



The Met.Office

Annual Report and Accounts 1998/99

Excelling *in weather services*



The Met. Office

Annual Report and Accounts 1998/99

An Executive Agency of the Ministry
of Defence

Presented to Parliament in pursuance
of section 4(6) of the Government
Trading Funds Act 1973.

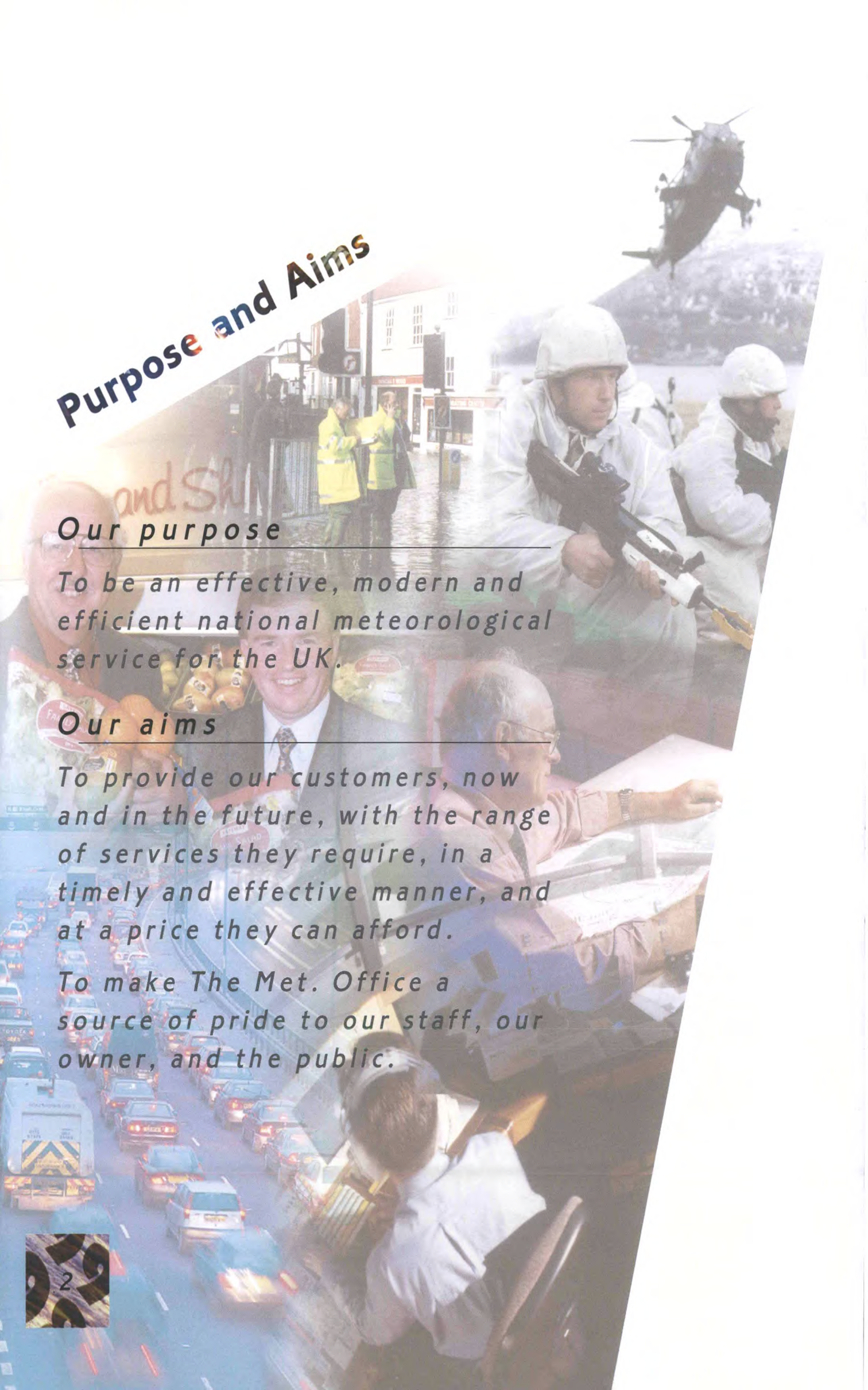
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Excelling *in weather services*



Purpose and Aims

Our purpose

To be an effective, modern and efficient national meteorological service for the UK.

Our aims

To provide our customers, now and in the future, with the range of services they require, in a timely and effective manner, and at a price they can afford.

To make The Met. Office a source of pride to our staff, our owner, and the public.

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*George Underwood, Senior Forecaster,
produces the last hand-drawn North Atlantic
chart on 29 March 1999 — the end of an era.*

Introduction



Introduction

About this Report

This Report provides the Ministry of Defence (MoD), as our owner, Parliament, our customers and staff with a review of The Met. Office's main activities in 1998/99 and of our performance against key targets. We hope that it will also be of interest to members of the public.

This year's Report is in four main sections. Following *Performance*, the section on *Progress with our Core programme* describes the latest developments in our basic observing, computing, telecommunications and forecasting systems. *Delivering and improving our services* covers some of the major changes in our services while *Corporate affairs* deals with our staff, management, and financial systems. The *Accounts and financial information* section (pages 38 to 64) reports on the results for the year ended 31 March 1999.

Met. Office headquarters
at Bracknell, Berkshire



Readers might like to know that we also produce a sister publication to the *Annual Report and Accounts 1998/99* called the *Scientific and Technical Review 1998/99* — aimed at the worldwide scientific community — which deals in much greater depth with our scientific and technical programmes, and the progress we have made during the year. To obtain a copy, please contact our Communications Branch — see inside back cover for details.

About The Met. Office

The Met. Office was formed in 1854 as a small department within the Board of Trade to provide meteorological and sea current information to mariners. Early this century, The Met. Office started responding to new demands for weather services, most importantly in the field of aviation. This led to The Met. Office being taken under the wing of the Air Ministry just after the First World War, later moving into the Ministry of Defence.

The Met. Office became an Executive Agency in April 1990, and started operating as a trading fund on 1 April 1996.

The Met. Office employs around 2,200 people, over 70% of them scientists. Some 900 staff are spread across more than 80 locations around the UK and overseas, observing the weather and providing forecast services to our customers. The remainder work in our main offices at Bracknell, Berkshire, in a wide range of activities including forecasting, research, the development of IT and observational systems, and central support functions such as finance and human resources. We also have a small number of research facilities elsewhere in the UK.



The management team

Management of The Met. Office is effected through the Met. Office Board and the Executive Committee. The Met. Office Board is responsible for the strategic management of the agency and for ensuring that overall customer requirements are met. The Executive Committee deals with day-to-day operational issues, thus making a clear distinction between the two roles.

Alan Douglas joined the Board as Managing Director Commercial from January 1999, a new post linked to the creation of a new Commercial Division (see pages 29 and 36). David Roberts left the post of Finance Director at the end of February 1999 when his contract ended; Philip Mabe, previously Corporate Financial Controller for the MoD, joined us on 1 March 1999.

Board members at 31 March 1999 were:

- Peter Ewins**, Chief Executive
- Paul Mason**, Chief Scientist
- Colin Flood**, Forecasting Director
- Jim Caughey**, Technical Director
- Roger Hunt**, Business Director
- Alan Douglas**, Managing Director Commercial
- Philip Mabe**, Finance Director
- Ann Tourle**, Company Secretary

The Executive Committee comprises the Board members plus **John Ponting**, Director IT, **Dave Carson**, Director Numerical Weather Prediction, and **Alan Thorpe**, Director Climate Research.

The Met. Office Board

Chief Executive
Chairman

Chief Scientist
Numerical weather prediction, climate research, ocean applications and international relations

Forecasting Director
Forecast production and service provision

Technical Director
Observations, space programme, information technology and telecommunications

Business Director
Core, Defence, civil aviation and Civil Department services

Managing Director Commercial
Services to commerce and industry

Finance Director
Finance, risk management, property and office services

Company Secretary
Human resources, corporate planning, communications, health, safety and security



Corporate Governance

In accordance with the Code of Best Practice published by the Cadbury Committee on Financial Aspects of Corporate Governance, The Met. Office has established an audit committee to ensure we have in place the appropriate financial risk management procedures. We also have a remuneration committee under the auspices of the Defence Meteorological Board to consider executive and 'incentivised' remuneration matters in relation to The Met. Office.

The Defence Meteorological Board

The Defence Meteorological Board advises the Secretary of State for Defence, owner of The Met. Office. The Board comprises members with relevant scientific and commercial experience, and normally meets four times a year. Members of the Defence Meteorological Board at 31 March 1999 were:

Mr RT Jackling CB CBE, Second Permanent Under Secretary, MoD

Prof Sir David Davies CBE, Chief Scientific Adviser, MoD

Mr JM Legge CMG, Deputy Under Secretary (Civilian Management), MoD

Maj Gen GA Ewer CBE, Assistant Chief Defence Staff (Logistics), MoD

Sir Brian Fender CMG, Chief Executive, Higher Education Funding Council for England

Mr CM Brendish CBE, Chairman, Admiral plc

Mr PD Ewins, Chief Executive, The Met. Office

The Meteorological Committee

The Meteorological Committee advises The Met. Office's Chief Executive on broad aspects of Met. Office policy. The committee, meeting twice a year, also reviews aspects of The Met. Office's programmes and activities with particular emphasis on meeting customer needs.

Members are appointed by the Secretary of State for Defence for a period of four years. Members of the Meteorological Committee at 31 March 1999 were:

Baroness Platt of Writtle CBE DL

Mr DA Davis

Mr D Filkin

Ms A Gammidge

Prof BJ Hoskins CBE

Mr JNM May

Ex Officio

Mr PD Ewins

Mr KS Groves
(replaced Dr DA Bennetts)

Mr JM Legge CMG

Mr IR Hall

Cdre S Auty, RN (replaced Cdre RMV Willis, RN)



Glossary of terms

Business Excellence Model

Developed by leading European companies to assess why some companies are more successful than others, we are implementing this model as part of *Improving our Performance*.

Business Process Improvement

Another element of *Improving our Performance*, this methodology determines which business processes should be in place in order to realise particular business objectives, and compares these with existing processes.

FOAM — Forecasting Ocean–Atmosphere Model

Using actual measurements of ocean temperature, FOAM produces real-time analyses and forecasts of ocean temperature, salinity and currents.

Horace

A Met. Office-designed, workstation-based system used by forecasters for the visualisation, product creation, and dissemination of meteorological data.

Improving our Performance

An Office-wide programme aimed at improving the way we carry out five aspects of our business — staff development and training, project and programme management, processes and procedures, management information, and internal communications.

MIST

A self-briefing interface developed jointly by The Met. Office and Matra Marconi Space, which supplies meteorological information directly to customers.

MMU — Mobile Meteorological Unit

Our team of Met. Office weather forecasters, able to locate anywhere in the world to provide local forecasts and advice to our Defence customers.

NHC — National Hurricane Center, Miami, Florida

The NHC prepares and distributes information about expected hurricane intensities and tracks to governments and the general public of countries affected. It uses forecasting input from a number of centres of meteorology, including The Met. Office.

NWP — numerical weather prediction

Our primary method of weather forecasting — by solving a set of equations, a computer model of the atmosphere shows how weather conditions will change over time.

OpenRoad

Our system for predicting road surface conditions by analysing data from a network of road sensors.

Polar system (EPS) programme

A programme of launches of polar-orbiting satellites — those that orbit the earth, passing over the poles — controlled by EUMETSAT (the European organisation for the exploitation of meteorological satellites).

Project 2000

Project 2000 is The Met. Office's programme of work to tackle the year 2000 problem.

Upper-air observations

Weather observations, taken at various heights above ground by weather balloons and aircraft, for use in our forecast models.

WMO — World Meteorological Organization

Comprising 185 States and Territories, WMO is a specialised agency of the United Nations encompassing the field of meteorology.



BBC weatherman Michael Fish and Safeway's Director of Supply Chain Operations Jim Drummond. The Met. Office enables Safeway to increase availability of weather-linked products and promotions according to the latest forecasts.

Performance

and Shine



© Courtesy of Safeway Stores plc

Performance

Highlights of 1998/99

Five out of six key performance targets met. (See page 14)

- ◆ Financial targets well exceeded.
- ◆ Service quality and efficiency substantially improved.
- ◆ UK Numerical Weather Prediction (NWP) Index target exceeded.
- ◆ Global NWP Index improved but target narrowly missed.

Successful progress with Project 2000, including interim compliance certification for 88 projects in December 1998. (See page 25)

Go-ahead given for the EUMETSAT polar system, September 1998, securing future satellite observations. (See page 22)

Proposals for a new Commercial Division, to sharpen our business focus, agreed in July 1998 and implemented from 1 April 1999. (See pages 29 and 36)

Memorandum of understanding signed with the Environment Agency, guaranteeing future joint funding of the UK weather radar network. (See page 23)

Scientific and technical support for Ministers at the UN Convention on Climate Change, Conference of Parties, held in Buenos Aires in October 1998. (See page 31)

Rapid response to MoD requirement to support Operation Desert Fox, December 1998, and acknowledged success in ongoing on-the-spot forecasting support for NATO operations. (See page 26)

Commercial and public web site access growing by 100% year-on-year, with average monthly access running at over one million pages since July 1998; site redesigned and updated in March 1999. (See page 30)

Excellent forecasts for the 1998 Boxing Day storm, providing timely and valuable advice to all our customers. (See page 23)

Employee Attitude Survey carried out, and recommendations implemented from Summer 1998. (See page 33)



Chief Executive's review

I am pleased to report that 1998/99 has been another successful year for The Met. Office. We exceeded our financial performance targets, as declared in last year's Report, by a significant margin and substantially improved our service quality and efficiency. Although we encountered some early problems, we also improved our UK Numerical Weather Prediction (NWP) Index — a measure of our underlying forecasting accuracy for the UK — by four percentage points, again well exceeding our target. The one disappointment was our failure to meet the global NWP target. In spite of substantial in-year effort, including the targeting of additional scientific effort, we improved the index by only two percentage points, missing our target by one percentage point. However, the first few months of the current year have seen excellent progress, and I am optimistic that we shall achieve our target this year.

Customer focus

1998/99 also saw a greater focus on our customers' needs, especially our public sector customers. We have developed a closer and, I believe, more open relationship with our Core customers, and we have welcomed a new customer to our Core Customer Group — the Department for Media, Leisure and Sport (DMLS), through the BBC, have taken responsibility from the MoD for national media forecasts. Also, the Department for Education and Employment (DfEE) has assumed responsibility from the MoD for enquiries and services for education.

*Peter Ewins, Chief Executive, briefing
visitors to a UK Simulation Advisory
Group meeting*



We are also particularly conscious of the increased financial stringency imposed on our Core customers over several years, with no respite in prospect. We share their concern about the potential loss in quality of service on behalf of the public they serve — a concern also voiced throughout the developed and developing world, and one which has attracted the attention of the World Meteorological Organization at its Congress in May this year. While we have been able to reduce the cost of the Core programme in real terms in each of the three years as a trading fund, efficiency gains cannot be sustained indefinitely. Without some stability in Core programme funding, especially to meet the UK's international obligations, it will not be possible to sustain the current programme. More importantly, future potential improvements in weather forecasting accuracy and service delivery may not be realised, and the UK will be in danger of losing its world-class position in meteorology and climatology. We are currently working with our Core customers to find a solution to this apparently intractable problem.

With regard to our direct services to the public sector, we have been busy meeting increased demands for our services. Internationally, these range from increased support to our Armed Services in the various trouble spots around the world to advice to our government in their discussions and negotiations on global warming. Nationally, they include developing relationships with the Environment Agency, particularly in the areas of



heavy rain and flood warnings in the light of the flooding at Easter 1998, and working closely with National Air Traffic Services (NATS) — the UK meteorological authority for aviation — as they move from public status to that of a private/public partnership.

Commercial emphasis

In July 1998, following a major internal review of our business management and service delivery, we decided to create a financially separate Commercial Division which would be able to concentrate on our services to commerce, industry and the private sector generally. This will help us to focus on the special needs of the sector while building on the strong position of The Met. Office as market leader in weather services. It will also enable us to demonstrate publicly that we are competing in this important market on equal terms with private service providers, without cross-subsidy from our public sector business. At the same time, it will help sharpen our internal services and drive further efficiency improvements, to the benefit of both public and private sector customers alike. The new Commercial Division came into being on 1 April this year.

Investing for growth

Over many decades The Met. Office has won an enviable international reputation for excellence in meteorology and, more recently, for the quality of service and value for money it provides to its customers. But such a reputation must not be taken for granted, and needs to be continuously reinforced through a strong research and development

(R&D) programme, the application of new technology and, above all, the training and development of our staff. The past year has seen substantial investment in all three areas. We have, for example, increased our R&D in automation and NWP, and have supported this work with the introduction of our new Cray T3E supercomputer. By the end of the current year we expect to have commissioned a second T3E, greatly expanding both our NWP and climate research and prediction capability. We have also begun a new investment programme of £5 million over five years aimed at expanding our product range and improving our services to customers.

Commitment to staff

At the same time we have continued our substantial programme of staff development and training, ranging from the professional training of forecasters to awareness and skills training in financial management, marketing and customer care. We have also improved our internal communications systems so that staff are better informed of our current plans and have the

Ed Gallagher, Chief Executive of the Environment Agency, and Peter Ewins sign a memorandum of understanding





The Cray T3E supercomputer came into use in 1998 — we expect to commission a second T3E by the end of 1999

opportunity to contribute to our longer-term strategy and plans. Through these and other related activities we hope to attain *Investors in People* accreditation by the end of the current year, symbolic of our commitment to our staff.

Looking ahead

Turning briefly to the future, the most immediate task for The Met. Office is to address the year 2000 problem — the ‘Millennium bug’ — and to ensure continuity of services to our customers, many of whom, like The Met. Office itself, are part of the National Infrastructure Forum. I am delighted to report that, with six months to go, our year 2000 project is in very good shape, and our confidence has been reinforced by the independent assessment carried out by the National Audit Office. Clearly, there is no room for complacency and we still have important work to complete, but I am confident of our ability to meet all the essential needs of our customers, in both the public and private sectors, over the New Year and during the other critical dates in September 1999 and February 2000.

While the impact of year 2000 issues will be over within the next nine months, we have started to tackle another issue that will be with us for some time and affect our future over several decades — the need for new accommodation. We came to Bracknell in 1961 and our main building is now coming to the end of its useful life. It is inefficient, with high maintenance costs, and is ill-suited to a business so dependent on information technology. To take The Met. Office successfully forward, we must harness the benefits that go

with a modern building and its associated infrastructure. We have therefore started our relocation project, with a view to moving to new premises in 2003/2004.

Finally, in my brief forward look, we need to be ready for — indeed, to lead in — the development of European meteorology and to take advantage of the new opportunities presented by the increasing concern about changes to our natural and man-made environments. Our scenario-planning project, aptly named *Odyssey*, has provided a valuable insight into the issues we face over the next 10 years as well as the opportunities, and we shall be using these extensively in the formulation of our strategic and business plans.

Building on our success

The Met. Office has enjoyed a successful year in 1998/99, a success shared by our customers, our staff and our owner. I hope, too, that the public is proud of The Met. Office as the UK’s national meteorological service. The challenge now, and one which I believe we are well placed to meet, is to build on that success to ensure we go on meeting our customers’ needs, to the very highest standards and at a price they can afford. In so doing, we shall continue to enjoy the support of our customers, our staff, our owner and the public alike.

Key performance indicators and targets

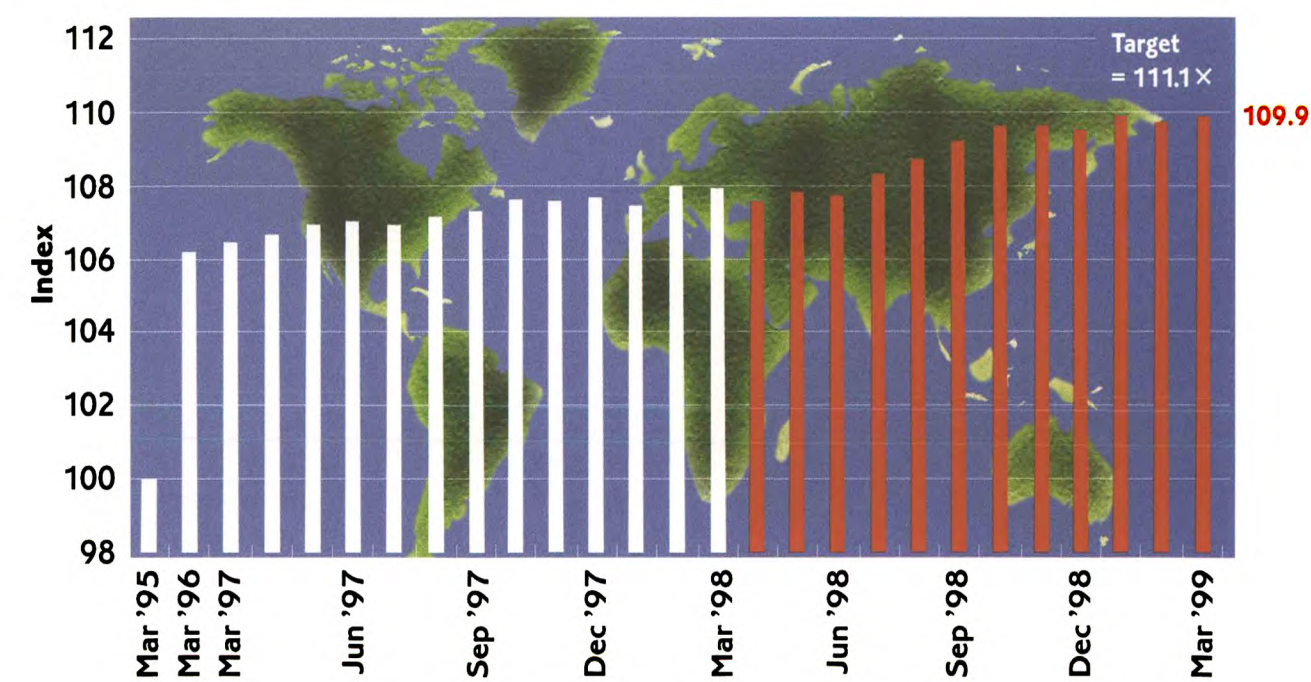
Continual improvement is crucial to maintaining our standing as a world-class meteorological service. Our ability to demonstrate and understand how well we are performing is vital if we are to identify where improvements can be made.

Our six key performance indicators (KPIs) – sometimes called key ministerial targets – focus upon those activities of greatest importance to our business. At the start of each financial year the Chief Executive and the Secretary of State for Defence agree targets for the indicators which are then announced in Parliament. These targets, which are intended to be both realistic and challenging, provide a benchmark against which our stakeholders can judge our performance. They also act to motivate our staff to deliver on our commitment to continually improve.

Delivering the UK's national meteorological service is a costly and complicated exercise. Modern weather forecasting depends upon a combination of high-powered computer processing and human expertise, and our KPIs reflect this. Forecast production is a harmony of

man and machine. From atmospheric and climate research, enhancements to computer models and improved methods of data processing, through to the skill and judgement of the forecasters themselves. As with any business, maintaining such capability depends upon sound financial

Global NWP Index



management. So, in addition to measuring our accuracy, service quality and efficiency, our KPIs also include measures of our financial performance.

Accuracy

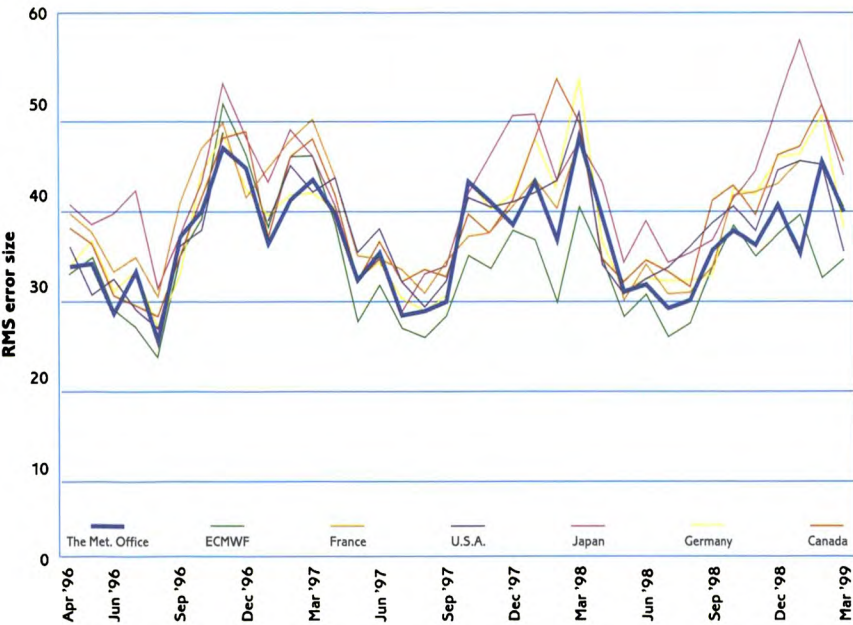
The accuracy of our published forecasts relies heavily upon the accuracy of our computerised NWP models. These models are run several times a day, every day, on both a global scale and, in greater detail, on a local scale for the UK.

Global NWP Index

This index measures the overall forecasting skill of our global NWP model compared with persistence (a forecast of ‘no change’ in the weather) for up to five days ahead worldwide. It takes account of the location, intensity, development and movement of weather patterns at the earth’s surface, as well as forecasts of winds at heights important for aircraft and forecasting operations.

Although we narrowly missed the target for the year, the index rose by more than in the previous year. Once initial problems with the model’s handling of the south pole region were overcome, the benefits of the higher resolution model implemented in January 1998 began to feed through. Enhancements introduced in late March 1999 resulted in the target level being achieved within two months of the year end. Comparison with other major meteorological services shows that we have maintained our position as a world-class weather forecasting centre.

International comparison of Met. Office performance — RMS error in forecasts of pressure at 500 hPa at T+72 over Europe (NB Smaller RMS error size represents better performance)

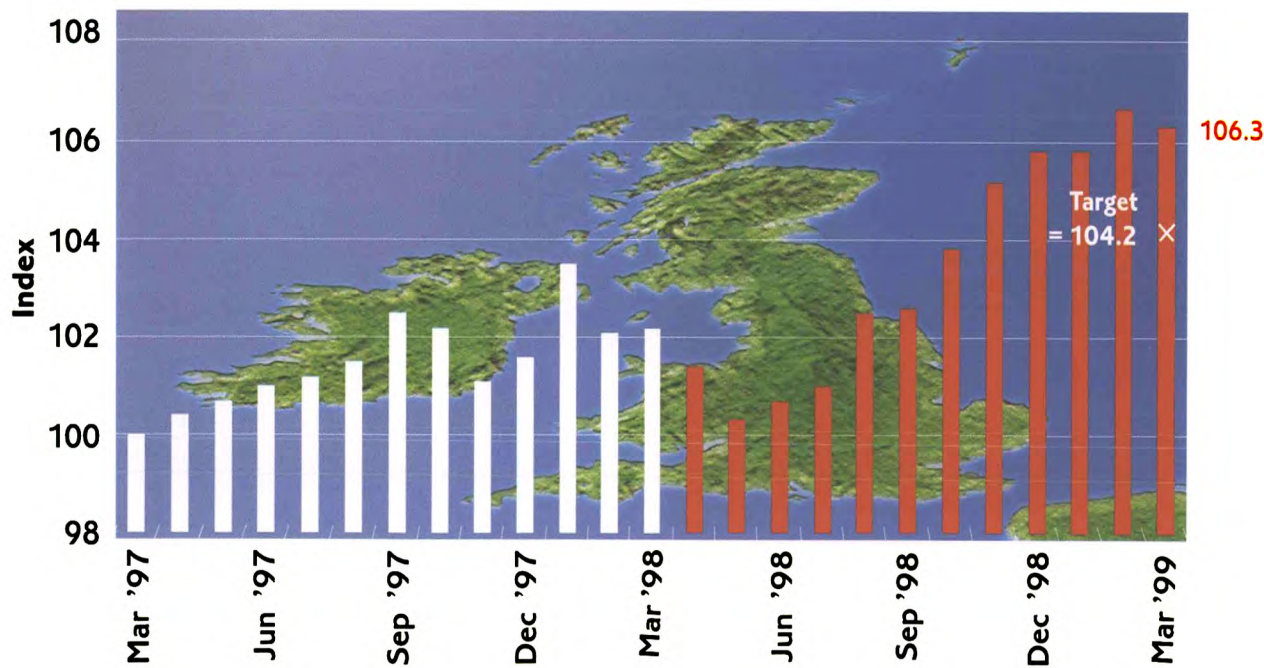


UK NWP Index

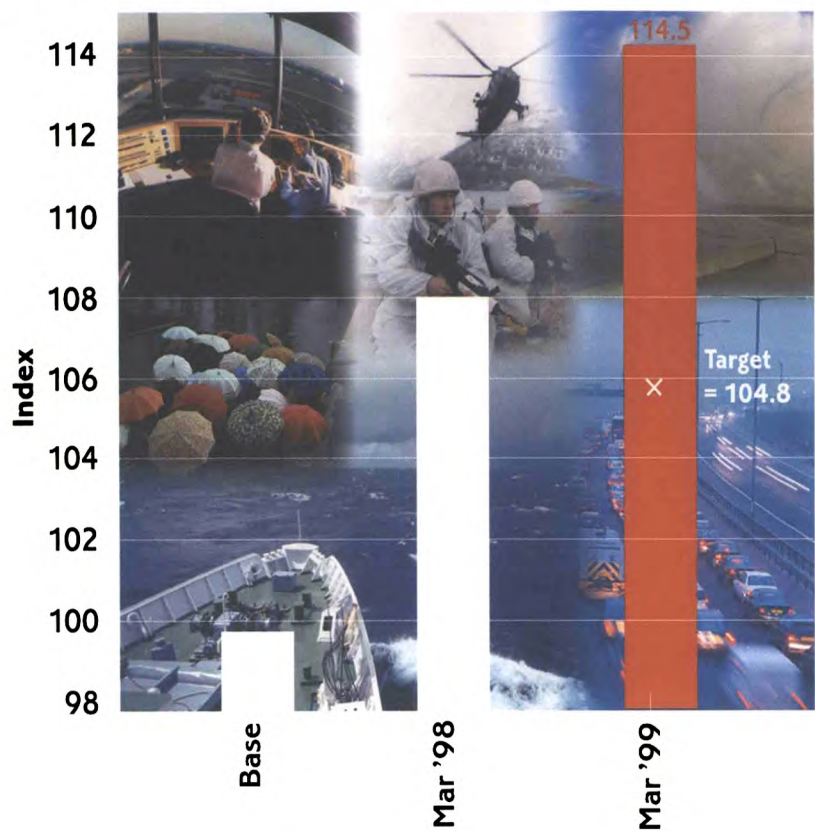
This index measures the overall forecasting skill of the UK NWP model compared with persistence for up to 24 hours ahead at specific sites in the UK. It takes account of wind, temperature and precipitation.

We achieved a significant improvement in performance, with a final result well above target, by implementing an enhanced version of the UK NWP model in June 1998.

UK NWP Index



Service Quality Index



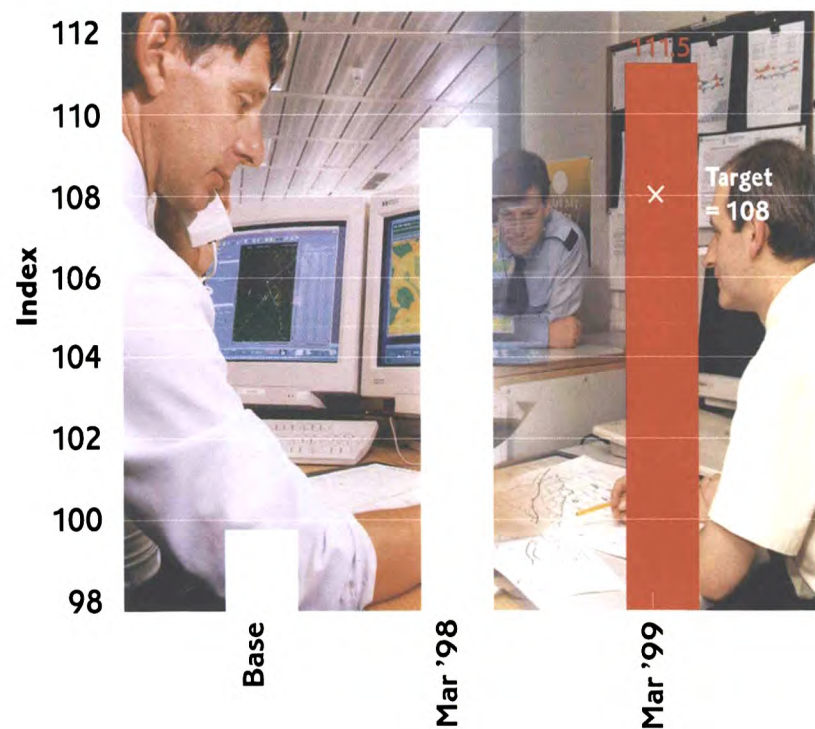
Service quality

Service Quality Index (SQL)

This index covers representative services and products across Defence, civil aviation, public and business users and the target level, agreed each year, is based on specific customer requirements. The areas covered in 1998/99 were forecasts for civil airfields, forecasts and weather warnings for Defence airfields, gale warnings for shipping, BBC Radio 4 forecasts at 1757 hours, predictions of icy roads for gritting operations, and storm tide alerts.

A good all-round performance resulted in a final score well above target. The storm tide alert service did particularly well, supported by very good performances in forecasts for Defence airfields and gale warnings for shipping.

Efficiency Index



Efficiency

Efficiency Index

Our Efficiency Index measures the change in outputs in relation to costs for two major areas of our activities — Core services, represented by the accuracy of NWP model output for the North Atlantic Ocean and Europe, and Defence services, represented by our service to Defence stations. The index is adjusted for inflation.

In 1998/99, overall efficiency continued to rise due to continued growth in outputs, particularly strong for Core. Inflation-adjusted costs have risen in year, due partly to a change in the anticipated life of the T3E supercomputer (see note 1(e), page 50).

Financial

Return on capital employed
(ROCE)

The ROCE measures the rate of return on average net assets — calculated on the current cost value of the assets — before certain agreed items are taken into account (see also note on page 45).

The yearly target to achieve a ROCE of at least 7% was set on a basis different from that now used to prepare the accounts. This is due to a change in the standard accounting practice on provisions introduced in September 1998 (see pages 36 and 39). Our performance on the original basis was well ahead of the target and we comfortably exceeded the two-year ROCE target of 11.6%.

Commercial activities
contribution

This indicator measures the financial contribution to Core and central services from commercially competed activities, excluding services to the Civil Aviation Authority and the climate research contract with the Department of the Environment, Transport and the Regions (DETR). This target was comfortably exceeded due to our success in achieving a higher level of sales than budgeted, at lower cost. The basis of this indicator was changed for 1998/99 and so the result is not comparable with those of prior years.

Targets for 1999/2000
(see table opposite)

The setting of appropriate targets for 1999/2000 has proved a very difficult exercise. The main reason for this is the potential for problems at the Millennium changeover (31 December 1999 to 1 January 2000). While we are confident that our own systems will continue to perform as

required (see page 25), our forecasting capability is clearly dependent upon the supply of weather observations from around the world. We are conscious that preparations for overcoming the so-called ‘Millennium bug’ in some parts of the world are not as advanced as we would like. We believe therefore that the loss of some data in the early months of the year 2000 is a distinct possibility.

As a direct result, some deterioration in our own forecasting performance is likely. The targets set for 1999/2000, which have been agreed with our owner and customers, reflect this likelihood. The Global NWP Index is at most risk and a target only marginally higher than this year’s level of achievement has been accepted as appropriate. For the UK NWP Index a target for the three-year period ending in March 2000 had been set previously; our recent good performance has given us the confidence to retain this target.

We are also entering the final year of a three-year target set for the Efficiency Index. This target has also been retained but is likely to prove extremely challenging due to the contribution to the index from global NWP forecasts.

Next year sees a change in the make-up of the Service Quality Index with the Radio 4 forecasts at 1757 hours being replaced as a measure of our public forecast service by the ‘UK Cities’ service available 24-hours a day on our Internet site. The target is based directly upon expressed customer requirements for the seven elements of the index.

And finally, the changes in standard accounting practice mentioned earlier have impacted upon the calculation of the ROCE in 1998/99. Recognising the need to invest in future growth, our target for 1999/2000 is notably lower than in previous years.



Performance against key ministerial targets

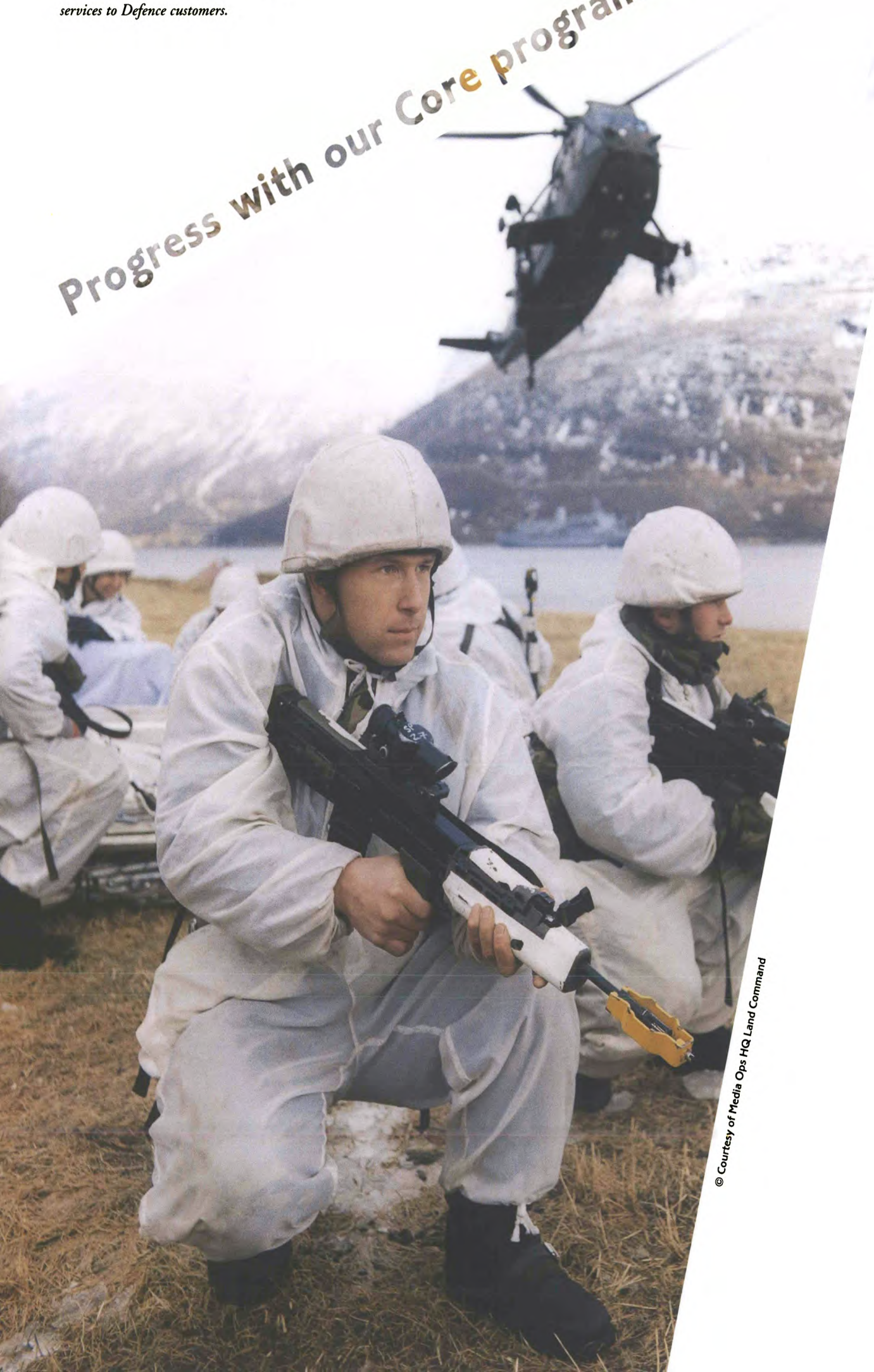
Key ministerial targets		Targets, outturns and achievements			Targets for
		1996/97	1997/98	1998/99	1999/2000
Efficiency					
Efficiency Index	Target	n/a	104.0	108.0	112.0‡
	Outturn	100.0	109.9	111.5	
Quality					
Global NWP Index	Target	n/a	108.0	111.1	110.2*
	Outturn	106.4	107.9	109.9	
UK NWP Index	Target	n/a	n/a	104.2	104.0‡
	Outturn	100.0	102.2	106.3	
Service Quality Index	Target	n/a	103.2	104.8	105.0
	Outturn	100.0	108.2	114.5	
Financial performance					
Return on capital employed (pre-FRS 12)§					n/a
	Target	7.0%	7.0%	7.0%	
	Outturn	20.7%	17.6%	10.0%	
Return on capital employed (post-FRS 12)§					2.9%
	Target	n/a	n/a	n/a	
	Outturn	n/a	20.6%	6.3%	
Commercial contribution					£2.2m
	Target	£3.3m	£3.0m	£1.1m†	
	Outturn	£5.3m	£6.3m	£1.8m	
<p>‡ The 1999/2000 targets for the UK NWP Index and the Efficiency Index are both three-year targets agreed at the end of 1996/97.</p> <p>* The agreed reduction in Global NWP target for 1999/2000 is in recognition of the risk to the quality of Met. Office forecasts arising from the potential impact of the so-called 'Millennium bug' on the collection and/or distribution of meteorological observations from any of our worldwide suppliers.</p> <p>§ The basis of calculating the return on capital employed (ROCE) changed during 1998/99 as a result of the introduction of FRS 12, a financial reporting standard that affected the accounting treatment of provisions. ROCE performance is therefore shown both pre-FRS 12, being the basis upon which the 1998/99 target was set, and post-FRS 12, being the basis which has to be used in the preparation of the Profit and Loss Account (see page 45). A two-year target for 1997/98 and 1998/99 to achieve an average ROCE of 11.6% was set at the beginning of 1997/98. On a pre-FRS 12 basis the average ROCE for these two years is 13.8% (13.5% post-FRS12).</p> <p>† The basis of the commercial contribution measure changed with effect from 1998/99. The results are therefore not directly comparable with those of previous years. The 1997/98 commercial contribution stated on a comparable basis with 1998/99 is £3.4 million.</p>					

The Comptroller and Auditor General has examined the statement of performance against key targets reported above and he is satisfied that the performance achieved is fairly stated.



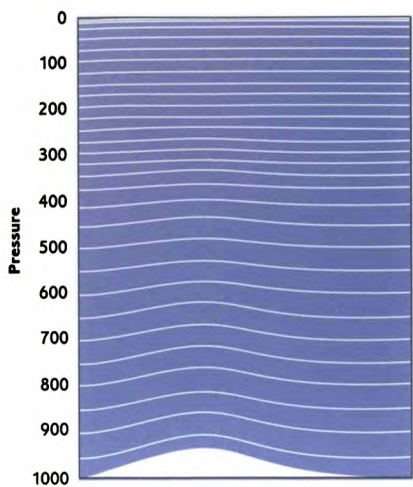
Met. Office staff provide a wide range of services to Defence customers.

Progress with our Core programme

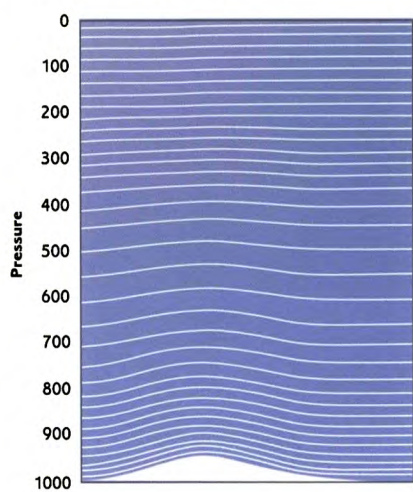


© Courtesy of Media Ops HQ Land Command

30 layers



Mesoscale 38 layers



Progress with our Core programme

The Core activities of The Met. Office underpin everything that we do. They include the gathering, exchange and storage of observational data from all over the globe, the operation of sophisticated NWP models, and the exploitation of model output by experienced staff in our National Meteorological Centre (NMC). We also support these day-to-day operational activities with Core research and development programmes aimed at delivering services with improved accuracy that better meet the customers' requirements and provide increasing value for money.

Improving our NWP models

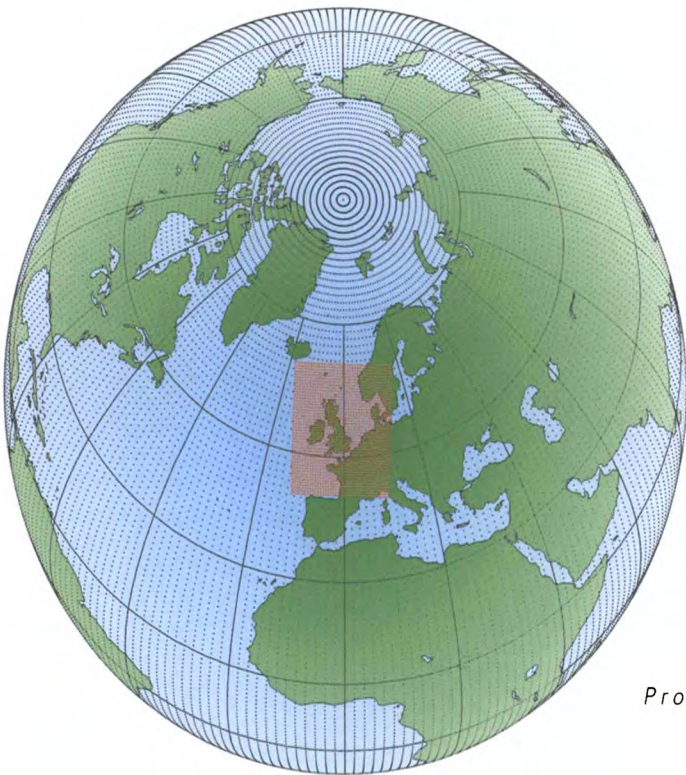
In April 1998, we stopped using our existing regional model and introduced a preliminary forecast from our global NWP model, providing better starting data for our most detailed 'UK' model. We also increased the area of coverage for this model and improved its resolution — a reduction in the distance between grid-points for which calculations are made. These improvements, combined with a new description of rain in the

Improvements to our NWP models include better representations of the boundary between the earth's surface and the atmosphere

model, resulted in better forecasts of wind and surface temperature. We have also included better representations of 'what goes on' at the boundary between the earth's surface and the atmosphere.

After five years of development, in March 1999 we introduced a new method of analysing the weather observations that are crucial for starting an NWP forecast. This mathematically complex new analysis method is more scientifically sound than the scheme it replaced, and offers considerable scope for further development, especially in the use of satellite data. We immediately used this feature by including for the first time data from new instruments flown on the most recently launched satellites. These developments have improved the measured performance of our global forecasts.

Global and local model grids for the core forecasting configurations of the NWP model on the T3E



Further upgrade to our Cray T3E supercomputer

During November 1997, we increased the size of our Cray T3E supercomputer from 696 processors to 880. Following work by the manufacturer to increase the level of service and availability during Spring 1998, we accepted the upgrade on 3 June 1998. These upgrades made it possible to introduce the changes to our NWP models mentioned above.



New satellite programme gets the go-ahead

Increasingly, we rely on satellites to provide weather observations and data, particularly over the oceans. In September 1998 EUMETSAT, the agency responsible for major European satellite activities, gave the go-ahead to their fifteen-year polar system (EPS) programme. The UK's share of the investment will initially be met by the MoD, The Met. Office taking responsibility for research and development costs. The EPS will ensure the continuity of vital polar satellite data well into the new Millennium.

At the same time, we signed an agreement with EUMETSAT to lead a five-year collaboration with the European Centre for Medium-range Weather Forecasts and the Dutch and French national meteorological services to develop satellite data-processing software for use in NWP. This will allow all members of EUMETSAT to share state-of-the-art software at significantly reduced cost.

Improved supply of observational data

During the year, we played a leading role in developing the European Composite Observing System (EUCOS), a EUMETNET (European Meteorological Network) programme devoted to establishing more cost-effective European observational networks through greater collaboration and co-operation. As part of a trial of EUCOS networks, we successfully negotiated

a three-year operational contract with British Airways to provide us with much needed upper-air observations. The new contract came into effect on 31 December 1998. The agreement means that we expect to have over 60 aircraft supplying fully automated weather reports. On average, we receive 160 wind and temperature reports daily from each operational aircraft and these are used directly in producing our NWP forecasts.

In February 1999, we took delivery of a completely automatic system for producing upper-air observations. We intend to use the system on a ship that will ply the Atlantic shipping lanes. When installed and operational in May 1999, we expect to receive data twice daily for approximately 20 days of each voyage.

Enhancement of our telecommunications networks

In December 1998, we completed the transfer of all telecommunications functions to our Weather Information Network and to other modern networks. This meant we could 'switch off' the previous, now obsolete, Civil Rented Data Network. As a result, the routing of data to and from remote sites is much more efficient, providing significant savings in network maintenance costs.

"...The Met. Office global model produced the best track forecasts of tropical cyclones for 1998 for the North Atlantic and east Pacific."

James M Gross

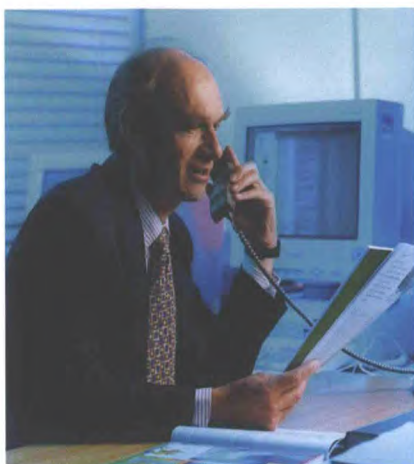
US National Hurricane Center, Miami

1998 National Hurricane Center forecast verification

Colin Flood, Forecasting Director, talks to Fraser Kaye, National Met. Centre Floor Manager, about the finer points of a customer forecast



Progress with our Core programme



Paul Mason, Chief Scientist, discusses issues arising from the WMO Congress in Geneva

Environment Agency agreement

Peter Ewins and Ed Gallagher, Chief Executives of The Met. Office and the Environment Agency respectively, signed a memorandum of understanding on 22 December 1998. The agreement between the two organisations covers the joint funding of the weather radar network in England and Wales for at least the next 10 years, effectively guaranteeing the supply of detailed rainfall information.

Successful forecasting

During the year, we provided successful forecasts of some very wet weather in the UK. Most notable were the predictions of high rainfall amounts that affected the Midlands at Easter 1998, Wales in October 1998 and North Yorkshire in March 1999. Although there was significant flooding on these three occasions, our forecasts provided valuable information to the Environment Agency in managing responses. Despite initial media criticism of our

rainfall forecasts at the time of the Easter 1998 flooding, the independent report prepared for the Environment Agency investigating the event acknowledged that our forecast guidance was good.

Our forecasts of the severe weather during the Christmas holiday period of 1998 were particularly successful. The worst of the weather occurred as predicted on Boxing Day, our NWP models providing excellent guidance about the track and severity of the depression. Early warnings issued to the emergency services, the media and to customers meant that all parties were best prepared to deal with events.

On the international scene, the skill of our NWP model in accurately predicting hurricane tracks was recognised by the US National Hurricane Center (NHC), Miami, in their report summarising the prediction of hurricane events in the 1998 season. We are delighted that our global model produced the best track forecasts of tropical cyclones for 1998 for the North Atlantic and eastern Pacific Oceans. Our forecasts were better than the National Centers for Environmental Prediction aviation model, the highly respected US Navy Operational Global Atmospheric Prediction System and the Geophysical Fluid Dynamics Laboratory models, and were as good as official NHC forecasts produced with the aid of Met. Office model output.

Jim Caughey, Technical Director, listens to comments from staff at RAF Waddington



The Met. Office provides services to civil aviation under major contracts with the Civil Aviation Authority and National Air Traffic Services.

Delivering and improving our services

© Courtesy of CAA

Delivering and improving our services

The Met. Office provides services through five business areas, each with a specialised customer focus – Defence, aviation, the Public Meteorological Service, commercial and climate research. During the year, we have developed the quality and range of our services; key aspects of these are given below.

Customer management centre

We have recognised for some time that we need a single first point of contact for our customers, delivering fast, effective access to services and products. We engaged consultants to investigate and advise us on the best way of addressing this and, since receiving and considering their report, we concluded that some form of customer management centre would best provide what is required. We expect to introduce an initial phase of this centre during the coming year.

Project 2000

On 18 February 1999, we issued a Year 2000 Compliance Statement marking completion of our interim year 2000 compliance review of the 88 systems we deemed critical to the provision of meteorological services. We carried out this vital review to assure all parties that we could continue to provide services to our customers through the year 2000 date change and beyond.

By completing this work, we have:

- ◆ checked for problems related to year 2000 issues and fixed those within our control;
- ◆ tested each critical system according to a plan;
- ◆ returned the system to operational use;
- ◆ put in place configuration and change control procedures to ensure ongoing compliance of the system;
- ◆ created risk registers and managed the risks;
- ◆ planned and resourced activities to ensure final certification of compliance of the critical systems by August 1999.

Project 2000 is on track and due to be completed on schedule.



Defence

Defence remains our largest customer group. While our greatest effort goes into supporting aviation and trials activity at fixed Royal Air Force, Army and Defence Evaluation and Research Agency locations, we remain immediately responsive to crisis requirements and the needs of the Royal Navy and NATO.

Forecasting in the field

Staff from our Mobile Met. Unit (MMU) worked with the Armed Forces in the Former Republic of Yugoslavia during much of 1998. More recently, they provided specific support for NATO activities in Iraq and Kosovo. Based in Incirlik (Turkey), Ali Al Salem (Kuwait), Sarajevo (Bosnia), Split (Croatia), Gioia del Colle (Italy) and in Macedonia, MMU staff have been able to provide valuable climate and weather forecast information to operational units.

In December 1998, we provided immediate additional support to the UK/US operations in Iraq. This involved setting up and running our detailed NWP and pollution dispersion models for the Persian Gulf and eastern Mediterranean area. Within one day of receiving the request, we had carried out these important tasks and set up the necessary communications link to the operations control centre at Permanent Joint HQ, Northwood, and to HQ Strike Command, High Wycombe. This required an enormous effort by staff drawn from many divisions.

International customers use Met. Office displays

During the year, international interest grew in our unique Horace meteorological display system. Discussions with the US Air Force in

Europe led to a contract to provide forecasters at the USAF base in Sembach, Germany, with Horace software and associated workstations. Although the European staff are completely satisfied with the system, we were unsuccessful in a bid to win a worldwide contract with the USAF.

Developed in parallel to Horace but with a different role, a specially tailored version of our Meteorological Information Self-briefing Terminal has also proved popular with the armed forces of NATO countries. Collaboration between our Commercial and Defence teams has resulted in sales of 70 systems during the year, including licences for the USAF in Europe. The systems are being used extensively by a number of nations in operations in the Balkans.



Roger Hunt, Business Director, conducts a Team Brief with representatives from Business Division

Tornado pilots were briefed by our Mobile Met. Unit prior to this sortie over southern Iraq



© Courtesy of D K Howells

Better working with MoD

Although our relationship with the Royal Air Force has been well established for over fifty years, other areas of the MoD are much less familiar with the services that we can provide to their benefit. To help ensure that the MoD benefits from better use of meteorology, we have carried out a major study of potential Defence requirements for meteorological services and R&D. The study suggests that relationships with the Defence Evaluation and Research Agency are key to future service developments, although there is also potential in some other fields, such as atmospheric simulation.

Progress with naval support systems

Our work for the Royal Navy this year has focused on providing a more detailed version of the operational Forecasting Ocean–Atmosphere Model (FOAM) to run within the overall global grid. This will allow naval forecasters to analyse and predict the detailed eddy and frontal structures in the ocean. These detailed models will also provide vital information for models of coastal areas affected by tides and the ocean shelf. We expect that a detailed version of FOAM and a computer model of the North West European Shelf will become operational during the year 2000.

Civil aviation

We provide services to civil aviation under major contracts with the Civil Aviation Authority (CAA) and National Air Traffic Services (NATS), the UK meteorological authority for aviation.

NATS 'goes private'

In June 1998, the government announced a proposal that NATS would change its status from being a purely public body to one of public/private partnership. This has necessitated considerable discussion with NATS and CAA to review the implications of the proposal, particularly the funding and provision of future services. In January 1999, based on the earlier discussions, we submitted a response to the DETR as part of their public consultation process.

CIVIL AVIATION AUTHORITY

working for excellence in aviation



© Courtesy of CAA

Review of meteorological services for aviation

Outside the arrangements to change their status, NATS carried out an extensive review of the UK's requirements for aeronautical meteorological services and how they should best be provided to users. We co-operated fully with the NATS review team, and both organisations are now exploring further opportunities for co-operation and the development of civil aviation services.



© Courtesy of British Airways Design and cartography by Alan Collinson Design UK

Public Meteorological Service (Civil Departments)

We provide the Public Meteorological Service (PMS) on behalf of the government for the 'public good'. The PMS comprises several specific services relating to the safety of life and protection of property, as well as the provision of general weather information. Our customers are agencies and government departments, mainly outside the MoD. For example, the National Severe Weather Warning Service (NSWWS) provides the public and emergency authorities with warnings of severe weather likely to present a danger to life or produce widespread disruption.

New 'owner' for public media services

After many months of negotiation, the Secretary of State for Culture, Media and Sport agreed in February 1999 to take on the responsibility for funding national media forecasts. Responsibility for these services had

remained with the MoD since we started operating as a trading fund. The Department of Culture, Media and Sport (DCMS) commissioned the BBC with their public service remit to be the direct customer for a range of scripts and broadcasts and, as a result, the BBC has become a full member of our Core Customer Group.

Working together on flood forecasting

Easter 1998 saw flooding over a large part of central UK despite largely good forecasts from The Met. Office — see *Successful forecasting*, page 23. Concern was such that the government commissioned an investigative report into all aspects of the incident. Our staff provided some input to the final report which was published in September 1998.

Since then, we have worked closely with staff from the Environment Agency to build on existing working relationships and to

The Met. Office provides in-flight weather information for all flights leaving the UK

improve working practices between the two organisations. Particular attention has been paid to the specific recommendations made within the report into the Easter floods. As a result the public can expect, amongst other improvements, better provision of flood warnings in future events of this kind. (See also *Environment Agency agreement* on page 23.)

Department for Education and Employment takes on education services



Clive Griffiths (DfEE, centre) with representatives of The Met. Office and QA Research; market research has helped us to improve services to schools and colleges

In a similar way to the DCMS taking responsibility for media forecasts, we are delighted that the Department for Education and Employment took over the role of customer for PMS educational services from the MoD in April 1998. A number of projects are under way to develop this important side of our business for the benefit of the educational community, including agreeing the scope of freely available information to go on the educational section of our Internet site. (See item on next page.)

Commercial

Our services to the commercial sector cover a wide range of activities in commerce and industry — from the provision of personally presented TV forecasts, or tailored forecasts to utility companies and supermarkets, to the delivery of past-weather data to engineering consultants. During the year, we decided to focus these commercial activities more rigorously and set in place plans to create a Commercial Division 'independent' from other parts of The Met. Office. This came into being in April 1999. (See also *Financial strategy* page 36.)

International OpenRoad trial

We started two operational trials of our site-specific forecast system in January 1999. The purpose of the new system is to improve the effectiveness of our forecasting process while both minimising the forecaster effort required and retaining control on quality.

The main UK trial, which finished at the end of April 1999, included forecast data for most observing and OpenRoad sites — those sites for which we currently give local authorities forecast services for winter maintenance — in Great Britain, while the second was for 11 sites in the USA, Canada and Sweden. Information from the new system was provided to customers via our Internet site. We will evaluate the results of the trials during this summer.

*Weather forecasts for
mobile phone users*

In July 1998, we launched a new service providing the latest marine weather information in text format to anyone using a Global System Mobile Communications phone on the Vodafone network. Called the Short Message Service, it provides water sports enthusiasts with a fast and cost-effective way of getting the latest weather information. Given the large number of people carrying mobile phones, we hope that this increased access to forecasts will contribute to safety. We expect to extend a similar service to all mobile phone users later this year.

Thailand contract

Since October 1996, The Met. Office has played a leading role in a project to create a new forecasting facility for the Thailand Meteorological Department (TMD). During Autumn 1998, we completed and installed a modified version of our NWP software on the TMD computer systems to operate using real-time data from South East Asia. TMD staff demonstrated the

software at a WMO conference on weather modification at Chiang Mai in February 1999.

Met. Office web site

In July 1998, we started a project to redesign our Internet site. Originally created in October 1995, the site had become somewhat old-fashioned despite the introduction of a range of new pages, including those on MetWEB, for which users pay in advance.

We introduced a 'new look' to the site in March 1999 and have provided many new pages and links since, including regional forecasts funded as part of the PMS. The site is currently recording over one million page accesses each month.



*Alan Douglas,
Managing Director Commercial,
at a customer meeting in Swindon*

"The more Safeway investigates the capabilities of our combined systems, the more we uncover in terms of opportunities. The deal with The Met. Office is extremely exciting and has enormous implications for the business. We are very confident that this is a sound business investment with one of the world's leading weather authorities."

Jim Drummond, Director of Supply Chain Operations, Safeway



*The Met. Office's new-look web site, introduced in March 1999,
leads net surfers into an ever-increasing range of information*



Delivering and improving our services

"I am most grateful for your tremendous contribution to the Press Conference hosted by myself at DETR on 2 November and the presentation hosted by the Deputy Prime Minister whilst in Buenos Aires at COP4.

I am extremely pleased to see the Hadley Centre continuing to drive the climate change debate forward..."

The Rt Hon Michael Meacher MP
Minister for the Environment

Climate research

Our Hadley Centre for Climate Prediction and Research is an internationally renowned centre of excellence in climate research. Our major Climate Prediction Programme is carried out under contract to the DETR. We also carry out additional climate-related work funded by the PMS and a number of contracts from the European Commission.

Support for climate change negotiations

The UK is a party to the UN Framework Convention on Climate Change. A Conference of Parties is convened each year to take forward the negotiations on curbing greenhouse gas emissions, and DETR leads the UK delegation.



(left to right) Geoff Jenkins and Tim Johns of The Met. Office's Hadley Centre, with the Rt Hon John Prescott at the UN Conference of Parties in Buenos Aires

To support the 1998 Conference of Parties, held in November in Buenos Aires, the Hadley Centre made predictions of climate change over the next 100 years using a new climate model. We passed these

predictions to a number of other research groups, who estimated the impacts of the predicted changes on natural ecosystems, water resources, food supply, coastal communities and human health.

At DETR's request, we also published a report summarising observations of recent changes in climate, the latest climate predictions and the impacts which could result. This report was launched at a press

conference in London chaired by the Rt Hon Michael Meacher, Minister for the Environment. Over 2,000 copies were distributed in Buenos Aires, where Hadley Centre staff were on hand to answer questions. They also made a presentation to delegates at a session hosted by the Deputy Prime Minister, the Rt Hon John Prescott.

Climate change scenarios for the UK

DETR has established a Climate Impacts Programme which seeks to involve stakeholders in making assessments of the impact of climate change on the UK. The first stage has been to prepare common scenarios of climate change for the UK over the next 100 years and these scenarios were based on predictions from our Hadley Centre model. Staff from The Met. Office and the University of East Anglia jointly authored a report entitled *Climate Change Scenarios for the UK*, launched to the media by the Rt Hon Michael Meacher in September 1998.

Forecasting climate over the next decade

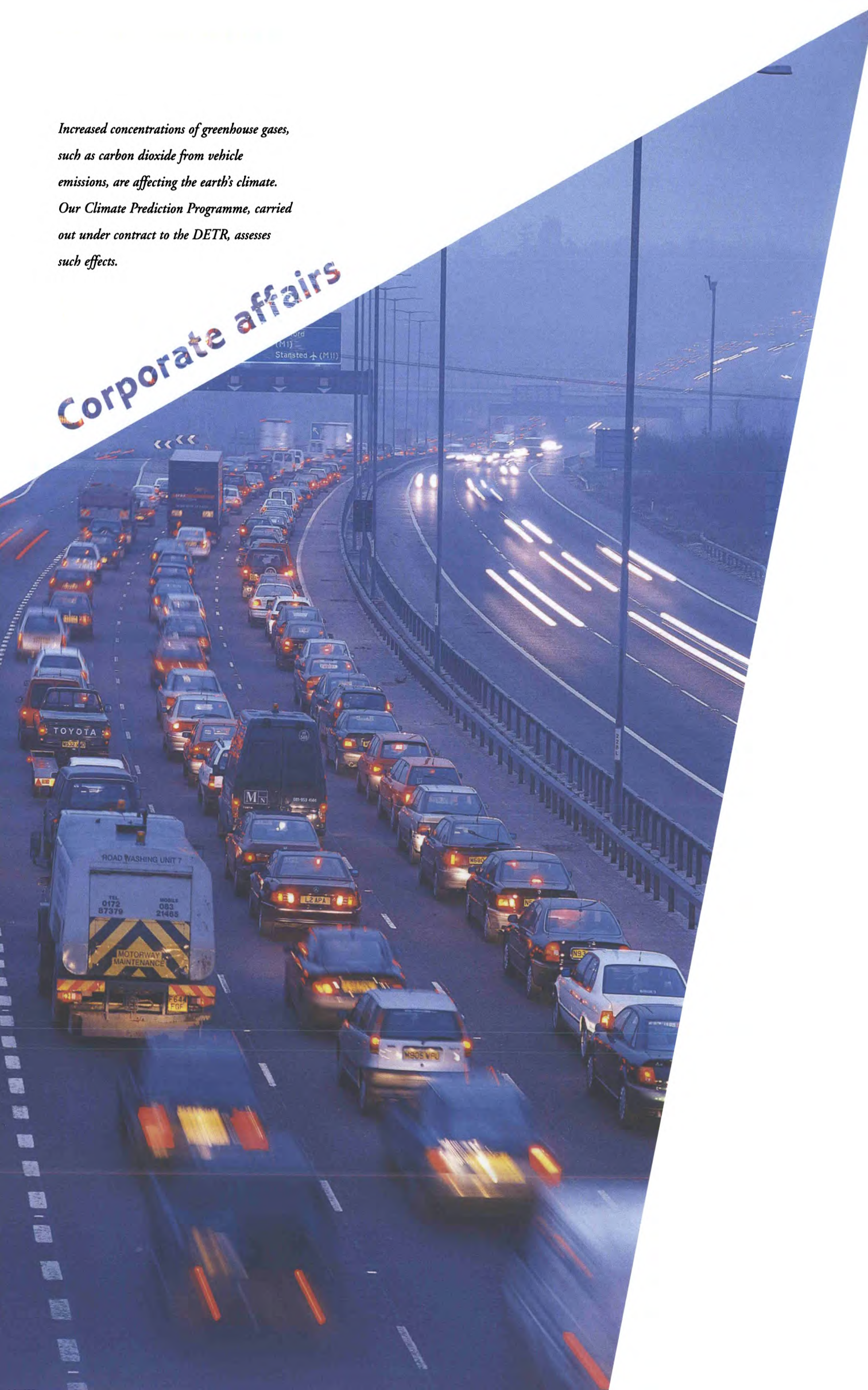
We make meteorological predictions over many timescales. These range from weather forecasts for a few hours ahead to scenarios of climate change 100 years into the future. One major gap in this range is the timescale of five to ten years ahead for which we, in common with other forecasting centres, cannot predict at present. However, we have been encouraged by recent work at the Hadley Centre, funded by the Public Meteorological Service programme, that predictions in this period may be possible in the future, at least for the British Isles.

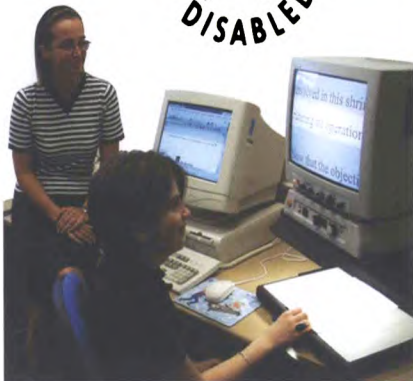


*Increased concentrations of greenhouse gases,
such as carbon dioxide from vehicle
emissions, are affecting the earth's climate.*

*Our Climate Prediction Programme, carried
out under contract to the DETR, assesses
such effects.*

Corporate affairs





Sophie Bower, a visually impaired work placement student, demonstrates special magnification equipment to Sara Waddington, Assistant Disability Officer

Corporate affairs

Human Resources

Equal Opportunities

The Met. Office is firmly committed to promoting equality in the workplace and all new legislation encompassing equality is incorporated into our policies at the earliest opportunity.

In March 1999, we achieved accreditation from the Employment Service to use the 'Two-Ticks' symbol indicating our positive attitude to employing those with disabilities. This includes not only making every effort to facilitate recruitment of those with disabilities, but also our commitment to provide suitable opportunities for the continued employment of newly disabled members of staff.

Recruitment

Once again we have made recruitment a high priority with 245 people joining us. Total numbers rose from 2,183 at the start of the year to 2,229 at the end, which partly reflects the additional resources required to prepare us for the Millennium changeover date. At least half of our recruits hold graduate qualifications in mathematics, physics or computing, and many of the remainder hold business or other professional qualifications. Our wastage rate has remained steady during the period.

It is our policy to recruit staff in accordance with the Civil Service Commissioners' Recruitment Code 1998. Individual appointments are made on the basis of fair and open competition. We did, however, have to take exceptional action to reappoint ten former Met. Office staff who were needed to meet increased business requirements, particularly in weather forecasting, and to staff our Project 2000. Additionally, one casual contract has been extended beyond the 12-month period. This action has been required to assist in the setting up of the new Commercial Division.

Employee Attitude Survey

In the spring of 1998, The Industrial Society carried out an Employee Attitude Survey on our behalf. Their report highlighted that, while many attitudes had improved since the last survey (in 1996), a number of key issues remain. These include reducing the number of initiatives in the organisation, improving the 'visibility' of Board members, creating a better system for grading and paying staff, and improving two-way communications. We have addressed some of these issues already and have set in motion plans to tackle the remainder. (See also *Pay and Grading* on next page and *Improving our Performance* on page 35.)

Staff recruited in 1998/99

	Male	Female	Total	Ethnic minority*	Disabled people*
Total	149	96	245	12	11

* All entrants were surveyed but some chose not to respond



Pay and Grading

We initiated a fundamental review of our existing staff pay and grading system in May 1998. Although a formal review was required in accordance with the terms of our delegation of authority as an agency, it was becoming increasingly apparent that a study of our existing system was necessary to enable us to meet our current and future business needs. The primary objective is to create a simpler and more flexible system that addresses these needs while attracting, retaining, encouraging and rewarding staff. During the year, this has entailed considerable work by internal teams, and discussions with the Trade Unions are under way with a view to having the new system in place by late Summer 1999.

Health and safety

We are committed to maintaining high standards of health and safety (H&S). This led to the introduction of a revised and improved H&S policy and the production of an updated *Health and Safety Manual* that takes account of relevant changes in legislation. During the year, we carried out H&S inspections of ten sites and plan to complete inspections of all our other sites over the next 18 months.

Professional training

Due to the continuing introduction of new technical systems, improvements in meteorological knowledge and changing customer requirements, it is essential that we help forecasters to develop their professional expertise. To that end, we have introduced several new courses at our College in Reading including those on weather journalism, tactical oceanography and using NWP products.

We have encouraged the Royal Meteorological Society to make a start on setting up a National Vocational Qualification (NVQ) for forecasters. This development is supported by the Royal Navy and private companies, as well as ourselves, and would benefit the whole meteorological community and its customers.

Julia Carter oversees Ann Tourle, Company Secretary, trying out our new Learning Resource Centre



Improving our Performance (IoP)

We have made good progress with this multi-stranded programme. We have created and introduced a formal *Staff Development Process* with associated documentation, including *Personal Development Portfolios* for each member of staff. We have also introduced a staff induction scheme that includes a 'training' session, and a complete set of literature specifically tailored towards both new staff and managers. And for the first time, we have drawn up a comprehensive corporate training and development policy.

With regard to communications, we published our *Internal Communications Policy and Practice* in August 1998. This stressed that while face-to-face communications continue to lie at the heart of our communication system, an internal web would play a key part in ensuring staff were kept well informed. Since then we have started a review of our

team briefing system to refine it, particularly in respect of introducing a feedback loop from staff. We have also produced a more logically structured internal web, Metnet, and this was launched in early May 1999.

During Autumn 1998, we agreed that the best way forward to improve our processes and procedures was to take a detailed look at how The Met. Office works now; we decided to use the Business Excellence Model (BEM) to provide a framework for this difficult task. With the aid of consultants, we have set up cross-Office teams to determine how we can generate and deliver our products to customers more efficiently. We plan to complete the BEM assessment by August 1999. The task of the *IoP* programme will then be to improve areas of weakness, making full use of other *IoP* strands and the concept of Business Process Improvement. We intend to use this framework to gain ISO9000 certification by 2002.



A selection of staff development literature

Financial strategy

Progress in 1998/99

In line with initiatives set in place during the latter part of 1997/98, this year we have seen the benefits of greater rigour in setting and managing budgets. These further improvements to the financial management of the trading fund have meant that we have been able to pass additional cost savings on to our customers, and we will continue this strategy in the coming year.

At the same time, we have absorbed the cost of two major projects — the R&D of the satellite programme METOP, and our Project 2000 to ensure continuity of customer services in the face of the year 2000 problem. Moreover, we have been able to repay an additional £5 million of our initial trading fund loan capital over and above the scheduled payments.

Future investment

As well as delivering savings now, we are investing in a variety of programmes designed to generate further savings for customers in the future. In order to achieve this we are planning to reduce profits and the return on capital employed in the coming year.

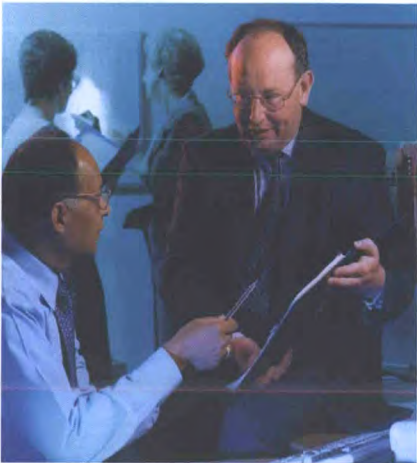
Our investment plans include:

- ◆ the purchase of a second T3E supercomputer to allow us to run an improved version of our UK NWP model and to meet the requirements of the DETR for climate research;
- ◆ funding the R&D associated with the continuity and supply of space observations;
- ◆ significant staff resources for our *Improving our Performance* programme;
- ◆ preliminary work on our Bracknell site relocation;
- ◆ updating and further automation of our observing networks;
- ◆ completion of our year 2000 programme.

From 1 April 1999, our newly created Commercial Division has been operating as a separate financial entity within the trading fund. We believe that through this new division we will be better able to generate commercial revenue than hitherto. The new structure will also allow us to demonstrate that the Commercial Division is operating on a 'level playing field' with respect to private sector competitors.

NOTE: Due to the introduction of Financial Reporting Standard (FRS) 12 during the year, we prepared the current year's financial figures on the basis of this FRS and have restated last year's figures for the purposes of comparison. This is fully explained in note 12 to the Accounts, page 59.

Philip Mabe, Finance Director, ensures Pravin Chotai, Chief Accountant, is well briefed



*Frankwell, Shrewsbury during the floods of
October 1998. Forecasts from The Met.
Office provided valuable information to the
Environment Agency in managing responses.*

Accounts and financial information



Courtesy of Noel Evans

Accounts and financial information

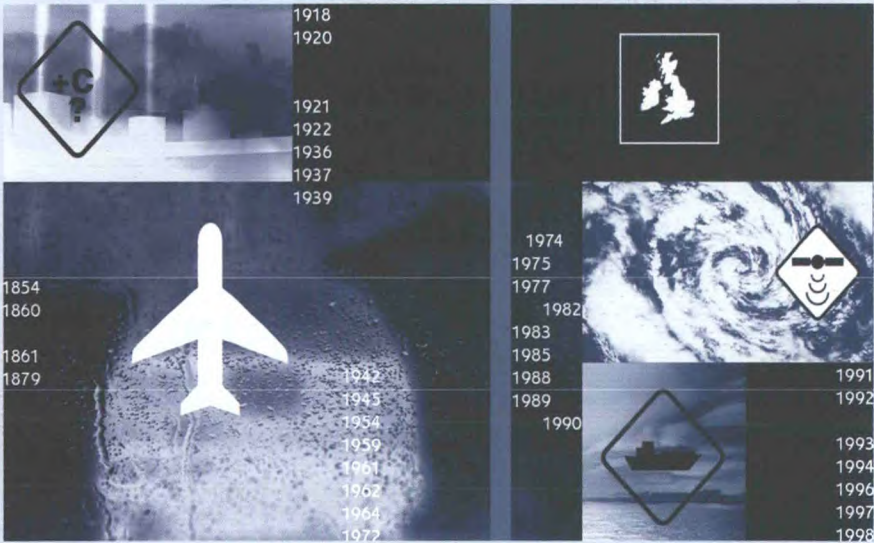
Foreword to the accounts

Statutory background

The accounts for The Met. Office have been prepared in accordance with the Direction given by HM Treasury on 19 June 1997 in pursuance of section 4(6) of the Government Trading Funds Act 1973. The Direction is reproduced on pages 63 to 64 of the *Annual Report and Accounts 1998/99*.

History

The Met. 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 Met. Office became part of the Air Ministry in 1920 and subsequently part of the Ministry of Defence in 1964. The Met. Office became an Executive Agency on 2 April 1990 and started operating as a trading fund on 1 April 1996, in accordance with Statutory Instrument SI 1996/774.



Review of activities

The principal activities of The Met. Office are set out on page 5. There have been no significant changes in these activities during the year.

Board members

The operation of The Met. Office is overseen by the Defence Meteorological Board, and the Chief Executive is advised by the Meteorological Committee and its Research Sub-committee. Management of The Met. Office is effected through the Met. Office Board and the Executive Committee. The Met. Office Board is responsible for the strategic management of the agency and for ensuring that overall customer requirements are met. The Executive Committee deals with day-to-day operational issues, thus making a clear distinction between the two roles. Audit committee and remuneration committee sub-committees were established during the year.

Payment policy

Payments to suppliers are predominantly made direct from The Met. Office. The policy is to pay suppliers within contracted payment terms or, in the absence of specifically agreed terms, within 30 days of receipt of a valid invoice (as specified by the Better Payment Practice Code), or of the delivery date if later. In the year ended 31 March 1999, 98% of undisputed invoices were paid within 30 days of receipt (31 March 1998, 92%).

Results and appropriations

The Met. Office's accounts for 1997/98 have been restated in line with Financial Reporting Standard 12 (FRS 12), issued in September 1998, which redefined provisions (see note 12 on prior year adjustment). This resulted in a £4.4 million increase in the profit figure for 1997/98 and a corresponding reduction in the profit figure for 1998/99. The Met. Office's turnover for the year was £152.9 million (1997/98, £154.8 million). Total expenditure, before exceptional items and interest, was £143.2 million (1997/98 restated, £130.8 million) and operating profit was £9.7 million (1997/98 restated, £24.0 million). Net assets as at 31 March 1999 were £147.7 million (31 March 1998 restated, £144.4 million). The return on capital employed (ROCE) key target of 7% (taken year on year) was met with a two-year average performance in 1997/98 and 1998/99 of 13.5%. Following the FRS 12 changes, the performance in 1998/99 was 6.3% (1997/98 restated, 20.6%). Profit after interest was £11.1 million (1997/98, £27.4 million). As agreed with HM Treasury, no dividend is to be paid to the Consolidated Fund in respect of the first three years of trading and the retained surplus has been transferred to the General Reserve, to meet future investment needs.

Market value of land

It is considered that there is no significant difference between the open market value and the book value of land on an existing use basis.

Research and development

A programme of applied research and development is conducted in support of the operational services provided by The Met. Office. Additional research and development concerning man-made climate change is conducted under contract to the Department of the Environment, Transport and the Regions.

Year 2000 compliance

For information regarding our activities that address the year 2000 issue, see the item on page 25. A new accounting system, which is year 2000 compliant, will be introduced in 1999. A total of £7.9 million has been spent on compliance up to and including 1998/99. A further £2.9 million is budgeted for 1999/2000.

New developments

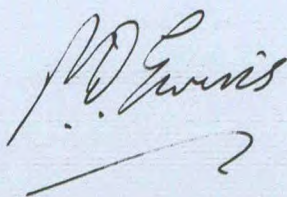
On 1 April 1999, a new Commercial Division was created with its own Managing Director as a separate financial unit within the trading fund. This development will demonstrate that The Met. Office competes fairly with the private sector and will encourage the Treasury to allow it new commercial freedoms as a trading fund.

Disabled persons

The Met. Office is committed to a policy of Equal Opportunity. The only test applied for recruitment, retention, training or advancement is the ability to do the job.

Employee involvement

Formal consultation with staff is undertaken through The Met. Office Functional Whitley Committee, its sub-committees and local committees. The Met. 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 Trades Unions have been consulted on a range of special issues, including the introduction of *Investors in People* as part of the *Improving our Performance* initiative. Staff are informed of new developments within The Met. Office by team briefings and by *Mercury*, the in-house magazine.



P D Ewins
Chief Executive
2 July 1999



Statement on the system of internal financial control

As Accounting Officer, I acknowledge my responsibility for ensuring that an effective system of internal financial control is maintained and operated by The Met. Office.

The system can provide only reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or would be detected within a timely period.

The system is operated within the context of the following management structure:

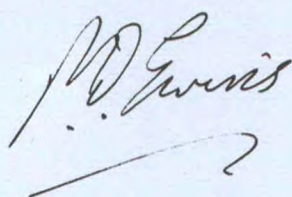
- ◆ the Executive Committee, which comprises all eleven Met. Office Directors, is responsible for the day-to-day running of operations and ensuring that customers' requirements are met;
- ◆ the Met. Office Board, which comprises the eight senior Met. Office Directors, is responsible for strategic issues;
- ◆ The Met. Office's Audit Committee, which comprises two external members, ensures that the appropriate financial risk management procedures are in place;
- ◆ the Defence Meteorological Board, which comprises The Met. Office's Chief Executive and senior MoD representatives along with two external members, advises the Secretary of State for Defence, as owner of The Met. Office.

The system of internal financial control is based on a framework of regular management information, administrative procedures, including the segregation of duties, and a system of delegation and accountability. In particular, it includes:

- ◆ comprehensive budgeting systems with an annual budget which is reviewed and agreed by the Executive Committee;
- ◆ regular reviews by the Executive Committee of periodic and annual financial reports which indicate financial performance against the forecasts;
- ◆ setting targets to measure financial and other performance;
- ◆ clearly defined capital investment control guidelines;
- ◆ as appropriate, formal project management disciplines.

The Met. Office makes use of the departmental internal audit unit, which operates to standards defined in the *Government Internal Audit Manual*. The work of the internal audit unit is informed by an analysis of the risk to which The Met. Office is exposed, and annual internal audit plans are based on this analysis. The analysis of risk and the internal audit plans are endorsed by The Met. Office's Audit Committee and approved by me. At least annually, the Director Internal Audit, MoD, provides me with a report on internal audit activity in The Met. Office. The report includes the Director Internal Audit's independent opinion on the adequacy and effectiveness of The Met. Office's system of internal financial control.

My review of the effectiveness of the system of internal financial control is informed by the work of the internal auditors, the Audit Committee which oversees the work of the internal auditor, the executive managers within The Met. Office who have responsibility for the development and maintenance of the financial control framework, and comments made by the external auditors in their management letter and other reports.



P D Ewins
Chief Executive
2 July 1999

Statement of the responsibilities of the Agency and the Chief Executive

Under section 4 (6) of the Government Trading Funds Act 1973, HM Treasury has directed The Met. Office to prepare a statement of accounts for each financial year in the form and on the basis set out in the Accounts Direction on page 63. The accounts are prepared on an accruals basis and must give a true and fair view of the The Met. Office's state of affairs at the year end and of its income and expenditure, total recognised gains and losses and cash flows for the financial year.

In preparing the accounts, the Agency is required to:

- ◆ observe the Accounts Direction issued by HM Treasury, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- ◆ make judgements and estimates on a reasonable basis;
- ◆ state whether applicable accounting standards have been followed, and disclose and explain any material departures in the financial statements;
- ◆ prepare the financial statements on the going concern basis, unless it is inappropriate to presume that the Agency will continue in operation.

HM Treasury has appointed the Chief Executive of The Met. Office as the Accounting Officer for the Trading Fund. His relevant responsibilities as Accounting Officer, including responsibility for the propriety and regularity of the public finances and for the keeping of proper records, are set out in the Accounting Officer's Memorandum, issued by HM Treasury and published in *Government Accounting*.



*Certificate and Report
of the Comptroller
and Auditor General
to the Houses of
Parliament*

I certify that I have audited the financial statements on pages 45 to 62 under the Government Trading Funds Act, 1973. These financial statements have been prepared under the historical cost convention as modified by the revaluation of certain fixed assets and the accounting policies set out on pages 49 to 51.

*Respective responsibility
of the Meteorological
Office, the Chief
Executive and Auditor*

As described on page 42 the Meteorological Office and the Chief Executive are responsible for the preparation of the financial statements and for ensuring the regularity of financial transactions. The Meteorological Office and Chief Executive are also responsible for the preparation of the other contents of the Annual Report. My responsibilities, as independent auditor, are established by statute and guided by the Auditing Practices Board and the auditing profession's ethical guidance.

I report my opinion as to whether the financial statements give a true and fair view and are properly prepared in accordance with the Government Trading Fund Act 1973 and Treasury directions made thereunder, and whether in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them. I also report if, in my opinion, the Foreword is not consistent with the financial statements, if the Agency has not kept proper accounting records, or if I have not received all the information and explanations I require for my audit.

I read the other information contained in the Annual Report, and consider whether it is consistent with the audited financial statements. I consider the implications for my certificate if I become aware of any apparent misstatements or material inconsistencies with the financial statements.

I review whether the statement on pages 41 and 42 reflects the Meteorological Office's compliance with Treasury's guidance *Corporate governance: statement on the system of internal financial control*. I report if it does not meet the requirements specified by the Treasury, or if the statement is misleading or inconsistent with other information I am aware of from my audit of the financial statements.

Basis of opinion

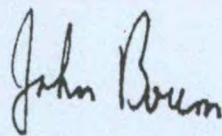
I conducted my audit in accordance with Auditing Standards issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts, disclosures and regularity of financial transactions included in the financial statements. It also includes an assessment of the significant estimates and judgements made by the Meteorological Office and Chief Executive in the preparation of the financial statements, and of whether the accounting policies are appropriate to the Meteorological Office's circumstances, consistently applied and adequately disclosed. I planned and performed my audit so as to obtain all the information and explanations which I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by error, or by fraud or other irregularity and that, in all material respects, the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them. In forming my opinion I have also evaluated the overall adequacy of the presentation of information in the financial statements.

Opinion

In my opinion:

- ◆ the financial statements give a true and fair view of the state of affairs of the Meteorological Office at 31 March 1999 and of the profit, total recognised gains and losses and cash flows for the year then ended and have been properly prepared in accordance with the Government Trading Funds Act 1973 and directions made thereunder by the Treasury; and
- ◆ in all material respects, the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

I have no observations to make on these financial statements.



John Bourn
Comptroller and Auditor General
8 July 1999

National Audit Office
157-197 Buckingham Palace Road
Victoria
London SW1W 9SP



*Profit and Loss Account for the year ended
31 March 1999*

		1998/99	Restated 1997/98
	Notes	£ '000	£ '000
Turnover	1, 2	152,875	154,784
Cost of sales	3, 5	119,844	109,835
Gross profit		33,031	44,949
Operating expenses	3, 5	23,287	20,965
Operating profit		9,744	23,984
(Loss)/profit on disposal of fixed assets		(791)	2,179
Profit/loss on ordinary activities		8,953	26,163
Interest receivable		4,236	4,208
Interest payable	4	(2,115)	(2,920)
Retained profit		11,074	27,451
Return on capital employed (ROCE)		6.3%	20.6%
Target (taken year on year)		7.0%	7.0%

ROCE is calculated as operating profit after (loss)/profit on disposal of fixed assets as a percentage of the average government funds (excluding unrealised capital reserves) employed in the business at the beginning and end of the year.

The accounts for 1997/98 have been restated to comply with FRS 12 on provisions (see note 12). The effect of the prior year adjustment has been to increase the profit figure for 1997/98 from £23 million to £27.4 million and to write back 1 April 1997 opening provisions of £2 million to the General Reserve.

Without the restatement required by FRS 12 ROCE would have been 10.0% (1997/98, 17.6%). ROCE for 1997/98 and 1998/99 averaged 13.5% against a two-year target of 11.6%.

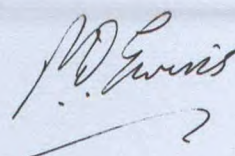
The notes on pages 49 to 62 form part of these accounts.

The movement on the General Reserve is set out at note 15 on page 60.

Balance Sheet as at 31 March 1999

	Notes	31 March 1999		Restated 31 March 1998	
		£ '000	£ '000	£ '000	£ '000
Fixed assets					
Intangible	1, 6		61,535		58,324
Tangible	1, 6		31,498		33,497
			93,033		91,821
Current assets					
Stocks	1, 7	1,056		1,409	
Debtors and prepayments	8	20,577		24,681	
Cash on deposit	9	64,900		61,500	
Cash at bank and in hand	9	379		3,555	
		86,912		91,145	
Creditors: amounts falling due within one year	10	(31,602)		(38,056)	
Net current assets			55,310		53,089
Creditors: amounts falling due after more than one year	10		(613)		(552)
Net assets			147,730		144,358
Financed by					
Provisions for liabilities and charges	11		870		1,750
Capital and reserves					
Public dividend capital		58,867		58,867	
Long-term loans	13	10,936		18,968	
Revaluation Reserve	14	4,598		3,388	
General Reserve	15	72,459		61,385	
Government funds		146,860		142,608	
			147,730		144,358

The notes on pages 49 to 62 form part of these accounts.

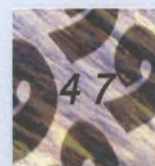


P D Ewins, Chief Executive, 2 July 1999

*Cash Flow Statement for the year ended
31 March 1999*

	Note	1998/99 £ '000	Restated 1997/98 £ '000
Reconciliation of operating profit to net cash inflow from operating activities			
Operating profit		9,744	23,984
Depreciation charges		17,011	16,254
Provisions for liabilities and charges		(880)	(414)
Decrease in stocks		353	45
Decrease in debtors		4,055	5,304
(Decrease)/increase in creditors		(1,232)	4,015
Net cash inflow from operating activities		29,051	49,188
Cash flow statement			
Net cash inflow from operating activities		29,051	49,188
Returns on investments and servicing of finance	17	2,170	1,129
Capital expenditure	17	(17,803)	(27,042)
Management of liquid resources	17	(3,400)	(20,900)
Financing	17	(13,194)	(5,511)
Decrease in cash		(3,176)	(3,136)
Reconciliation of net cash flow to movement in net debt			
Decrease in cash		(3,176)	(3,136)
Increase in cash on deposit	17	3,400	20,900
Other movements	17	13,194	5,511
Change in net funds		13,418	23,275
Net funds/(debt) at 1 April	17	32,893	9,618
Net funds at 31 March		46,311	32,893

The notes on pages 49 to 62 form part of these accounts.



Statement of recognised Gains and Losses for
the year ended 31 March 1999

	Note	1998/99 £ '000	Restated 1997/98 £ '000
Profit for the financial year		11,074	27,451
Transfer from creditors falling due after more than one year	15	0	11,484
Surplus on revaluation of fixed assets credited to the Revaluation Reserve	14	1,210	1,449
Total recognised Gains and Losses relating to the year		12,284	40,384

The effect of the prior year adjustment has been to increase the total recognised Gains and Losses from £36.0 million to £40.4 million for 1997/98 (see note 12).

Reconciliation of movements in government funds			
	Note	1998/99 £ '000	Restated 1997/98 £ '000
Government funds at 1 April		142,608	113,368
Write back of opening provisions to profit in prior years	15	0	2,050
Total recognised Gains and Losses relating to the year		12,284	40,384
Movements in long-term loans	13	(8,032)	(13,194)
Net movement in government funds		4,252	29,240
Balance at 31 March		146,860	142,608

The effect of the prior year adjustment has been to increase the balance of government funds at 31 March 1998 from £136.2 million to £142.6 million (see note 12).

The notes on pages 49 to 62 form part of these accounts.

Notes to the accounts

1 Accounting policies

a) Basis of accounting

The accounts have been prepared in accordance with the accruals concept and the historical cost convention, modified to include revaluations of fixed assets and stocks. They comply with the accounting and disclosure requirements of the Companies Act 1985 and the Accounting Standards Board, where appropriate.

b) Turnover

Turnover comprises the invoiced value of services (net of VAT) supplied to the private sector, the wider public sector and other government departments. Income received under collaborative arrangements for the capital installation of rainfall radar systems is credited as deferred income within creditors until tangible fixed assets are acquired.

c) Research and development

All research and development expenditure is charged to the Profit and Loss Account.

d) Intangible fixed assets

The UK is a member of EUMETSAT and, as such, contributes to the cost of its satellite programmes. The Met. Office benefits from the data and services resulting from these programmes. Expenditure other than R&D on the programmes to date has been capitalised and revalued annually using the Aerospace Combined Input Cost Index. The depreciation is calculated using the straight-line method, and is based on the expected operational life, currently to 2012.

The Met. Office has acquired intellectual property rights (IPR) in its MIST system. IPR is amortised over two years using the straight-line method.

e) Tangible fixed assets

Valuation

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

Freehold land and buildings are revalued by qualified valuers every five years, or at shorter periods if it is considered that values have changed materially.

Plant and equipment, including computers, are capitalised where the useful life of an individual item exceeds three years and the cost of acquisition and installation exceeds £5,000 (excluding VAT). From 31 March 1996, The Met. Office has also capitalised networked minor computers, and related equipment, which individually do not meet the criteria. Major items are revalued annually using the Gross Domestic Product Deflator Index.

Certain meteorological equipment installed in commercial aircraft or at sea is not capitalised as it is outside the direct control of The Met. Office and has an uncertain operational life.

Depreciation

Freehold land is not depreciated.

Depreciation on buildings is calculated to write off the cost, or value, by equal instalments over the asset's estimated useful life (not exceeding 50 years).

Computers, plant and equipment are generally depreciated by the reducing balance method at a rate calculated to reduce the net book value to 5% of current replacement cost over the asset's estimated useful life (between three and ten years).

Major assets, where the benefit accrues evenly over the life of the asset, are depreciated by the straight-line method. There is currently one asset, the supercomputer facility, in this category. This was to be fully depreciated over a life of five years. However, during 1998/99 the business and economic value of the facility was reviewed and it was decided that, taking account of technical change and increased business requirements, the asset should be depreciated to a residual value of 25% at the end of three years (31 March 2000) at which time the facility will be enhanced by the purchase of an additional supercomputer (see note 19).



f) Leasing commitments

All leasehold property is held under operating leases which are charged to current expenditure.

g) Stocks

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

h) Insurance

In line with government policy, it is normal practice for The Met. Office to self-insure against insurable risks. In the event of a major loss, The Met. Office will consult with the Ministry of Defence about the action to be taken.

i) Pensions

Excepting locally employed civilians, all staff are covered by the provisions of the Civil Service and Armed Forces Pension schemes. Payments are made into the Consolidated Fund at contribution rates determined by HM Treasury.

j) Foreign exchange

The Met. Office policy is to buy forward foreign currency for payments to international bodies as soon as amounts can be reliably estimated. The payments are in respect of annual subscriptions and contributions including payments for intangible fixed assets. In this case, payments are accounted for in sterling at the forward purchase rate. All other foreign currency payments are accounted for at the sterling equivalent at the exchange rate ruling on the day the payment is made.

2 Turnover

This note meets the requirements of HM Treasury's *Fees and Charges Guide*.

a) Customer Group Analysis

Main customer		1998/99			1997/98 Restated		
		£ '000	£ '000	£ '000	£ '000	£ '000	£ '000
		Core	Direct Services	Total	Core	Direct Services	Total
Defence	MoD	26,949	28,088	55,037	27,750	26,369	54,119
Civil aviation	CAA	16,557	10,121	26,678	17,051	10,720	27,771
Civil Departments		26,952	8,682	35,634	27,755	10,179	37,934
Climate research	DETR	0	6,829	6,829	0	6,658	6,658
Commerce & Industry		0	21,131	21,131	0	22,313	22,313
Other		1,475	6,091	7,566	1,745	4,244	5,989
Total turnover		71,933	80,942	152,875	74,301	80,483	154,784

(i) All turnover relates to the same class of business, the provision of meteorological and related services. There were no acquisitions or discontinued operations.

(ii) 'Core' is the programme of work necessary to generate, and make available centrally, the underpinning weather forecasts and climatological services which are the basis for specified 'Direct Services' to Core customers.

(iii) 'Commerce & Industry' contracts are subject to open competition.

(iv) Prior year figures have been restated on a comparable basis because of changes in the transfer of IT charges from Core to Direct Services and in the attribution of revenue to customer groups.

b) Commerce & Industry Analysis

	1998/99	1997/98
	£ '000	£ '000
	Actual	Restated
Turnover	21,131	22,313
Expenditure	19,260	18,844
Contribution to Core	1,871	3,469

The Commerce & Industry customer group achieved a contribution to Core activities of £1.8 million, against a target of £1.1 million. Prior year figures have been restated on a comparable basis because of changes in the attribution of revenue and costs to customer groups and a revised basis of measuring contribution.



3 Cost of sales and operating expenses

	Note	1998/99 £ '000	Restated 1997/98 £ '000
Staff costs	5	71,372	65,932
Travel and subsistence		4,011	3,148
Equipment and services		32,287	28,717
Accommodation		9,493	8,659
Depreciation	6	17,011	16,254
International subscriptions		7,744	6,784
Other administrative expenses		1,213	1,306
Total cost of sales and operating expenses		143,131	130,800

(i) Accommodation includes £1.8 million (1997/98, £1.8 million) operating lease rentals of property.

(ii) International subscriptions include the European Centre for Medium-range Weather Forecasts, the World Meteorological Organization and EUMETSAT (excluding amounts capitalised as intangible assets).

(iii) Other administrative expenses include an audit fee of £50,000 (1997/98, £50,000). The provisions for year 2000 compliance (£4.0 million) and self-insurance (£0.4 million) have been written back in 1997/98 to comply with FRS 12 (see note 12).

(iv) Total cost of research and development, which was funded by customers including the Department of the Environment, Transport and the Regions was £17.6 million (1997/98, £16.3 million).

4 Interest payable and similar charges

	1998/99 £ '000	1997/98 £ '000
On loans wholly repayable within five years	2,115	2,920
On loans not wholly repayable within five years	0	0
Total interest payable and similar charges	2,115	2,920

5 Staff

a) Staff costs

	1998/99 £ '000	1997/98 £ '000
Salaries, bonuses and allowances	59,294	54,818
Social security	4,681	4,216
Pension contributions	7,397	6,898
Total staff costs	71,372	65,932

The employees of The Met. Office are Civil Servants to whom the conditions of the Superannuation Acts 1965 and 1972, and subsequent amendments, apply. For 1998/99, contributions of £7.4 million (1997/98, £6.9 million) were paid to the Paymaster General at rates determined from time to time by the Government Actuary and advised by HM Treasury. For 1998/99 these rates ranged from 12% to 18.5% (1997/98, 11% to 19.5%) — see note 1(i).

b) Average staff numbers

	1998/99 number	1997/98 number
Senior Civil Service	8	8
Scientific, managerial, technical	1,586	1,513
Support	591	598
Locally engaged civilians overseas	19	20
Monthly average staff numbers	2,204	2,139

There were 2,229 staff employed at 31 March 1999 compared with 2,183 at 31 March 1998, both figures expressed as full-time equivalents.

c) Chief Executive's emoluments

PD Ewins, the Chief Executive, received total emoluments, excluding pension contributions, of £80,032 in 1998/99. In 1997/98 he received £50,688 from the date of his appointment (1 August 1997). Professor JCR Hunt, his predecessor, received £19,355 for the period 1 April to 30 June 1997. They are ordinary members of the Principal Civil Service Pension Scheme.

d) Employee information

The number of other employees, including members of the Board, whose remuneration exceeded £40,000 was:

	1998/99 number	1997/98 number
£40,000-£49,999	116	84
£50,000-£59,999	29	20
£60,000-£69,999	6	7
£70,000-£79,999	3	3
£80,000-£89,999	1	0
Total number of employees whose remuneration exceeded £40,000	155	114

Remuneration includes allowances subject to UK income tax but excludes pension contributions.

e) Early retirement

	1998/99 £ '000	1997/98 £ '000
Expenditure incurred in current year	21	27
Expenditure to be incurred within one year	0	0
Expenditure to be incurred in later years	0	0
Total early retirement expenditure	21	27

This represents the full cost of employees who left in year. £nil (1997/98, £18,000) was offset by a grant from the Ministry of Defence.

6 Fixed assets

The movements in each class of assets were:

	Intangible			Tangible		
	Satellite programme £ '000	Intellectual property £ '000	Total intangible £ '000	Land and buildings £ '000	Plant and equipment £ '000	Total tangible £ '000
Cost or valuation:						
At 1 April 1998	89,529	0	89,529	11,642	36,996	48,638
Additions	11,459	350	11,809	357	5,664	6,021
Disposals	0	0	0	0	(1,166)	(1,166)
Revaluation	1,611	0	1,611	0	283	283
At 31 March 1999	102,599	350	102,949	11,999	41,777	53,776
Depreciation:						
At 1 April 1998	31,205	0	31,205	1,008	14,133	15,141
Charged during year	9,633	15	9,648	417	6,946	7,363
Disposals	0	0	0	0	(348)	(348)
Revaluation	561	0	561	0	122	122
At 31 March 1999	41,399	15	41,414	1,425	20,853	22,278
Net book value:						
At 1 April 1998	58,324	0	58,324	10,634	22,863	33,497
At 31 March 1999	61,200	335	61,535	10,574	20,924	31,498

(i) The net book value of freehold land and buildings includes £4.5 million of freehold land (1 April 1998, £4.5 million) which has not been depreciated.

(ii) The net book value of plant and equipment is based on a valuation at 14 December 1995 by Grimley, updated by appropriate indices.

(iii) Land and buildings were valued by the Valuation Office at 1 November 1995, in accordance with the Statements of Asset Valuation Practice in guidance notes prepared by the Royal Institution of Chartered Surveyors, on the basis of open market values for existing use, except that specialised buildings have been valued on the basis of depreciated replacement cost.

7 Stocks

	31 March 1999 £ '000	31 March 1998 £ '000
Meteorological equipment	614	959
Reserve equipment	282	280
Consumable stores	160	170
Total stock	1,056	1,409

8 Debtors

	31 March 1999 £ '000	31 March 1998 £ '000
Trade debtors	11,030	13,107
Other debtors	855	646
Prepayments and accrued income	8,692	10,928
Total debtors	20,577	24,681

9 Analysis of changes in cash at bank and in hand

	Note	31 March 1999 £ '000	31 March 1998 £ '000
Balance at 1 April		3,555	6,691
Net cash outflow	17	(3,176)	(3,136)
Balance at 31 March		379	3,555

Cash which is surplus to immediate requirements is held in interest-bearing accounts — £64.9 million (31 March 1998, £61.5 million).



		31 March 1999	31 March 1998
	Notes	£ '000	£ '000
Operating expenditure			
Amounts falling due within one year:			
Current instalment on long-term loans	13, 17	8,032	13,194
Trade creditors		3,067	3,042
Taxation and social security		6,650	5,112
Early retirement payments		1	10
Accruals and deferred income		13,722	16,487
Total operating expenditure within one year		31,472	37,845
Amounts falling due after one year:			
Dilapidations		613	552
Total operating expenditure after one year		613	552
Total operating expenditure		32,085	38,397
Capital expenditure			
Amounts falling due within one year:			
Deferred income for capital expenditure		130	211
Total capital expenditure		130	211
Total amounts falling due within one year		31,602	38,056
Total amounts falling due after one year		613	552
Total amounts due		32,215	38,608

11 Provisions for liabilities and charges

Note:	Reorganisation (i) £ '000	Restated insurance (ii) £ '000	Restated year 2000 (ii) £ '000	Restated total £ '000
Balance at 1 April 1998	1,750	0	0	1,750
Transferred from Profit and Loss Account	0	0	0	0
Utilised in year	(880)	0	0	(880)
Balance at 31 March 1999	870	0	0	870

(i) Provision has been made for the future cost of leasehold properties which are surplus to requirements following reorganisation.

(ii) Provisions for self-insurance and year 2000 compliance at 31 March 1998 have been restated in accordance with FRS 12 (see note 12).

12 Prior year adjustment

The accounts for 1997/98 have been restated to comply with FRS 12, issued in September 1998.

This requires that provisions should only be made when there is a legal or constructive obligation resulting from a past event. The provisions for self-insurance and year 2000 compliance do not meet this new definition. Consequently the new provisions made in 1997/98 have been written back to profit in 1997/98 (see note 11), and the existing net provisions carried forward from the previous year have been written back to the General Reserve in 1997/98 (see note 15).

13 Long-term loan repayments

Government loans, repayable by instalments, and bearing interest at 8% and 8.25% per annum.

	31 March 1999 £ '000	31 March 1998 £ '000
Loans at 31 March comprise amounts repayable in two to five years	10,936	18,968
After five years	0	0
Total loan repayments	10,936	18,968

Amounts repayable in one year are included in creditors — see note 10.

14 Revaluation Reserve

	31 March 1999	31 March 1998
	£ '000	£ '000
Revaluation Reserve at 1 April	3,388	1,939
Revaluation of intangible fixed assets	1,050	1,353
Revaluation of tangible fixed assets	160	96
Revaluation Reserve at 31 March	4,598	3,388

£809,000 (31 March 1998, £571,000) of the Revaluation Reserve was realised.

15 General Reserve

	31 March 1999	Restated 31 March 1998
	£ '000	£ '000
General Reserve at 1 April	61,385	20,400
Transfer from creditors falling due after more than one year (i)	0	11,484
Write back of opening provisions to profit in prior years (ii)	0	2,050
Retained profit	11,074	27,451
General Reserve at 31 March	72,459	61,385

(i) The net assets appropriated to the trading fund on 1 April 1996 included a provision for deferred income in recognition of the change from a vote-funded basis of accounting to a full accruals basis. It was determined that this provision was no longer required at 31 March 1998, and it was transferred directly to the General Reserve.

(ii) 1 April 1997 provisions for self-insurance (£1 million) and year 2000 compliance (£1 million) have been written back to the General Reserve in accordance with FRS 12 (see note 12).

16 Related parties

The Ministry of Defence is regarded as a related party. During the year, The Met. Office has had material transactions with the Department and with other entities for which MoD is regarded as the parent department, primarily the Defence Evaluation and Research Agency. In addition, The Met. Office has had material transactions with a number of other public bodies, Government Departments and their agencies, principally the Civil Aviation Authority, Department of the Environment, Transport and the Regions, Home Office and Ministry of Agriculture, Fisheries and Food. None of the Met. Office Board members, key managerial staff or other related parties has undertaken any material transactions with The Met. Office during the year.



17 Cash Flow Statement

a) Gross cash flows

	31 March 1999		31 March 1998	
	£ '000	£ '000	£ '000	£ '000
Returns on investments and servicing of finance				
Interest received	4,285		4,058	
Interest paid	(2,115)		(2,929)	
		2,170		1,129
Capital expenditure				
Payments to acquire intangible fixed assets	(11,809)		(13,599)	
Payments to acquire tangible fixed assets	(6,021)		(15,893)	
Receipts from sales of tangible fixed assets	27		2,450	
		(17,803)		(27,042)
Management of liquid resources				
Net payments to National Loans Fund deposit account	(3,400)		(20,900)	
		(3,400)		(20,900)
Financing				
Loan repayment	(13,194)		(5,511)	
		(13,194)		(5,511)

b) Analysis of changes in net funds

	At 1 April 1998 £ '000	Cash flows £ '000	Other changes £ '000	At 31 March 1999 £ '000
Cash at bank and in hand	3,555	(3,176)		379
Cash on deposit	61,500	3,400		64,900
Debt due within one year	(13,194)	13,194	(8,032)	(8,032)
Debt due after one year	(18,968)	0	8,032	(10,936)
		13,194		
Total	32,893	13,418	0	46,311



18 Operating leases

	1998/99 £ '000	1997/98 £ '000
Annual commitments for land and buildings were as follows.		
Leases expiring in:		
Under one year	3	24
One to five years	133	138
Over five years	1,695	1,656
Total	1,831	1,818

19 Capital commitments

	1998/99 £ '000	1997/98 £ '000
Contracted	8,716	837

(i) £8 million has been committed to the purchase of an enhancement of the supercomputer facility. Following this enhancement, the life of the facility will be reviewed and the cost of the enhancement, plus the residual value of the existing facility, depreciated on a straight-line basis over the revised life.

(ii) £nil (1997/98, £0.6 million) relates to contracts in support of year 2000 compliance.

20 Derivatives

The Met. Office makes significant foreign currency payments for subscriptions and contributions to international meteorological organisations. These costs are recovered from customers of Core services on fixed price contracts. To manage the risk of currency movements, The Met. Office has a policy of buying forward foreign currency, or of taking out options to buy currency, as soon as amounts can be reliably estimated. During 1998/99, The Met. Office did not take up its options and wrote off £0.2 million (1997/98, £nil).

21 Non-adjusting post-Balance Sheet event

On 22 May 1999, The Met. Office announced that six enhanced regional centres would be established, and the existing network of over forty forecasting offices would be reduced by five. Over the next two years, offices in Newcastle, Leeds, Norwich, Bristol, and Southampton will close. Some forecasters will work alongside their customers at their premises, and others will relocate, but no redundancies are anticipated.



Treasury Accounts Direction and Schedules

Accounts Direction given by HM Treasury in accordance with section 4(6) of the Government Trading Funds Act 1973

1. The Met. Office shall prepare accounts for the financial year ended 31 March 1997 and subsequent financial years comprising:

- a) a foreword;
- b) a Profit and Loss Account;
- c) a Balance Sheet;
- d) a Cash Flow Statement; and
- e) a statement of total recognised Gains and Losses,

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

2. The accounts shall give a true and fair view of the profit or loss, and cash flows for the financial year, and the state of affairs as at the end of the financial year.

3. Subject to this requirement, the accounts shall be prepared in accordance with:

- a) generally accepted accounting practice in the United Kingdom (UK GAAP);
- b) the disclosure and accounting requirements contained in *The Fees and Charges Guide* (in particular those relating to the need for segmental information for services or forms of service provided) and in any other guidance which HM Treasury may issue from time to time in respect of accounts which are required to give a true and fair view;

c) the accounting and disclosure requirements of *Government Accounting* (in particular Chapter 17) and HM Treasury's guidance paper *Next Steps Agencies — Annual Reports and Accounts* (February 1993), as amended or augmented from time to time, insofar as these are appropriate to The Met. Office and are in force for the financial period for which the accounts are to be prepared.

4. Clarification of the application of the accounting and disclosure requirements of the Companies Act and accounting standards is given in Schedule 1 of this Direction. Additional disclosure requirements are set out in Schedule 2 of this Direction.

5. The Profit and Loss 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 at the lower of net current replacement cost (or historical cost if this is not materially different) and net realisable value.

6. This direction and, where appropriate, the Treasury Minute (see paragraph 2 of Schedule 2) shall be reproduced as appendices to the accounts.

Signed: Jamie Mortimer
Treasury Officer of Accounts
19 June 1997

Schedule 1

Application of the Accounting and Disclosure Requirements of Companies Act and Accounting Standards

Companies Act

1. The disclosure exemptions permitted by the Companies Act shall not apply to The Met. Office unless specifically approved by HM Treasury.

2. The Companies Act requires certain information to be disclosed in the Directors' Report. To the extent that it is appropriate, the information relating to The Met. Office shall be contained in the foreword.

3. When preparing its Profit and Loss Account, The Met. Office shall have regard to the Profit and Loss Account format 1 prescribed in Schedule 4 to the Companies Act.

4. When preparing its Balance Sheet, The Met. Office shall have regard to the Balance Sheet format 1 prescribed in Schedule 4 to the Companies Act. The Balance Sheet totals shall be struck at 'net assets'.

5. The Met. Office is not required to provide the historical cost information described in paragraph 33(3) of Schedule 4 of the Companies Act.

6. The foreword and Balance Sheet shall be signed by the Accounting Officer and dated.

Accounting standards

7. The Met. Office is not required to include a note showing historical cost profits and losses as described in FRS 3.

Schedule 2

Additional Disclosure Requirements

1. The foreword shall, inter alia:

- a) state that the accounts have been prepared in accordance with a direction given by HM Treasury in accordance with section 4(6) of the Government Trading Funds Act 1973;
- b) include a brief history of The Met. Office and its statutory background.

2. The notes to the accounts shall include details of the further financial objectives set by the responsible Minister as described in a Treasury Minute in accordance with section 4(1) (b) of the Government Trading Funds Act 1973, together with an indication of the performance achieved.



Contact information

If you would like more information on any particular topic, please contact the appropriate person directly, as shown below. Alternatively, you may ring our switchboard and ask the operator for help.

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