mr G.C. Howell

* Mr J. Miller FIOB

Captain D.C. Murray RN

Air Vice-Marshal C.J. Thompson CBE AFC RAF

Research Subcommittee

Chairman

* Professor H. Charnock CBE FRS

Members

Dr D.J. Carson

Dr M.J.P. Cullen

Dr P.D. Curtis

Group Captain J. Evans RAF

* Professor B.E.F. Fender CMG

* Dr D. Fisk

* Professor J.E. Harries

* Dr A. Hollingsworth

* Professor B.J. Hoskins FRS

Professor J.C.R. Hunt FRS

Dr P.J. Mason

Captain M.J.R. Nestor RN

* Dr V.G. Roper

Dr P. Ryder

Dr P.W. White

* Dr J.D. Woods

Retiring members

Group Captain R. Bogg RAF

Captain D.C. Murray RN

* Dr V.G. Roper

* Not employed within the Ministry of Defence.

Management Structure

Apart from myself, the Management Board of the Meteorological Office consists of the Director of Operations, the Director of Research, the Director of Commercial Services and the Director of Finance and Administration, with the Corporate Planning Manager acting as Secretary to the Board. The role of the Management Board has been reviewed and the Director of Operations has been given wider responsibilities and the title Deputy Chief Executive whilst the Director of Research is now also designated Chief Scientist. The underlying aim of these changes has been to enhance strategic thinking at senior level and to extend delegation in operational matters.

In recognition of the increased operational delegation, divisional directors have been given full Director status. Further emphasis will be given to business areas both external and internal to improve the customer orientation of the Office.

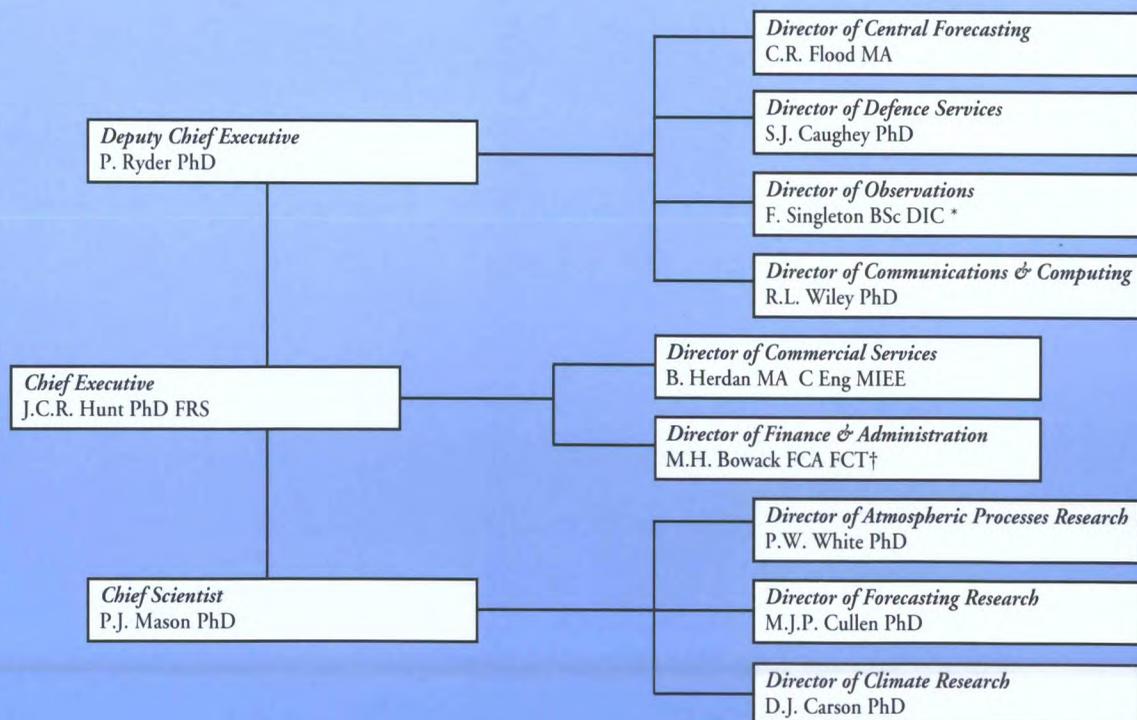
Membership of the Board at 31 March 1993 was:

Management Board

Prof. Julian Hunt	Chief Executive
Dr Peter Ryder	Deputy Chief Executive
Dr Paul Mason	Chief Scientist
Mr Bernard Herdan	Director of Commercial Services
Mr Michael Bowack	Director of Finance and Administration†

The organizational structure and membership of the senior management of the Office at 31 March 1993 is shown below:

Senior Management



* J.M. Nicholls has since been appointed Director of Observations on the retirement of F. Singleton.

† Michael Bowack has since resigned and the post is currently vacant.

Human Resources

Personnel

At the end of the year there were 2526 staff employed by the Office at a total cost of £63.5 million. Staff numbers have increased by 79 in the three years since the change to Agency status, as a net consequence of reductions resulting from our automation programmes and rationalization of services to Defence, offset by increases due to our success in capturing new business, and extra personnel, financial and other administrative work, resulting from the move to Agency status itself. Although further delegations of responsibility are in prospect, investment in automation and efficiencies produced by market testing will ensure steady staff reductions in the future. In all personnel issues there was full consultation with the Trade Unions and I am committed to equality of opportunity.

Staff losses, other than through normal retirement, were at an unusually low level and no serious recruitment problems were experienced. The total number of staff recruited was 168, of whom 63 were graduates.

Training

Training continued to be accorded a high priority as the majority of new entrants have no formal qualifications or professional skills in meteorology: most graduate entrants have degrees in mathematics or physics. The Office College provided 26 different types of courses and raised substantial revenue from overseas students. The appointment of a Management Training Officer at a senior level reflected the increased attention being given to management and developmental training. An Academic Audit was conducted by a Canadian practitioner with the cooperation of the Atmospheric Environment Service of Canada.

Management Development

As part of the move towards improved performance management, fully open staff reporting was introduced and a new Personal Review form is being developed to match the particular needs of the Office. The careers of non-scientists, previously on loan from our parent Department are now managed by the Office. A new computer system has been purchased to maintain all staff records.

A review of pay and grading was also initiated with the support of external consultants. The review aims to lead to a pay and grading scheme optimized for the Office. Pay will be linked closely to objectively determined job weight and performance. For this purpose every job in the Office is being evaluated.

Market Testing

Historically the Office has taken a pragmatic approach to the use of outside specialists and has used contractors for tasks which can be achieved more effectively than the equivalent internal operation, or to cover gaps in the expertise or strength of staff available. The current value of contracted-out services is about £8 million per annum, covering operational commitments (e.g. Ocean Weather Ship), computing, site maintenance and site services.

In order to gauge the possibilities for further efficiencies a scoping study was undertaken. As a result an internal Market Testing Team has been set up under a senior manager to develop an overall strategy which tests non-core functions whilst taking account of the likely impact on core functions, and the long-term health of the Office, in terms of the retention of sufficient depth of manpower with the requisite knowledge and experience.

Honours and Awards

Honours

The following appointments were made.

Queen's Birthday Honours List:

Dr F.B. Smith, Expert on atmospheric pollution and dispersion	OBE
Mr K.W. Bryar, Voluntary Observer	BEM
Mr R.W. Rogers, Voluntary Observer	BEM

New Year Honours List:

Mr H.F. Middleton, Voluntary Observer	BEM
Mr S. Webster, former Voluntary Observer	BEM

Awards

The 1992 Professor Dr Vilho Vaisala Award for the first WMO Intercomparison of Visibility Measurements:

Mr D.W. Jones
Dr D.J. Griggs
Mr W.R. Sparks
Mr M. Ouldrige

The L.G. Groves Memorial Prize for Meteorology (1991):

Mr C.K. Folland
Mr D.E. Parker

WMO Special Award for Outstanding Services to WMO:

Capt G.V. Mackie

Gulf Campaign Medals were awarded to:

Mr J. Watson
Mr C.G. Robins
Mr W.R. McQueen (MBE)
Mr T.G. Calvert
Mr A.E. Armstrong
Mr P.J. Wyatt
Mr D.L. Hopkinson

First Prize in the International TV Weather Forecasters' Festival:

Ms S. Lloyd

Team awards were received as follows:

The John Houghton Award for Forecasting Services:
Offshore Forecasting Team, Aberdeen

The Geographical Association Gold Award:
Metfax Education Service

External Appointments

Prof J.C.R. Hunt — President, Institute of Mathematics and its Applications

Dr P. Mason — President, Royal Meteorological Society

Mr R.J. Shearman — President, WMO Commission for Marine Meteorology

Performance against Key Business Plan Targets 1992/93

Our performance against our key Business Plan targets is set out below. The targets were published in last year's *Annual Report and Accounts*. The 1991 performance is shown in brackets.

■ *Achieve high standards of quality of service for each of the five major groupings of customer.*

Almost 80% of individual business area targets have been met with most of the others almost met. This is a solid technical achievement against demanding targets. A more detailed discussion of quality targets is given in the next section.

■ *Reduce Net Operating Costs to £38 million.*

The target was not met. Net Operating Costs were £42 million (£42 million) due largely to a shortfall in receipts, an underestimation of costs on votes disaggregated from MOD, and the timing of works bills.

■ *Increase efficiency by 3% through improvements in quality of service, increased service volumes and reduced costs.*

Rather than express increases in efficiency as a single number for the whole Office, they are reported for representative business areas as follows:

2% in Defence Services
3% in the CAA area
2% in the PMS area
4% in Central Forecasting
1% in Observing
over 30% in Telecommunications and Computing of which 2% was due to reductions in input costs and the remainder to output volume increases stemming from new technology.

■ *Achieve an increase in the uptake of meteorological services to £17.2 million as measured by cash revenue generated from commercial services to the public, industry and commerce (excluding CAA).*

Cash revenue was £16.1 million (£15.0 million), but invoiced revenue as shown in the commercial accounts for work done during the year was £16.9 million (£13.9 million).

■ *Achieve an increase to £6.0 million in the gross contribution of commercial services invoiced revenue to offsetting core costs and overheads.*

The gross contribution was £6.2 million (£5.9 million).

■ *Provide authoritative advice on climate change issues to Ministers and the general public.*

Advice was given throughout the year to Government on a wide range of issues, including specific input to the Intergovernmental Panel on Climate Change and preparations for the UN Earth Summit held in Rio de Janeiro in June. In particular two key reports were prepared: *The Hadley Centre Transient Climate Change Experiment*, summarizing our most up-to-date prediction of the climatic response to man-made greenhouse gases, and a report on the contribution of the UK science base to our understanding of the climate problem.

Performance against Subsidiary Quality Targets

The Business Plan for the Agency identifies a number of quality, timing and customer satisfaction targets in addition to its financial targets.

Overall performance against other targets has been very good with about 80% of individual targets being met and many others almost met.

- Basic weather forecasting accuracy is stable at around 84% as measured by the 24-hour forecast at 1755 on BBC Radio 4. This met the target set.
- Forecast accuracy for individual aspects of the weather tends to be higher. For example frosts are detected on 90% of occasions for forecasts under the OpenRoad service and 97% of British Gas forecasts were within 3 °C of the actual. These were close to or exceeded the targets.
- Warnings to Defence and Public customers for 6 to 12 hours ahead were successful on more than 80% of occasions, again exceeding the targets set. False alarms

occurred on about 15% of occasions, again better than the target set.

- The underlying strength of forecasts lies in the high quality of computer forecasts which are based on complex mathematical models of the atmosphere. These have shown a generally improving trend over the past few decades but this has slowed recently. The very stringent targets set in this area were almost met. Research and operational projects currently in hand are leading to greater accuracy that will be reported next year.
- Forecast accuracy is only part of the story. Data and forecasts need to be delivered to customers (both internal and external) to a very tight schedule, around the clock and on each day of the year. Very stringent timing targets were met on almost 100% of occasions.
- It is essential that forecasts and other weather services are delivered to customers in the form and to the time-scale that is suitable to them. Several customer satisfaction studies are now regularly undertaken and last year yielded indices between 84% and 93%, again exceeding those targets which had been set.

Planning for the Future

The Agency's internal five-year Corporate and one-year Business Plans have been approved by the Parliamentary Under Secretary of State for Defence. These do not foresee major changes in the business of the Agency but confirm the current aims of developing the commercial applications of meteorology, whilst maintaining the Agency as one of the top four national Met. Services in the World. The overall aim is to improve basic forecasting accuracy, extending the time horizon for useful forecasts and developing innovative techniques for presenting weather information. The increase in commercial sales is expected to continue and we aim to almost double the contribution that these make to the core costs of Agency. At the same time the dependency on public funding is expected to decline by some 12% and the total staff employed by the Agency is expected to reduce by 7% to 2351.

For next year, the Business Plan, 1993/94, contains plans for the development of the Office, including key operational and financial targets shown below. Despite stringent limits on finance the plans have been prepared by the Office on the assumption of meeting the agreed requirements of the main customers of the Office, because improvements in our efficiency will continue.

The objectives and targets for the Agency are shown below. New targets are identified in italic type and all financial targets have been uplifted for inflation.

Quality of Services

- *To achieve 80% of all Business Plan targets for customer satisfaction, forecast accuracy and timeliness.*
- *To produce a Charter Standard for public services by September 1993.*
- To provide timely and apt advice to Ministers and the general public on meteorology and climate.

Research

- *To progress the research programme in accordance with the 1993/94 Research Plan and to satisfy the requirements of internal and external customers to schedule and to agreed standards.*
- *To initiate a rolling programme of reviews of scientific and technical standards throughout the Agency.*

Efficiency

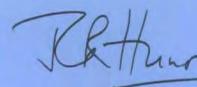
- To increase efficiency in business areas by 2.5% through improvements in quality and volume of service and reduced unit costs.
- To achieve Net Operating Costs of £46.7 million. This represents a 1% reduction on the 1992/93 budget.*

Commercial Activity

- To increase the uptake of commercial services (excluding CAA and DOE) as measured by invoiced sales of £19.1 million.
- To provide a gross contribution to core of £7.0 million from commercial services.

Management

- *To provide the output costs of all key activities using FAMIS.*



J.C.R. Hunt
Chief Executive
5 July 1993

* Net Operating Costs for the first time this year, include pension contributions and are not directly comparable with previous years.

The Met. Office

Accounts for the Year ended 31 March 1993

Foreword to the Accounts

The accounts for the Office have been prepared in accordance with the Direction given by the Treasury on 1 July 1993 in pursuance of section 5(1) of the Exchequer and Audit Departments Act 1921. The Direction is reproduced on pages 25 to 27 of the *Annual Report and Accounts*.

The Office was established as the Meteorological Department of the Board of Trade in 1854 and adopted its present title in 1867. Separate meteorological branches for each of the armed forces were set up in 1914 and the Office became part of the Air Ministry in 1926. This became part of the Ministry of Defence in 1964 and the Office became an Executive Agency on 2 April 1990 as part of the Governments "Next Steps" initiative.

The principal activities of the Office are set out on page 4 of the *Annual Report and Accounts*. There have been no significant changes in these activities during the year.

The operation of the Office is overseen by the Defence Meteorological Board and the Chief Executive is advised by the Meteorological Committee and its Research Sub-committee. The day to day business of the Office is managed by the Management Board. The members of these Boards and Committees is described on pages 7 to 9 of the Report.

The total expenditure of the Office in year ended 31 March 1993 was £142.0 million (1991/92 £129.9 million). A total of £50.2 million (1991/92 £44.2 million) was recovered from repayment customers and the balance, representing net expenditure as shown on the Net Expenditure Account, was £91.8 million (1991/92 £85.7 million). Total Assets less Current Liabilities at 31 March 1993 were £96.4 million (31 March 1992 £99.2 million).

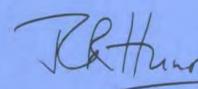
There were no significant changes in the fixed assets held by the Office during the year. It is considered that there is no significant difference between the open market value of land and its book value on an existing use basis. However, two

properties included in the value on the Balance Sheet, are surplus to requirements and expected to be disposed of by the Defence Lands Agent during 1993/94; planning considerations may result in the proceeds of individual properties varying from their book values but the overall total is expected to be broadly in line with the Balance Sheet value.

A programme of applied Research and Development is conducted in support of the operational services provided by the Agency. Additional Research and Development concerning man-made climate change is conducted under contract to the Department of the Environment.

The Office is committed to a policy of equality of opportunity. Disablement is not seen as a bar to recruitment or advancement, the test applied being the ability to do the job.

Formal consultation with staff is undertaken through the Meteorological Office Functional Whitley Committee, its sub-committees and local committees. The Office regards the health, safety and welfare of its employees (and others) as of paramount importance. A full time Health and Safety Officer is employed to ensure that all staff are fully aware of new and existing requirements and of their responsibilities. Employee involvement is through the Health and Safety sub-committee of the Functional Whitley Committee. In addition, the Trade Unions have been consulted on a range of special issues including changes in personnel management arrangements, the introduction of new pay and grading structures for the Office and the arrangements for market testing of Office activities. Staff are informed of new developments within the Office by circulars and *Mercury*, the house magazine.



J.C.R. Hunt
Chief Executive
5 July 1993

Net Expenditure Account for the year ended 31 March 1993

	Note	1992/93 £ million	1991/92 (Restated) £ million
INCOME			
Income from non-MOD customers	2	<u>50.2</u>	<u>44.2</u>
EXPENDITURE			
Staff costs	3	63.5	59.9
Accommodation charges	4	8.6	8.1
Other costs			
Operational activities Observations Central Forecasting Data Collection and Processing	5	37.9	33.3
Commercial Research and Administration	6	21.8	18.3
International Subscriptions	7	4.4	4.3
Interest charge on Capital		<u>5.8</u>	<u>6.0</u>
Total expenditure		<u>142.0</u>	<u>129.9</u>
NET EXPENDITURE (representing THE NET DEPARTMENTAL COST OF OUTPUT)		<u><u>91.8</u></u>	<u><u>85.7</u></u>

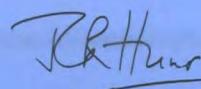
The notes on pages 19 to 24 form part of these accounts.

The movement on the General Reserve is set out at note 15 on page 24.

Balance Sheet as at 31 March 1993

	Note	31 March 1993		31 March 1992 (Restated)	
		£ million	£ million	£ million	£ million
FIXED ASSETS					
Intangible	8		40.6		42.8
Tangible	8		<u>50.4</u>		<u>49.4</u>
			91.0		92.2
CURRENT ASSETS					
Stocks	9	2.0		2.1	
Debtors	10	<u>9.2</u>		<u>7.7</u>	
		11.2		9.8	
CURRENT LIABILITIES					
Creditors amount falling due within one year	11		<u>(5.8)</u>		<u>(2.8)</u>
NET CURRENT ASSETS			<u>5.4</u>		<u>7.0</u>
TOTAL ASSETS LESS CURRENT LIABILITIES			<u>96.4</u>		<u>99.2</u>
FINANCED BY					
Revaluation Reserve	14		0.2		—
General Reserve	15		<u>96.2</u>		<u>99.2</u>
			<u>96.4</u>		<u>99.2</u>

The notes on pages 19 to 24 form part of these accounts.



J.C.R. Hunt
Chief Executive
5 July 1993

Cash Flow Statement for the year ended 31 March 1993

	1992/93	1991/92 (Restated)
	£ million	£ million
NET EXPENDITURE	91.8	85.7
(From the Net Expenditure Account)		
Adjustments for items not involving the movements of funds:		
Depreciation	(17.4)	(16.8)
Notional Charges		
Pension costs	(8.4)	(7.9)
Departmental costs	(2.5)	(2.3)
Contribution in lieu of rates	(1.2)	(1.2)
Interest charge on Capital	(5.8)	(6.0)
Profit/(loss) on disposals of fixed assets	(0.2)	(1.0)
Movements in net current assets:		
Stocks — (decrease)	(0.1)	(0.8)
Debtors — increase/(decrease)	0.4	(0.7)
Creditors — (increase)/decrease	<u>(3.3)</u>	<u>3.7</u>
NET CASH OUTFLOW FROM OPERATING ACTIVITIES	53.3	52.7
INVESTING ACTIVITIES		
Payments to acquire fixed assets	17.8	15.3
Proceeds from sale of fixed assets	<u>(0.2)</u>	—
NET CASH OUTFLOW BEFORE FINANCING	<u>70.9</u>	<u>68.0</u>
FINANCING		
Payments from Defence Appropriation Accounts	129.2	119.5
Receipts from Defence Appropriation Accounts	(55.6)	(47.4)
Adjustment for non-recoverable VAT	<u>(2.7)</u>	<u>(4.1)</u>
NET CASH INFLOW FROM FINANCING	<u>70.9</u>	<u>68.0</u>
INCREASE/DECREASE IN CASH	<u>NIL</u>	<u>NIL</u>

The notes on pages 19 to 24 form part of these accounts.

Notes to the Accounts

1. Accounting Policies

A. Basis of Accounting

The accounts for the Meteorological Office have been prepared in accordance with the accounts Direction issued by HM Treasury on 1 July 1993 pursuant to section 5(1) of the Exchequer and Audit Departments Act 1921 (see pages 25 to 27). The accounts follow the accruals concept of accounting and the historical cost convention, modified to include revaluations of Fixed Assets and Stocks as set out in the Notes E, F and G below. Subject only to compliance with the requirements set out in the accounts Direction, the accounts also

(i) comply with the accounting and disclosure requirements of the Companies Act 1985 insofar as they are consistent with the status of a Vote funded Agency of the Ministry of Defence (the Department).

(ii) comply with accounting standards issued or adopted by the Accounting Standards Board unless they are deemed to be inapplicable by the Treasury.

The prior year figures have been restated from the (unaudited) figures published in the Annual Report and Accounts 1991/92. These reflect the accounting policy on satellites now agreed and additional information identified during the preparation of the current year's accounts.

B. Value Added Tax

The Agency is not registered for Value Added Tax (VAT) and VAT collected and expended is accounted for centrally by the Department. Amounts included in the Net Expenditure Account and in the Balance Sheet are exclusive of VAT.

C. Income

Income comprises the invoiced value of services supplied to the Private sector, the wider Public Sector and other Government departments. The funding of the Agency by the Department is shown in the Cash Flow Statement. Income received under collaborative arrangements for the capital installation of weather rainfall radar systems is credited as deferred income within creditors until tangible fixed assets are acquired.

D. Notional Charges

(i) Pension Costs

Excepting overseas locally employed civilians, all staff are covered by the provisions of the Civil Service and armed Forces Pension Schemes. No payment is made by the Agency into the Consolidated Fund, but a percentage, currently 17%, of staff pay excluding certain allowances is included in staff costs within the Net Expenditure account to reflect the notional cost of this expenditure to the Agency.

(ii) Departmental Overhead Charges

Notional amounts are included in the Net Expenditure account for charge in respect of services provided from other areas of the Department. The amounts so charged are calculated to reflect the full cost of providing these services to the Agency and include payroll services, payment of bill, internal audit, Vote accounting and personnel management.

(iii) Interest Charge on capital

A notional charge for interest on capital is included in the Net Expenditure Account. This is calculated at 6% on the average value of total assets less current liabilities.

E. Tangible Fixed Assets and Depreciation

(i) Land and Buildings

(a) Where the Agency is the principal beneficial user of Departmental Estate, such estate is treated as an asset of the Agency although legal ownership rests with the Secretary of State for Defence.

(b) A valuation of the Departmental Estate assets of the Agency was carried out at 31 March 1992 by the Valuation Office in accordance with the Statements of Asset Valuation Practice and Guidance Notes issued by the Royal Institution of Chartered Surveyors. The Valuation Office updated their valuation to 31 March 1993 using suitable indices.

(c) All leasehold property is held under operating leases as defined by Statement of Standard Accounting Practice Number 21. Major enhancements are capitalised.

(ii) Plant and Equipment

(a) Plant and equipment, including computers, is capitalized where the useful life exceeds 5 years and the cost of acquisition and installation exceeds £4,300, excluding VAT.

(b) Certain meteorological equipment 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 annually using the Gross Domestic product Deflator Index.

(iii) Depreciation

Freehold land is not depreciated. Depreciation on buildings, mainframe computers, plant and equipment is calculated to write off the cost, or value, by equal instalments over the assets estimated useful lives. A residual value equal to one year's depreciation is retained. Asset lives are periodically reviewed for technological obsolescence.

<u>Asset Category</u>	<u>Estimated useful life</u>
Buildings	Not exceeding 50 years
Mainframe computers	7 years
Plant and equipment	Between 5 and 10 years

F. Intangible Assets

The Meteorological Office is a member of EUMETSAT and, as such, contributes to the cost of its satellite programmes. The Office benefits from the data and services resulting from these programmes. Expenditure on individual programmes is capitalised and revalued annually using the Aerospace Combined Input Cost Index. The value of each programme is depreciated from the date that the programme becomes operational over its expected life (currently of the order of ten years) using the straight line method.

G. Stocks

Stocks are valued at the lower of cost, or net current replacement cost if materially different, and net realizable value.

H. Research and Development

All research and development expenditure incurred during the year is charged to the Net Expenditure Account.

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:

	<u>1992/93</u>	<u>1991/92</u>
	<u>£ million</u>	<u>£ million</u>
Civil Aviation Authority	26.5	24.6
Department of the Environment	6.8	5.7
Commercial and other		
Repayment Services	<u>16.9</u>	<u>13.9</u>
	<u>50.2</u>	<u>44.2</u>

Income from other Government Departments is included within Commercial Services.

3. Staff

(i) The staff costs were:

	<u>1992/93</u>	<u>1991/92</u>
	<u>£ million</u>	<u>£ million</u>
Salaries, wages and allowances	51.3	48.5
Social security costs	3.8	3.5
Pension costs	<u>8.4</u>	<u>7.9</u>
	<u>63.5</u>	<u>59.9</u>

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

	1992/93	1991/92
Unified Grades 2-7	191	178
Other Grades:		
Scientific	1790	1804
Technical	165	153
Administrative and support	323	322
Locally employed civilians overseas	<u>39</u>	<u>42</u>
	<u>2508</u>	<u>2499</u>

There were 2526 staff employed at 31 March 1993 (31 March 1992, 2504 staff).

(iii) Professor J.C.R. Hunt, the Chief Executive received total emoluments, including pension contributions of £79,000 in 1992/93. In 1991/92 he received £19,000 after his appointment on 2 January 1992. His predecessor, Sir John Houghton received £61,000 in that year.

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

Grade	1992/93		1991/92	
	Standard Salary band £	No	Standard Salary Band £	No
3	51,272-59,280	1	49,300-57,000	1
4	44,390-49,790	2	42,724-44,390	3
5	36,019-47,921	9	34,667-39,402	9

(v) 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, contributions in lieu of rates and depreciation on buildings.

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.

6. Commercial, Research and Administration

(i) These costs represent equipment, materials and services supporting the commercial, research and administration activities, notional Departmental Overhead charges and a notional audit fee of £ 42,000.

(ii) Total costs of the Research and Development activities in the year were £14.8 million including staff costs from 3 above.

7. International Subscriptions

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

8. Fixed Assets

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

	Intangible		Tangible Plant and equipment, including computers	
	Fixed Assets	Land and buildings		Total
	£ million	£ million	£ million	£ million
Cost or valuation:				
At 1 April 1992	71.6	19.1	45.3	64.4
Additions	6.9	4.1	5.4	9.5
Disposals	–	–	(2.6)	(2.6)
Revaluation	<u>3.1</u>	<u>(2.1)</u>	<u>1.0</u>	<u>(1.1)</u>
At 31 March 1993	<u>81.6</u>	<u>21.1</u>	<u>49.1</u>	<u>70.2</u>
Depreciation:				
At 1 April 1992	28.8	0.4	14.6	15.0
Charged during year	10.9	0.7	5.8	6.5
Disposals	–	–	(2.2)	(2.2)
Revaluation	<u>1.3</u>	<u>–</u>	<u>0.5</u>	<u>0.5</u>
At 31 March 1993	<u>41.0</u>	<u>1.1</u>	<u>18.7</u>	<u>19.8</u>
Net Book Value:				
At 1 April 1992	42.8	18.7	30.7	49.4
At 31 March 1993	40.6	20.0	30.4	50.4

(ii) Freehold land with a book value of £8.2 million (31 March 1992 = £9.2 million) has not been depreciated.

(iii) Land and Buildings have been valued by the Valuation Office on the basis of open market values for existing use except, that specialised buildings have been valued on the basis of depreciated replacement cost.

9. Stocks

	1992/93 £ million	1991/92 £ million
Meteorological equipment	1.3	1.3
Reserve equipment	0.4	0.5
Consumable stores	<u>0.3</u>	<u>0.3</u>
Total	<u>2.0</u>	<u>2.1</u>

10. Debtors

	1992/93 £ million	1991/92 £ million
Amounts falling due within one year:		
Trade debtors	3.3	2.5
Prepayments for operating expenditure	<u>3.3</u>	<u>3.7</u>
	6.6	6.2
Prepayments for capital expenditure	<u>2.6</u>	<u>1.5</u>
Total	<u>9.2</u>	<u>7.7</u>

11. Creditors

	1992/93 £ million	1991/92 £ million
Amounts falling due with one year:		
Trade creditors	2.9	1.7
Deferred income and accruals for operating expenditure	<u>2.9</u>	<u>0.8</u>
	5.8	2.5
Deferred income for capital expenditure	<u>-</u>	<u>0.3</u>
Total	<u>5.8</u>	<u>2.8</u>

12. Capital Commitments

	1992/93 £ million	1991/92 £ million
Contracted	1.8	1.8
Authorised, but not contracted	<u>0.1</u>	<u>2.6</u>
Total	<u>1.9</u>	<u>4.4</u>

13. Operating Leases

(i) Annual commitments under operating leases are as follows:

	Land and Building £ million	Others £ million	Total £ million
Leases expiring within:			
Less than one year	–	–	–
One year to five years	0.1	4.9	5.0
Over five years	<u>1.9</u>	<u>–</u>	<u>1.9</u>
Total	<u>2.0</u>	<u>4.9</u>	<u>6.9</u>

(iii) The amount charged to the Net Expenditure Account in 1992/93 was £6.5 million.

14. Revaluation Reserve

(i) The Revaluation Reserve was set at zero on 1 April 1992 by order of the Treasury.

(ii) Movement in Year

	1992/93 £ million
Revaluation Reserve at 1 April 1992	–
Revaluation surplus on Intangible fixed assets	1.8
Revaluation deficit on Tangible fixed assets	<u>(1.6)</u>
Revaluation Reserve at 31 March 1993	<u>0.2</u>

15. General Reserve

(i) The General Reserve was set at £99.2 million as at 1 April 1992 representing Net Assets employed as at that date.

(ii) Movement in Year

	1992/93 £ million
General Reserve at 1 April	99.2
Net cash flow from Financing	70.9
Notional charges	<u>17.9</u>
	188.0
Less Net Expenditure	<u>(91.8)</u>
General Reserve as 31 March	<u>96.2</u>

16. Contingent Liabilities

A contingent liability exists in the event of any damage arising from the improper use of a computer leased by the Office. No realistic estimate of any financial effect can be made as the risk is considered low.

Certificate and Report of the Comptroller and Auditor General

I certify that I have examined the financial statements on pages 16 to 24 in accordance with the Exchequer and Audit Departments Act 1921 and the National Audit Office auditing standards.

In my opinion the financial statements give a true and fair view of the state of affairs of the Meteorological Office Executive Agency at 31 March 1993 and of its net expenditure and cash flows for the year then ended and have been properly prepared in accordance with the Exchequer and Audit Departments Act 1921 and Directions made thereunder by the Treasury.

I have no observations to make on these financial statements.

John Bourn
Comptroller and Auditor General

National Audit Office
7 July 1993

Accounts Direction given by the Treasury

The Treasury, in pursuance of section 5(1) of the Exchequer and Audit Departments act 1921, hereby gives the following Direction.

1. The statement of accounts which it is the duty of the Meteorological Office to prepare in respect of the financial year ended 31 March 1993 and in respect of any subsequent financial year shall comprise;

- (a) a foreword;
- (b) a net expenditure account;
- (c) a balance sheet;
- (d) a cash flow statement; and
- (e) (1993/94 onwards) a statement of recognized gains and losses;

including in each case such notes as may be necessary for the purposes referred to in the following paragraphs.

2. The Meteorological Office shall observe all relevant accounting and disclosure requirement given in "Government Accounting" and in the Treasury booklet "Trading Accounts; a Guide for Government Departments and Non-Departmental Public Bodies" (the "Trading Accounts booklet") as amended or augmented from time to time.

3. The statement of accounts referred to above shall give a true and fair view of the income and expenditure, state of affairs and cash flow of the Meteorological Office. Subject to the foregoing requirement, the statement of accounts shall also, without limiting the information given and as described in Schedule 1 of this Direction, meet:

- (a) the accounting and disclosure requirements of the Companies Act;
- (b) best commercial accounting practice including accounting standards issued or adopted by the

Accounting Standards Board, with the exception of the requirement contained in FRS 3 for the inclusion of a note showing historical cost profits and losses;

- (c) any disclosure and accounting requirements which the Treasury may issue from time to time in respect of accounts which are required to give a true and fair view; and
- (d) any additional disclosure requirements contained in "The Fees and Charges Guide", in particular those relating to the need for segmental information for different services provided,

insofar as these are appropriate to the Meteorological Office and are in force for the financial period for which the statement of accounts is to be prepared.

4. Additional disclosure requirements are set out in Schedule 2 of this Direction.

5. The net expenditure account and balance sheet shall be prepared under the historical cost convention modified by the inclusion of:

- (a) fixed assets at their value to the business by reference to current costs; and
- (b) stocks valued at the lower of cost, or net current replacement cost if materially different, and net realizable value.

Signed: T.J. Burr
Treasury Officer of Accounts
1 July 1993

Schedule 1

Application of the Companies Act's Requirements

1. The disclosure exemptions permitted by the Companies Act in force for the financial period for which the statement of accounts is to be prepared shall not apply to the Meteorological Office unless specifically approved by the Treasury.
2. The foreword shall contain the information required by the Companies Act to be disclosed in the Directors' Report, to the extent that such requirements are appropriate to the Meteorological Office.
3. The profit and loss formats prescribed in Schedule 4 of the Companies Act shall not apply to the Meteorological Office's net expenditure account which shall be in the form set out in the annex to this direction. Minor changes may be introduced subject to Treasury agreement.
4. In preparing its balance sheet, the Meteorological Office shall adopt format 1 prescribed in Schedule 4 to the Companies Act to the extent that such requirements are appropriate to the Meteorological Office. Regard should be had to the examples in Annex C of the Trading Accounts booklet, in particular the need to strike the balance sheet totals at "Total Assets less Current Liabilities".
5. The foreword and balance sheet shall be signed and dated by the Chief Executive.
6. The Meteorological Office prepares its accounts under the modified historical cost convention, but is exempted from providing the additional information required by paragraph 33(3) of Schedule 4 to the Companies Act.

Schedule 2

Additional Disclosure Requirements

1. The foreword shall state that the accounts have been prepared in accordance with a direction given by the Treasury in pursuance of section 5(1) of the Exchequer and Audit Departments Act 1921.
2. The foreword shall include a brief history of the Meteorological Office and its statutory background. Regard should be had to Annexes B and C of the Trading Accounts booklet.
3. The notes to the accounts shall include details of key corporate financial targets set by MoD the Secretary of State for Defence for the year being reported on and performance achieved against those targets (when targets based on full cost accrual accounts have been set).
4. The Accounts Direction (but not the annex) shall be reproduced as an appendix to the accounts.

The Met. Office publishes its annual reports in three booklets, the *Annual Review*, *Annual Report and Accounts*, and *Scientific and Technical Review*.



Annual Review

1992/93

The Annual Review gives a summary of all the Met. Office's activities during the year. It covers new developments in public services, defence and commercial services and gives a résumé of research and development work, as well as providing a focus on our international interests and quality procedures. Its broad view of the Met. Office is of particular interest to those who do not specialize in meteorological science, but who have an interest in the use of weather intelligence.



Annual Report and Accounts

1992/93

Full details of the Met. Office's accounts are provided in the Annual Report and Accounts, which gives the Income and Expenditure Accounts, accounting procedures, and performance against targets, as required by the Treasury as a result of the Met. Office's status as an executive agency.



Scientific and Technical Review

1992/93

The Scientific and Technical Review gives a more-detailed account of the research work currently being carried out at the Met. Office. Among the many topics it covers are forecasting research, numerical models, use of new satellite data, plume dispersal, etc. It describes progress being made in climate change research at the Hadley Centre and the Met. Office's contribution to the IPCC. The Scientific and Technical Review contains a detailed bibliography of papers published by scientists at the Met. Office over the last year, and is a valuable guide for everyone engaged in research into physical and numerical processes in weather and climate.

You can speak to our Enquiries Officer on the number below, or leave a recorded message out of normal office hours.

You can also ask for leaflets giving details of all our services, including where you can hear the latest forecast on radio or television, by phoning your local weather centre (listed on the back cover) or the Enquiries Office.

You can find details of our public services in programme magazines, newspapers and telephone directories under "Weather". We want to hear your views, and learn whether you are satisfied with the services we provide.

Copies of the Met. Office's *Annual Review*, and the *Scientific and Technical Review* for 1992/3 are available free of charge from the Enquiries Officer, The Met. Office, London Road, Bracknell, Berkshire RG12 2SZ. Telephone 0344 854455

Copies of the Report and Accounts are also available from HMSO.

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