report and accounts

2005–2006

Cefas

Cefas Annual Report and Accounts 2005 – 2006

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contents

ceo statement

Cefas has achieved all of the key ministerial performance targets that it was set. I am delighted to report that this reflects the professionalism and dedication of our people, who have sought to continuously improve operational standards alongside the significant demands created by many new developments. This success is reflected in our retention of the Investor in People (IiP) standard.

Our primary purpose remains the application of science in support of UK government departments. We support this by ensuring our research aspires to the highest standards, earning respect from customers and scientific peers. We develop our capabilities and skills by serving a wide range of global customers, effectively exploiting our intellectual property and offering added value to our stakeholders.

A significant example of our work was the vital support for government negotiations at the European Council of Fisheries Ministers in December 2005, at which the Total Allowable Catches were set for the following year. We worked throughout the year with the fishing industry and the Department for Environment, Food and Rural Affairs (Defra) to provide the necessary information about the state of fish stocks around the UK.

The profile of interest in a sustainable marine environment has never been higher. This was underpinned by the recently launched public consultation for the proposed UK Marine Bill – to which Cefas will respond as a consultee – and a proposal for a Marine Strategy Directive by the European Commission (EC). Our ability to integrate diverse information about the marine environment into single, cohesive assessments will see a continued mandate for our services as ecosystem management and monitoring activity become more demanding.

In April 2005 we launched *Science in Cefas*: **www.cefas.co.uk/science/strategy**, a new science strategy that aligns our research into three thematic areas covering organism health, ecosystem interactions and resource management. This provides the framework for how we manage the agency, and it shapes our partnerships nationally and internationally. New management structures and working practices have already been introduced to support this change. We continually seek to strengthen our research base and have worked alongside local universities in planning the new University Campus Suffolk, as well as continuing to interact with many European research organisations through EC Framework programmes.

During 2005 we were subject to a quinquennial science audit sponsored by Defra's Chief Scientific Adviser. The assessment of the international audit team was that Cefas was meeting and exceeding customer requirements. The audit will inform our science action plans over the next five years.

Left: Mark Farrar (Chief Executive) observing lobster sample preparation

Above: Encrusting sponge habitat off the south coast of England

Following pages: Wind farm on Scroby Sands, off the Norfolk coast ©M J Page

Our business helps to deliver sustainable outcomes for others. However, it should not be forgotten that as a large organisation we have a significant environmental footprint ourselves. Cefas fully supports the government's drive for sustainability. We have a sustainable development action plan: **www.cefas.co.uk/about/sdap**, which will be formally reviewed next year. We take pride in our Lowestoft laboratory achieving accreditation to ISO14001 Environmental Management Systems.

We have given a new emphasis to external communication and strengthened media engagement. More online and broadcasting outlets have contacted us for comment and story support across a wide range of subjects. Our strategy for external outreach and partnerships on significant initiatives, such as the forthcoming International Polar Year (2007–08), means that we have forged stronger links with students, other scientists and regional government.

For the future, Defra is undertaking a review of its science laboratories, including Cefas. This work aims to deliver long-term sustainability for its laboratories and offers exciting opportunities for the future. In parallel with this initiative we are reviewing our plans and examining options for our estates, including an alliance with local government partners. Once decisions have been finalised we shall implement any necessary changes as part of a longer-term strategic plan.

In conclusion, Cefas remains committed to high-quality delivery against the needs of our customers, staff, partners and the public. As part of our transformation programme, significant change is already underway within the organisation and more is planned. This will build on our many strengths and ensure we continue to play a leading role as a successful, dynamic science organisation focused on the aquatic environment.

Mark Farrar, Chief Executive

strong science

Safeguarding Our Seas, the government initiative for marine stewardship, set out a vision for "clean, safe, healthy, productive and biologically diverse oceans and seas". Those aspirations are echoed in the draft European Marine Strategy Directive, which promotes an "ultimate aim of providing biologically diverse and dynamic oceans and seas that are safe, healthy and productive". Providing the evidence that these objectives are being met is an important task and one in which Cefas is a key player.

How do you prove that the environment meets these aspirations? We have re-organised our science into three themes to provide some answers:

- **organism health**
  looks at the issues of contaminants and pathogens on aquatic species and the consumers of fish and shellfish products
- **ecosystem interactions**
  examines the functioning of ecosystems and the requirements to protect diversity
- **resource management**
  focuses on productivity, ensuring that we are able to make the best use of the sea without damaging it

Partners for delivery

Cefas is not doing this work alone. One of the highlights of the year has been the discussions with Defra and other UK agencies to re-organise monitoring to bring together information more effectively. New groups of agencies and research institutes are being created and gaps in data filled to measure our performance against marine objectives. Our research is also increasingly pooled with the NERC community. We have discussed with the directors of NERC marine institutes how to organise resources to deliver the NERC programme on marine biological resources.

Similarly, we are working with the Inter-Laboratory Forum, a group of six agencies, to share resources to meet demands of government more cost-effectively. The group provides more than 9,000 scientists, engineers and technologists. This year we have discussed chemicals and emergency responses. We have proposed several new ideas for joint programmes that will improve the government's effectiveness in anticipating problems with chemicals in the environment and dealing with large-scale emergencies.

At a European level, our scientists were again active in science and policy fora such as ICES, OSPAR and the EC. Our science has helped to develop new provisions for monitoring fisheries under the Fisheries Data Regulations, more holistic management of the seas under the European Marine Strategy, and risk-based management of diseases under the new Fish Health Regulations.

Innovation

Partnering others provides synergies and cost savings, but innovation is the most important driver to change the way we conduct our science. Innovation in Cefas is underpinned by our seedcorn programme. This is aimed at new research to safeguard the organisation and broaden our skills, and development work so that our new ideas will benefit customers. Seedcorn research in genomics and proteomics led to a winning consortium bid, with the University of Birmingham, to NERC to evaluate "omic" tools in assessing pollution.

Our programme on genetic methods for identifying fish diseases has been expanded by the provision of Defra funds in association with other agency colleagues at CSL and VLA. We are developing a "lab on a chip" for diagnostics for diseases in farm animals, plants and fish. New work includes modelling and deploying molecular tools for studying bacterial and algal communities. Development projects include diagnostic tests for diseases, which are marketed through our Cefas Technology Limited (CTL) website: **www.cefastechnology.co.uk**.

Much of our seedcorn funding develops new talent in the science community. We now fund or part-fund more than 30 international studentships in UK universities. In April we brought all of these students together for one day to learn about developments we have made from sub-cellular processes to global ecology.

Quality and data

Sharing measurements with the academic community is a strong driver to ensure comparability of data. We have increased our range of accredited science to include our phytoplankton and applied technology groups. We have expanded our biological quality assurance measurements (BEQUALM) programme to provide self-help and guidance for laboratories across Europe involved in biological testing. Cefas is a member of the Marine Data and Information Partnership (MDIP), and we increasingly publish our data direct to the internet through our iSEA website: **www.cefas.co.uk/iSEA**.

This year also saw our second quinquennial science audit. Independent scientists from across the globe assessed the quality of our work. A summary of the audit will be published by Defra, but Defra's Chief Scientific Adviser suggests that the auditors have liberally used the word "excellent" for our science.

Maintaining excellent science will be challenging given pressures on government budgets against an increasing need for marine sciences. We will continue to seek innovative solutions for delivering the best possible science. For example, we will use the RV *Cefas Endeavour* and its cutting-edge technology to underpin our investigations, and so provide strong scientific evidence.

Above: The Cefas profiler, being deployed over a seagrass bed

Above Top: Sorting a sample catch onboard Cefas research vessel

organism health

Cefas has a key role nationally and internationally in determining the impact of contaminants and pathogens on aquatic systems. Our Weymouth laboratory is the European Community Reference Laboratory for Shellfish Hygiene and the National Reference Laboratory for Fish and Shellfish Diseases.

We were recently awarded the contract for monitoring shellfish for the presence of algal biotoxins in Great Britain, and have also increased our advisory role on shellfish hygiene across the UK. Cefas has hosted several workshops and training sessions, mainly for European professionals in the areas of disease diagnosis and shellfish hygiene.

leading the field in
monitoring health in aquatic systems

New diagnostic tools

Conventional ways of identifying the notifiable virus spring viraemia of carp (SVC) cannot easily distinguish it from other similar but non-notifiable viruses. Partial viral genome sequencing is required to distinguish viruses, which can be expensive and is not available at all diagnostic laboratories. Cefas has developed a new approach in which viral nucleic acid is labelled and hybridised in a sample to specific viral gene sequences on a membrane macroarray. The position of the label on the membrane shows which virus is present, and for SVC it simultaneously identifies the virus as one of four genetic types. Current work aims to broaden the range of related viruses identified by the assay and to miniaturise the system on a glass-slide microarray.

Fish that survive an outbreak of koi herpes virus (KHV) may contain very low levels of virus that can be transmitted to susceptible fish. Such carriers are considered a significant factor in spreading KHV worldwide. Identification of carriers and prevention of their movement is essential for disease control, but current methods lack the sensitivity to detect low levels of virus. Cefas scientists take blood samples from live fish and test them for antibodies against KHV. Antibody testing is a standard method in human and terrestrial veterinary medicine, but has not been used widely for fish. A sensitive immunoassay has been developed that detects antibody in carrier fish. Antibody has been detected more than a year after the initial infection, and has been detected in fish vaccinated against the virus. The blood sample does not harm the fish, which is advantageous for testing valuable brood fish or ornamental specimens. The test is now offered as a service by CTL: **www.cefastechnology.co.uk/khv**.

Left: Preparing oyster samples for microbiological analysis

Right: Koi carp (*Cyprinus carpio*)

Risk assessment and modelling

Parasitic fish fluke (*Gyrodactylus salaris*)

One of Defra's key objectives is the protection of wild and farmed fish from threats of exotic disease. At a practical level, this policy is implemented to minimise the risk of disease introduction and enables the relevant authorities to deal efficiently with any outbreaks (ie, contingency planning). The parasitic fish fluke (*Gyrodactylus salaris*) is the most important exotic disease threat to our populations of wild Atlantic salmon. It has been the focus of risk assessment and modelling work. Qualitative risk assessment has been used to investigate and rank routes of introduction of exotic notifiable diseases. This work provides justification for the measures taken to minimise disease introduction and it underpins development of further policies.

The same risk assessment approaches have been used to explore routes of spread between river catchments. The results directly support contingency planning by identifying where efforts to control spread should be focused. Because movement of live fish is the most significant route of disease spread, a matrix of contacts between fish farms and from farms to fisheries was constructed, using the database of live fish movement. This formed the basis for models of the potential spread of a pathogen or parasite through the movement of live fish.

Mussel speciation

New work has revealed that populations of mixed species of mussels can occur in locations that were historically thought to contain one species. Using traditional molecular biology techniques, an estuary originally designated as containing only *Mytilus edulis* was found to be populated by *M. edulis* and *M. galloprovincialis*.

Interestingly, hybrids of the two species were also discovered. Mussels are a frequently used indicator for environmental pollution. Consequently the precise species composition of a population is critical to interpreting any such monitoring data.

Incorrect identification may have serious implications for the interpretation of data on biological effects using mussels. Statistics are being used to investigate whether mussel speciation has an effect on a range of biological effect markers commonly used in mussel monitoring programmes.

Reducing the risk from enteric viruses

Filter-feeding molluscan shellfish (oysters, mussels, clams, etc) have a well-known propensity to accumulate pathogens that are potentially injurious to humans if they are grown in faecally contaminated waters. Consequently, most countries have enacted strict sanitation controls, which monitor pollution levels in areas of shellfish production. The controls also determine whether shellfish can be marketed and, if so, the necessary degree of commercial processing to render them safe for consumption.

Since the 1920s such worldwide sanitation controls have relied on bacterial indicators of pollution, principally *Escherichia coli*. However, monitoring of *E. coli* has struggled to contain outbreaks of infectious disease caused by human enteric viruses, resulting in illnesses such as hepatitis and gastroenteritis. In the UK gastroenteritis caused by norovirus has been a particular problem.

Cefas has been leading efforts within the EU to combat this problem. We chair a European standardisation committee that is developing a standard method for detecting hepatitis A virus and norovirus in foodstuffs (including shellfish) using the latest technological advances. This work will open the possibility, for the first time in a century, for more targeted controls against viruses in foods. In preparation for this Cefas has, over the past few years, also been running trials to measure how well laboratories worldwide are able to determine the presence of these viruses in shellfish, and to help the laboratories improve their performance. Cefas is set to gain formal accreditation by UKAS for these new detection methods to complete the necessary suite of quality assurance measures.

Above: Mussels (Mytilus edulis)

Above right: Analysis of norovirus PCR (polymerase chain reaction) products

Right: Yellowfin tuna (Thunnus albacares)

Copper speciation and toxicity

Bladder wrack (*Fucus vesiculosus*)

The biocidal properties of copper have led to its wide use as an active ingredient in antifouling paints. Recent toxicological scrutiny has led to certain EU countries restricting its use, with the potential for other EU countries to do likewise. Despite increasing evidence that the toxicity of copper to aquatic organisms is dependent on its speciation, the regulation of copper in the marine environment is currently based on the concentration of total dissolved copper (TDCu).

Chemical forms of copper include the free cupric ion (Cu^{2+}), and inorganic and organically bound copper. Although Cu^{2+} is considered the most toxic form and inorganic copper toxic to a certain extent, organically bound copper is not. Therefore, parameters of seawater that can alter the proportion of organically bound copper, such as dissolved organic carbon (DOC), would likely reduce the proportion of copper that is toxic.

Cefas investigated the effects of DOC on forms of copper, its bioavailability and subsequent toxicity to the early life stages of the Pacific oyster (*Crassostrea gigas*) and the common bladder wrack (*Fucus vesiculosus*). We found DOC provided protection for both against high levels of waterborne copper, by reducing the concentration of the more bioavailable forms. Overall the concentration of labile copper (Cu^{2+} and inorganic copper combined), not TDCu, was responsible for the observed toxicity of copper. This tells us that current risk assessments are likely to over-estimate the harm of copper and a regional approach is required, depending on the conditions at different locations.

Strengthening fish hygiene

The Seychelles and Mauritius are authorised to export fish and fish products to EU member states, and most of their tuna production is exported to Europe. Compliance with EU regulations for health certification must be demonstrated by each country for that export to continue. Cefas scientists were members of an EU team sent to advise the local competent authorities on their process of health certification.

In Mauritius, objectives were to evaluate the quality of testing laboratories for facilities, accreditation and analytical services provided, and to assess the existing environmental monitoring programme for the detection of residues in fish and fish products. Cefas scientists assessed the current monitoring programme and resultant data, and prepared a two-year monitoring programme for all the islands of the Indian Ocean region.

The team also organised a two-day workshop for the Indian Ocean region, which included representatives from Madagascar, La Reunion, Mayotte, Seychelles and Mauritius. As a result of these assessments and the workshop, recommendations were made to the EU to improve the process of health certification for fish and fish products in Mauritius and the Seychelles.

ecosystem interactions

Research into the effects of human activities on ecosystems supports the management of finite resources. Human pressures are being applied at a large scale, such as those manifested by climate change. However, local effects, such as river barrages and dredging operations, can also determine the sustainability of important parts of ecosystems.

Identifying interactions may help us to answer pressing environmental questions. New technologies for sensing the environment are an important part of this. Smart systems for deploying instrumentation in the sea, in rivers and on individual animals are key. Integrating data from these and then developing models of ecosystem function help in assessing harm.

pioneering
new technology

Climate change

Cefas' research on climate change is diverse, reflecting the scale of the impact. Current projects include effects on the spawning of salmon in rivers and the timing of cod reproduction. In addition, much of Cefas' basic science to improve the understanding of ecosystem interactions underpins our research on climate change.

We also co-ordinate climate change work by acting as the secretariat for the Marine Climate Change Impacts Partnership (MCCIP). This is an inter-agency body that provides national co-ordination for the transfer of high-quality evidence on the impacts of marine climate change and for the provision of advice to policy advisers and decision-makers. This enables partners to plan for the challenges and opportunities presented by the impacts of climate change on the marine environment.

Our studies on climate change also consider the impacts beyond UK waters. We recently completed two important projects supported by the Department for International Development (DFID). In the first piece of work we compared the global vulnerability of fisheries to climate change for 133 countries. Globally, fisheries supply over 2.6 billion people with at least 20% of their average protein intake. The analysis showed that many African and Asian nations are extremely vulnerable because of their high reliance on fish as a protein source and the low capacity of their fisheries to respond to predicted temperature increases. The identified hotspots will allow international development organisations to target adaptive activities on those nations that would most benefit. In the second project we showed that two-thirds of coral reefs are being exploited unsustainably. Future population growth implies the equivalent of an additional 8.9 Great Barrier Reefs will be required to support predicted demand from fisheries by 2050.

Left: The G5 – a new generation of Cefas data storage tag

Top right: Coral reef

Impacts of trawling on marine sediments

Sediments of the continental shelf perform important ecosystem functions including the cycling of carbon and nutrients. These functions can be disturbed by natural or human actions. Cefas has recently completed a project to determine the impact of fishing on the seabed and hence on these important functions.

The spatial impact of trawling is comparatively high. Approximately 60% of the seabed is affected by this activity compared with less than 1% for other activities such as disposal of waste or aggregate extraction. Natural disturbance also plays an important role and dominates reworking of surface sediments throughout the North Sea. Trawling becomes more dominant in terms of in-depth sediment impact, and in deeper waters where strong tides and wave action cannot reach seabeds on a regular basis.

Cefas' observations from the Outer Silver Pit region of the North Sea indicate that increased fishing activity has had a significant impact on the sediment geochemistry (ie, changes in sediment sorting, oxygen penetration and the process of carbon degradation). Burial or mixing of carbon to depth can lead to stimulation of anaerobic bacterial pathways, which in the long term may lead to breakdown in the connection between carbon cycles on the bottom and in the open sea. This is important because there are likely to be profound effects on the rate of recycling of nutrients in the system and productivity of the sea.

Sidescan image of beam trawl scars on the seabed

Ecological indicators for better management

Cefas has been working to develop and test indicators to assess the state of the environment and so help managers meet objectives. We have also been helping to describe the management frameworks in which they could most effectively be used. Recently developed indicators describe trends in biodiversity, such as the abundance of rare and vulnerable fish, the composition of fish communities and the status of habitats affected by bottom fishing. Cefas has also been linking ecological indicators to trends in fishing pressure. Knowledge of these links is vital because managers can only change the environment by managing human activities.

A key conclusion of our studies is that most indicators respond quite slowly to management action and that year-on-year management is better supported by setting targets for reducing pressures on the environment. Much of our research on indicators is being used to advise Defra, OSPAR and the EC on the development of management systems and to refine monitoring programmes.

Ecosystem modelling

Cefas has developed a new leading-edge capability in the modelling of marine ecosystems. This allows us to exploit our existing observational capabilities in innovative ways.

Earlier research and development had already implemented an operational SmartBuoy programme, which has automatically logged over 11 million observations in remote locations in the North and Irish Seas. These and other datasets, combined with the latest generation of coupled physical–biological marine models, allow us to improve understanding and to make predictions of future change. Cefas has acquired a parallel computer cluster that allows us to run complex ecosystem models for the whole of the North Sea.

Cefas is working with a cross-European team to continue developing the best available models. Results from these played an important part in an international OSPAR workshop on eutrophication held in Hamburg in September 2005. The aim was to identify whether models had now reached a capability that could help diagnose and predict nutrient over-enrichment (eutrophication), which remains a key pressure on the marine ecosystem. Further developments will ensure that the modelling to support OSPAR needs can be fully exploited for the next assessment of eutrophication, in 2007.

Seals as predators

In many parts of the UK, common and grey seals are considered the major marine mammalian predators of Atlantic salmon and sea trout. However, quantifying the impact of seals on these fish populations has been problematic, as the evidence is at best anecdotal.

Cefas has been monitoring the behaviour of returning adult salmon and sea trout as part of a programme to assess the efficacy of the River Tees Barrage fish pass. Adult fish have been tagged with acoustic transmitters incorporating a temperature sensor to gather information on their movements in relation to the barrage and water temperature. However, this research has also serendipitously provided additional information on the potential impact of grey seals in the estuary on the local salmon and sea trout.

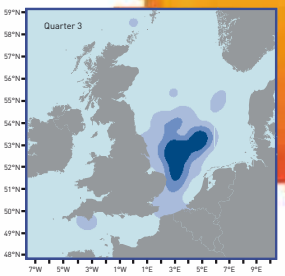
Data from 47% of the tags implanted into the stomachs of the adult salmon and sea trout, which on release recorded the ambient water temperature (15°C), have subsequently shown a rapid rise in temperature to about 35°C for periods of up to four days. The increase is the result of the tagged fish being consumed by a seal and the sensor recording the temperature of the seal's stomach. This explanation is supported by studies in the laboratory where temperature recorders incorporated into the fish diets of captive seals showed very similar temperature profiles.

A research programme is being developed to further quantify the impact of the seals in the River Tees and to develop management options for reducing the interaction between predator and prey.

Data, GIS and ecosystem interactions

Accessing and managing data is an increasingly important process in ecosystem science. As a member of MDIP we are investing in improved access to our datasets by generating a robust database of metadata. External access to Cefas' data is available through our website. The iSEA system, which provides users with a GIS approach to data display and handling, is also available there.

At the 2005 annual conference of the Fisheries Society of the British Isles, we illustrated the use of GIS and the iSEA systems in cod movement studies. In animations of predicted movements we demonstrated that the distribution of adult Baltic Sea cod during the spawning season is not random and results in cod occupying areas that increase the chances of survival of eggs and larvae. Such results improve our understanding of ecosystem changes and demonstrate the power and usefulness of GIS data assessments.



Left: Long exposure photograph of the West Gabbard SmartBuoy in storm conditions

Above left: Young seal with salmon

Above background: GIS image of the North Sea 1970–90 mean September seabed temperature

Above: Summer distribution of tagged and recaptured cod in the southern North Sea from the 1960s to the present

studying human impact
on the environment

resource management

This scientific theme assesses human activities that affect the aquatic environment. These include fishing activity, for which we are developing predictive tools to provide more accurate assessments of the likely impact of management decisions. We monitor the response of the ecosystem to decisions on fishery policy, so verifying and improving our predictive tools.

Other types of human activity that we study include navigation dredging and the disposal of dredged material, constructions in the sea such as wind farms and other renewable energy structures, and the extraction of sand and gravels (marine aggregates) from the seabed. Cefas advises a range of UK government departments including Defra, the DTI, ODPM, as well as non-governmental organisations, overseas governments and industry consortia.

Marine spatial planning

There is sometimes a conflict between the exploitation of resources and the conservation of the environment, or between one human activity and another. One way of resolving competing demands on the sea is through marine spatial planning. There are initiatives to introduce this approach in the UK. Broad-scale maps of habitats for UK offshore areas, currently being prepared by Cefas, will underpin such marine spatial plans.

Developments in acoustic technology combined with traditional survey techniques offer opportunities to explore and map the sea floor at high resolution. Cefas scientists are using state-of-the-art technology to produce marine habitat maps that provide the fundamental information needed for sustainable management of offshore resources.

Acoustic, optical and sampling techniques each provide unique information about the seabed across a range of spatial scales. Acoustic techniques can cover wide areas but only provide information on the gross physical nature of the seabed. Optical techniques have a more limited coverage, but show more detail of sediments (eg, sand veneers over gravel) and reveal how the fauna use their living space. Grab samples have extremely limited coverage, affording sampling at only single points, but provide a wealth of detailed information on the diversity of fauna and the nature of sediments.

Fortunately, analysis and interpretation of these multiple data layers has become more accessible with the advent of GIS. This system enables geospatial data to be presented as maps that can be queried electronically. To visualise a virtual seabed like this is of great benefit in the process of managing and monitoring the marine environment.

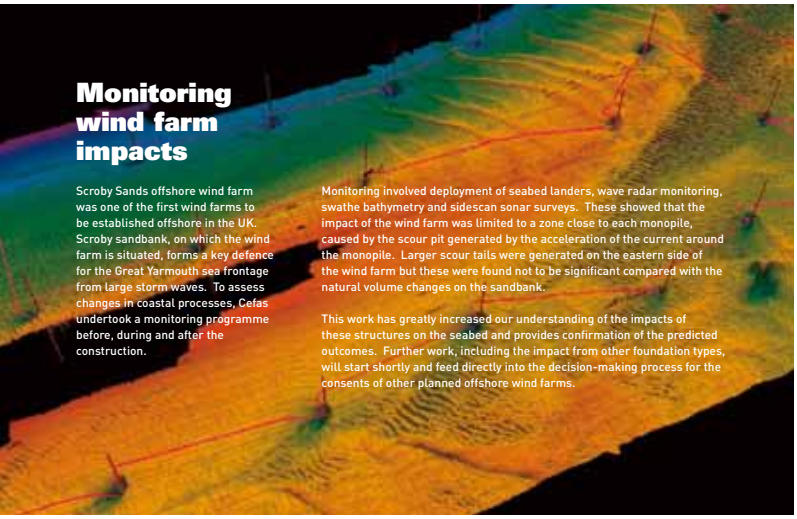
Left: Suction dredging

Right: Brittlestar (*Ophiothrix* spp) bed off the south coast of England

Strategic environmental assessment

Jack-up rig

Strategic environmental assessment (SEA) provides the background and evidence upon which local and national decisions about government plans can be made. As the principal regulator of the offshore oil and gas industry, the DTI promotes SEA to balance economic needs with environmental protection. Cefas wrote the report that considered the major sources of contamination to the Irish Sea (SEA Region VI) from offshore energy installations. Our report compared these sources with other types of contamination, measurable levels in different matrices and biological effects. We concluded that the major inputs of natural and anthropogenic contamination to the Irish Sea were riverine, with smaller contributions from the oil and gas, and local industries.



Monitoring wind farm impacts

Scroby Sands offshore wind farm was one of the first wind farms to be established offshore in the UK. Scroby sandbank, on which the wind farm is situated, forms a key defence for the Great Yarmouth sea frontage from large storm waves. To assess changes in coastal processes, Cefas undertook a monitoring programme before, during and after the construction.

Monitoring involved deployment of seabed landers, wave radar monitoring, swathe bathymetry and sidescan sonar surveys. These showed that the impact of the wind farm was limited to a zone close to each monopile, caused by the scour pit generated by the acceleration of the current around the monopile. Larger scour tails were generated on the eastern side of the wind farm but these were found not to be significant compared with the natural volume changes on the sandbank.

This work has greatly increased our understanding of the impacts of these structures on the seabed and provides confirmation of the predicted outcomes. Further work, including the impact from other foundation types, will start shortly and feed directly into the decision-making process for the consents of other planned offshore wind farms.

Developments in offshore renewable energy

Renewable energy sources undoubtedly have benefits for society. However, they also have the potential to affect the marine environment negatively. A critical part of the consenting process is therefore the assessment of potential environmental impacts.

So far, 12 locations have been granted consent in the UK government's first round of offshore wind developments, of which three are already generating electricity. Environmental surveys at these sites, as part of the licence conditions, will add to our knowledge.

Since the the UK government's announcement in December 2003 of a second round of larger developments, Cefas scientists are assessing construction applications for the first four of the 15 proposed locations (London Array, Greater Gabbard, Thanet and Gwynt y Môr).

Above top: Scour pits around the monopiles on Scroby Sands, off the Norfolk coast

Above: Lowestoft harbour, with Scroby Sands wind farm in the distance

Right: Catch being hauled aboard a commercial vessel

Marine protected areas

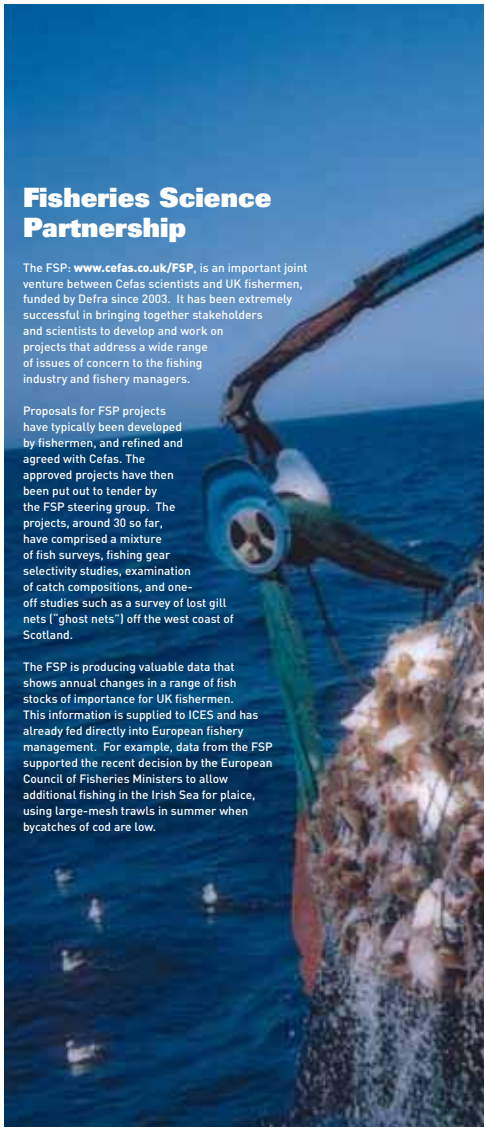
Marine protected areas (MPAs) have recently received much attention in the UK as a potentially important tool for delivering safeguards to ecosystems. This initiative is driven by the UK's strategy for the marine environment, and international activity in OSPAR and the EU to protect offshore species and habitats. Data from Cefas research cruises have helped to identify locations of offshore reefs and reef-forming seabed animals such as the Ross worm (*Sabellaria spinulosa*).

The UK is committed to establishing networks of MPAs. During 2005 we supported a one-day conference organised by Defra to consider what these might look like, and the extent to which they could include measures related to other human uses such as fisheries. The further development of spatially managed areas for fisheries management is a complex task, and is closely linked to the use of other technical management measures. Cefas will be releasing the results of research commissioned under the *Net Benefits* review of fisheries strategy, which will clarify the conditions under which closed areas are beneficial to fish stocks.

Predictive fisheries science

Cefas uses a range of numerical modelling methods to explain and predict changes in fish stocks and fisheries from the local to global scale.

Plaice and sole are the primary targets of a mixed beam-trawl fishery in the North Sea. Cefas has evaluated interactions between stocks and fleets, examining the impacts of changes in fish distribution and productivity on the sustainability and profitability of fishing fleets. The analyses have shown that the population of plaice shifted northwards over time, relative to existing management regions, and that plaice and sole have experienced periods of markedly differing productivity. These uncertainties have major effects when estimating the reference points used to guide management decisions.



Fisheries Science Partnership

The FSP: **www.cefas.co.uk/FSP**, is an important joint venture between Cefas scientists and UK fishermen, funded by Defra since 2003. It has been extremely successful in bringing together stakeholders and scientists to develop and work on projects that address a wide range of issues of concern to the fishing industry and fishery managers.

Proposals for FSP projects have typically been developed by fishermen, and refined and agreed with Cefas. The approved projects have then been put out to tender by the FSP steering group. The projects, around 30 so far, have comprised a mixture of fish surveys, fishing gear selectivity studies, examination of catch compositions, and one-off studies such as a survey of lost gill nets ("ghost nets") off the west coast of Scotland.

The FSP is producing valuable data that shows annual changes in a range of fish stocks of importance for UK fishermen. This information is supplied to ICES and has already fed directly into European fishery management. For example, data from the FSP supported the recent decision by the European Council of Fisheries Ministers to allow additional fishing in the Irish Sea for plaice, using large-mesh trawls in summer when bycatches of cod are low.

customers

It has been a successful year for business development. Cefas has built upon past successes and, in line with its strategy, continued to expand its provision of services to the UK government, the EC, and national and international clients. In addition to a growing portfolio of international work, competitively won contracts have substantially developed our UK-based activities. For example, the shellfish monitoring programme for England, Wales and Scotland has been significantly expanded.

Cefas Technology Limited (CTL) is a wholly owned subsidiary of Cefas, specialising in the application of Cefas technology to meet specific customer needs. Through CTL we have successfully developed and launched the Cefas G5 data storage tag. Volumes of initial orders for the tag have ensured that its production has been at full capacity. Interest from customers is also driving further development.

In September 2005 the core of a new project management system was commissioned. This system provides up-to-date, detailed information on staff allocation to projects. It allows us to identify over- or under-utilised staff. This enables our resource managers to effectively deploy staff so that contractual commitments are met in the most efficient manner.

To support the development of new business and to maintain contact with a wide range of customers, Cefas exhibited at several exhibitions and scientific events. These included the 6th Conference on Fish Telemetry (Sesimbra, Portugal), the 2nd International Bio-logging Science Symposium (St Andrews), the Aggregate Levy Sustainability Fund Technical Conference (London), the 6th International Crustacean Conference (Glasgow), Future Fish Eurasia (Istanbul), Offshore Europe (Aberdeen), Oceanology International (London), Black Sea & Caspian Ecology (Istanbul) and Coastal Futures (London).

A core element of our service is to respond promptly to approaches. For example, we replied to 99% of letters within 15 working days, and we met 99.9% of visitors to our laboratories within ten minutes of their arrival. One complaint was received during the period of the report. Our charter sets out our service standards: **www.cefas.co.uk/about/charter.htm**.

Above left: New Cefas data storage tag (G5) being used on little penguins on Phillip Island, Australia ©Y Ropert-Coudert

Above: RV *Cefas Endeavour* at berth in Lowestoft ©M J Page

people

People are our most important asset. Without their creative input we could not deliver world-class science. This year we have worked hard to recognise and support their efforts, and have pursued development programmes to further enable staff and our business.

Cefas is affiliated to the University of East Anglia, and several of our scientists hold honorary research positions in the science faculties of this and other universities.

Learning and development

Our priorities for learning and development have focused on improving delivery. Some 200 staff were trained in the new Cefas project management methodology, and a successful bid to Defra's Challenge Fund enabled 300 staff to attend the Winning Edge course. This programme develops success-orientated thinking in support of culture change.

A trial programme for senior managers, leading to Business and Technology Education Council (BTEC) level 7 qualifications, has started in order to support the Professional Skills for Government initiative.

As well as the traditional trawl and application routes, we provide the opportunity for further career advancement through the Cefas Individual Merit Promotion scheme, which enables outstanding staff to be promoted in post.

Investor in People

Cefas has again been successful in its IiP assessment. We are proud that our strategy and planning aspects achieved level 2 of the new profiling standard.

Fair and open recruitment

Cefas' support for the Race Relations Act and its use of the Positive About Disabled People symbol underlines our recruitment policy, which is based upon fair and open competition. We select on merit alone and have a culture based on transparency, consultation and inclusiveness.

More than 10% of our staff gained promotions

Females represent 36% of recruits, and of the 51.7% who declared ethnicity, 11.25% were of ethnic minority origin

Rewards and recognition

Cefas has recently implemented a new pay and rewards package that is competitive with the external market. It provides enhanced benefits for the top performers and a clear mechanism of pay progression for all staff.

Cefas has received an award of excellence for last year's Annual Report and Accounts. It was judged a finalist in the public sector category in the Communicators in Business (CiB) Awards 2006.

Above left: Cefas scientists discussing phytoplankton identification using high-powered inverted microscopes

Above top: Cefas' Communications Manager holding the Award of Excellence certificate at the CiB Awards in Bournmouth

financial performance

Cefas has met its ministerial targets set for financial performance and efficiency for the year ended 31 March 2006. As an agency under the Net Accounting regime, Cefas has an ongoing requirement to recover the full economic cost of the services the agency provides. This was achieved while exceeding the Gershon efficiency target of a 2.5% reduction in annual costs.

The overall net surplus of £197,000 (2004–05: surplus of £60,000) generated a total cost recovery position of 100%, falling within the tolerances allowed. This surplus is after an exceptional impairment charge of £315,000, which arose as a consequence of Cefas' decision to dispose of a surplus facility, resulting in a write down to its recoverable value.

Turnover for the year was £40,415,000, an 8% increase on 2004–05. Income from Defra of £32,181,000 (2004–05: £30,263,000) accounted for 80% of turnover (2004–05: 81%). Another 11% of income (2004–05: 10%) came from other UK government departments and agencies, where particularly strong growth in the services Cefas supplies to the Food Standards Agency was achieved. A further 9% of income (2004–05: 9%) came from EC, foreign government and commercial sources.

Controls on expenditure remained tight during the year, yet many new initiatives resulted in gains for Cefas. This has included support staff, where the average number of staff has fallen from 135 in 2004–05 to 132 in 2005–06, a 2% reduction, while turnover has risen by 8%. The financial benefits from the 2004–05 voluntary Early Retirement Scheme amounted to £335,000.

Efficiency gains in excess of £500,000 were realised as a result of the disposal of Cefas' older research vessel in the last quarter of 2004–05. The remaining research vessel, *Cefas Endeavour*, is fully utilised and excess requirements are met through the chartering of third-party vessels.

Capital charges relating to land, buildings and our research vessel totalled £3,925,000 during the year. The land and buildings were revalued by the Valuation Office Agency as at 1 April 2005.

Capital charges remain notional, which assists Cefas in being cash positive. Defra, having reviewed the cash requirements of Cefas, requested payment of £4,340,000 (2004–05: £10,582,000), which has been reflected in the accounts (see Note 17).

Capital investment in the business of £1,611,000 (2004–05: £1,580,000) was principally incurred on an extension to the Burnham laboratory costing £925,000 which was completed in March 2006. This enhanced facility provides modern office and conference space for more than 40 staff in a very environmentally sustainable structure. The remaining capital investment was in scientific equipment, information technology developments and improvements to laboratory facilities. An example of this investment is the implementation of a new e-procurement system that will deliver both processing and purchasing efficiencies into the future.

The prompt payment of suppliers is subject to a government target requiring Cefas to make settlement within 30 days of the receipt of goods and services. During the year 89% (2004–05: 71%) of supplier invoices were paid within the stipulated timeframe.

Above: Fish sampling in the wet laboratory on RV *Cefas Endeavour*

Left: SmartBuoys rigged ready for deployment

performance against ministerial targets

Cefas' key targets are reviewed annually to ensure ongoing alignment with our purpose. Targets are set by the Minister and announced in the House of Commons for the forthcoming year. Achievement is measured annually and audited as part of our reporting process.

We are pleased to report that we have not only met, but improved upon, all our targets for the year.

1. Delivery of outputs
(New target 2004–05)

To fulfil commitments on time, within budget and to agreed standards of quality

2004–05 Target achieved

2005–06

Target: Overall delivery of milestones to exceed 90%. R&D milestones are reported on as a proportion of agreed outputs weighted by value of contracts.

Outturn: Target achieved

2. Strong science

To enhance scientific capability and reputation

2003–04 Target achieved

2004–05 Target achieved

2005–06

Target: To achieve a high standard of excellence based on indicators of scientific and technical quality, with an overall score to exceed 75%.

Outturn: Target achieved

3. Customer focus

To provide a high standard of services to the satisfaction of customers

2003–04 Target achieved

2004–05 Target achieved

2005–06

Target: Overall customer satisfaction survey score to exceed 82%.

Outturn: Target achieved. Responses to the customer satisfaction survey were received from 57% of the customer base, representing 52% by value of Cefas' programme. The weighted average score, based on seven aspects of service quality, was 86%.

4. Financial

To recover the full cost of services and invest for the future

2003–04 Target partially achieved

2004–05 Target fully achieved

2005–06

Target: To achieve 100% cost recovery. Fully achieved if cost recovery is 100% or greater, and partially achieved for recovery between 98% and 100%.

Outturn: Target fully achieved

5. Efficient, cost-effective operation

To operate with simple, reliable and effective processes

2003–04 Target achieved

2004–05 Target achieved

2005–06

Target: To achieve agreed Gershon efficiency plan savings of 2.5%.

Outturn: Target achieved

6. Investment in people
(New target 2004–05)

To respect and help the agency's people to develop

2004–05 Target achieved

2005–06

Target: Overall annual staff survey satisfaction score to exceed 63%. Measured by an annual questionnaire to staff.

Outturn: Target achieved

statements and reports

Statement of Accounting Officer's Responsibilities

1. Under the Government Resources and Accounts Act 2000 the agency is required to prepare resource accounts for each financial year, in conformity with a Treasury direction, detailing the resources acquired, held or disposed of during the year, and the use of resources by the agency during the year.

2. The resource accounts are prepared on an accruals basis and must give a true and fair view of the state of affairs of the agency, the net resource outturn, resources applied to objectives, recognised gains and losses and cash flows for the financial year.

3. The Department for Environment, Food and Rural Affairs (Defra) has appointed the Head of the agency as Accounting Officer of the agency with overall responsibility for preparing the agency's accounts and for transmitting them to the Comptroller and Auditor General.

4. In preparing the accounts the principal Accounting Officer is required to comply with the Financial Reporting Manual prepared by HM Treasury, and in particular to:

- observe 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, as set out in the Financial Reporting Manual, have been followed and disclose and explain any material departures in the accounts; and
- prepare the accounts on a going concern basis.

5. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which an Accounting Officer is answerable, for keeping proper accounting records and for safeguarding the agency's assets, are set out in the Accounting Officers' Memorandum issued by HM Treasury and published in Government Accounting.

6. The maintenance and integrity of the Cefas website is the responsibility of the Accounting Officer.

Cefas Statement on Internal Control

Scope of responsibility

As Accounting Officer, I have responsibility for maintaining a sound system of internal control which supports the achievement of Cefas' policies, aims and objectives, set by the department's Ministers, whilst safeguarding the public funds and departmental assets for which I am personally responsible, in accordance with the responsibilities assigned to me in Government Accounting.

I ensure that the Defra Permanent Secretary, the principal Accounting Officer for the Department, is aware of the main risks managed by the agency through regular reporting of the top risks. Additionally:

- the agency's business plans that are submitted to, and approved by, Ministers include sections on risk;
- I am responsible for the timely production of data required by Defra for in-year monitoring of its accounts. I ensure that Cefas observes any general guidance issued by HM Treasury or the Cabinet Office, and effects any recommendations of the Public Accounts Committee (PAC), other Parliamentary Select Committees or other Parliamentary authority insofar as they are accepted by Government.

The purpose of the system of internal control

I am responsible for commissioning the internal audit and management inspection services required to ensure the proper and efficient conduct of Cefas' affairs and to discharge my responsibilities. These services comply with the objectives, standards and practices laid down by HM Treasury.

The system of internal control is designed to manage risk to a reasonable level rather than to eliminate all risk of failure to achieve policies, aims and objectives; it can therefore only provide reasonable and not absolute assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify and prioritise the risks to the achievement of departmental policies, aims and objectives, to evaluate the likelihood of those risks being realised and the impact should they be realised and to manage them efficiently, effectively and economically. The system of internal control has been in place for the year ended 31 March 2006 and up to the date of approval of the annual report and accounts and accords with Treasury guidance.

Capacity to handle risk

The Chief Executive is advised by the Cefas Management Board (CMB): the top level of management within the agency. It supports me in my responsibilities for providing overall direction and governance of Cefas' activities and managing risk. It provides a forum for planning strategy, setting policies, reviewing performance, and making decisions that affect Cefas as a whole.

The executive board membership consists of myself, Deputy Chief Executive Officer, two science directors, commercial director, HR director and finance and resources director. The non-executive membership consists of a Defra representative and two external advisers.

The Board's principal functions are to:

- establish Cefas' purpose
- set strategic aims for the agency
- set corporate targets
- commission, approve and prioritise resource plans, organisational arrangements, policies and actions
- conduct monitoring and review
- advise the Chief Executive

Capacity to handle risk (continued)

The CMB achieves its objectives through bi-monthly board meetings and planning meetings for the executive, delegation to a series of committees and working groups and close interaction with Cefas Heads of Group. The Board actively communicates its activities and decisions to all Cefas staff. The CMB is presented with monthly financial and management information designed to monitor performance, and decisions are supported by papers presented in a standard format.

Individual CMB members lead on specific risks registered under four strategic work programmes namely: Science, Customers, Organisational Efficiency, People. Science Heads of Group and Heads of Support Units carry responsibility for specific activities within their areas of operation. The Audit and Risk Committee is a sub-committee of the CMB, constituted to give advice on the adequacy of internal and external audit arrangements, and on the implications of the assurances provided in respect of internal control and risk management.

New staff are introduced to the system of internal control as part of a formal induction process. Further staff guidance is available in the Cefas Risk Management Plan, provided on the local intranet. Risk assessment is a requirement of the standard contract tendering procedure to manage the risk inherent in this activity. Training for project managers includes advice on risk management. Cefas staff take advantage of the sharing of best practice provided by Defra and by local risk and project reviews.

The risk environment

The top risk priorities currently identified in the Cefas Risk Register concern maintaining reputation as a supplier and employer of choice, potential delivery problems associated with increased income, maintaining Defra's commitment to Cefas, high fixed and running costs and shortcomings in some management information systems.

In Cefas the main processes we have in place for identifying, evaluating and managing risk are:

- Regular risk reviews undertaken by the CMB to identify, evaluate and update the risks facing Cefas. The Board sets the priorities for risk in key business areas by prioritising and delegating specific activity and requiring feedback as necessary before authorising consequent actions.
- A documented risk management plan containing the register of top Cefas risks assigned to and managed by individual management board members together with summaries of risk management by science Heads of Group and Support Unit Heads.
- Written statements from managers on the steps they are taking to manage risk in their areas of responsibility.
- Discussion at meetings in all levels of Cefas management.
- A system of internal control based on a framework of regular management information, administrative procedures, management supervision and a system of delegation and accountability.
- Documented risk assessment procedures in support of tender activity for new business.
- Reporting Cefas' top risks to Defra for inclusion in the Department's risk register.

Our management of risk is embedded in policymaking, planning and delivery by:

- an appointed risk co-ordinator who meets all members of senior management individually to discuss and embed risk management;
- managers who promote risk management at team meetings;
- corporate risk management documentation that is available to staff via an intranet site;
- embedding risk management in mandatory business planning and tendering procedures;
- the induction course for new entrants that includes a section on risk management; and
- the operation of both a whistle blowing and an anti-fraud policy.

Communicating corporate values

Corporate values and policies are communicated by notices to staff and on a dedicated intranet corporate site as well as regular briefings for staff by myself and the directors. A committee on staff matters communicates with all staff (union and non-union) in compliance with Information and Consultation of Employees Regulations.

Consultation and communication is managed with customers by dedicated customer relationship managers. Communication and consultation with staff is made via numerous communication channels ranging from senior management 'roadshows' to written notices.

Strategy and planning

Cefas strategy is designed to align with Defra's requirements of the agency as customer and sponsor. The CMB works through me to understand the Defra Laboratory Strategy and respond to it appropriately. At other levels, planning and resourcing is set to meet the customer's requirement and commitment.

Strategic issues are identified by the CMB in consultation with management. Depending upon scale, the directors are then responsible for identifying and evaluating strategic options and presenting them to the CMB for decision-making. Analytical techniques include risk management and HM Treasury financial appraisal methodology. Specialist advice is contracted from time to time to supplement internal expertise. As appropriate, uncertainty is managed by risk review or monthly assessment in the CMB performance report.

I agree prioritisation and ownership of objectives and targets with my directors, which are then cascaded through management and tracked against their own personal objectives.

Change management

The CMB sets in place change management processes to match culture with strategic need. A training strategy, including attitudinal and Professional Skills for Government training, is designed to develop competencies to manage change efficiently.

Implementing change is governed through a corporate projects system designed to prioritise and manage projects systematically, including reporting progress to the CMB.

Change is embedded using communication, training and where appropriate through the appraisal and reward system.

Review of effectiveness

As Accounting Officer, I also have responsibility for reviewing the effectiveness of the system of internal control. My review of the effectiveness of the system of internal control is informed by the work of the internal auditors and the executive managers within the agency who have responsibility for the development and maintenance of the internal control framework, and by comments made by the external auditors in their management letter and other reports.

The CMB meets bi-monthly to consider the plans and strategic direction of the agency. The CMB reviews the Cefas Risk Register twice annually and corporate risks are delegated to board members to manage.

The Audit and Risk Committee is a formally constituted committee of the CMB. The committee is chaired by an external independent member and includes two further external independent members together with three members of the Cefas executive management team.

The Committee considers and provides advice on:

- Internal Control and Risk Management: reviews the establishment and maintenance of an effective system of internal control and risk management.
- Internal Audit: oversees the appointment and effective operation of internal audit; ensures effective co-ordination between internal and external auditor; reviews the internal audit programme and considers the major findings of internal audit coverage and management response.
- External Audit: enhances the effectiveness of the relationship with external audit; discusses with the external auditor, before the audit commences, the nature and scope of the audit and interaction with internal audit plans; reviews external audit reports.
- Financial Reporting: reviews the annual financial statements before submission to the CMB, focusing particularly on changes in and compliance with accounting policies and practices, major judgmental areas and significant adjustments resulting from the audit.

The Committee actively seeks to add value to Cefas as part of its work.

Meetings are held not less than four times per year in accordance with an annual schedule that includes oversight of annual report and accounts drafting, outcome of risk review and health & safety reporting as well as routine review of audit reports.

Cefas receives regular reports by internal audit, to Government Audit Standards, which includes the Head of Internal Audit's independent opinion on the adequacy and effectiveness of the agency's system of governance, internal control and the system for risk management, together with recommendations for improvement. The internal audit service has been provided by PricewaterhouseCoopers LLP. The work of internal audit is informed by an analysis of the risks to which Cefas is exposed and annual audit plans are based on this analysis.

Performance management

The performance of Cefas is regularly and routinely measured against key objectives set by the CMB creating a framework of management control to continually improve performance. The key processes within that framework are summarised below :

- Performance cycle: the organisation's vision is clearly established and publicised. All subsequent strategy, business plans, set objectives and training plans are designed to support the vision.
- Business planning and prioritisation: a five year corporate plan and a more detailed annual budget are set before the start of each year. Performance against these and additional targets is reported to and reviewed monthly by the CMB.
- Key performance indicators: reported against monthly. These link to the key strategic aims and to the management of key risks. Such indicators are both robust, to ensure comparability, and flexible, to adapt to changing needs.
- Accountability for performance: Cefas objectives are embedded within the set objectives of appropriate CMB members who in turn cascade these through the organisation
- Rewarding performance: good performance is celebrated within Cefas through internal publicity. An annual performance-related bonus of up to 9% may also be awarded for excellent performance as assessed in annual reviews.
- Improving performance: plans, objectives and targets are regularly updated to improve performance. Surveys of customers and staff are conducted to input to this process as do successes and failures. Staff innovation incentive schemes are also in place.

Programme and Project Management (PPM)

Acquisition programmes and procurement projects in civil government are subject to Office of Government Commerce (OGC) reviews. The OGC requires that Defra provides an annual assurance on PPM controls in the Defra family. The OGC's mandatory PPM controls are in place and operating consistently and effectively in Cefas, for suitable projects, beginning with an infrastructure procurement project during 2005-06.

All projects are governed using specific project management processes and an IT system designed to monitor resource and performance.

Significant internal control problems

I am not aware of any significant control issues arising in the year to 31 March 2006. In my statement last year, I highlighted ongoing actions regarding our laboratory information management systems and development of our disaster recovery plan. I am pleased to report that the necessary actions have now been completed.

I have been advised on the implications of the result of my review of effectiveness of the system of internal control by the CMB and the Audit and Risk Committee, and a plan to ensure continuous improvement of the system is in place.

Signed:

Mark Farrar
Chief Executive

Date: 22 May 2006

Remuneration Report

The Cabinet Office, subject to HM Treasury remits, sets the remuneration of the Chief Executive and Deputy Chief Executive. They are Senior Civil Servants and their contract of employment is with Defra but Cefas bears the cost of their employment. Up to 15% of their remuneration is performance related and is reviewed against ministerial targets.

The Chief Executive, subject to HM Treasury remits, sets the remuneration of all other CMB members. The executive members are directly employed as Civil Servants. Up to 9% of their remuneration is determined by the Cefas Performance Related Pay Scheme, which is subject to the attainment of set objectives as determined by the Chief Executive. The non-executive members are employed on a call off basis with their remuneration being based on a daily rate and the reimbursement of expenses.

All executive directors are under permanent contracts of employment, except T Green who is on a fixed term appointment to 21 August 2007, and all have a maximum notice period from Cefas of six months and a minimum from the employee of three months. The length of service, salary and age of the employee determine any termination payments payable. Non-executive directors have no contractual notice period costs payable or compensation payments on termination. No awards in respect of early termination were made to existing or former directors in the year.

The remuneration of the most senior managers of the agency were as follows:

	Salary band 2005/06 £'000	Salary band 2004/05	Perfomance Bonus 2005/06 £'000	Perfomance Bonus 2004/05	Total Remuneration 2005/06 £'000	Total Remuneration 2004/05 £'000
Management Board Member						
Chief Executive **M Farrar**	75 - 80	65 - 70	0 - 5		80 - 85	65 - 70
Deputy to the Chief Executive **Dr J Horwood**	70 - 75	65 - 70	0 - 5	5 - 10	75 - 80	75 - 80
Science Director **Dr M Waldock**	55 - 60	50 - 55	0 - 5	0 - 5	55 - 60	50 - 55
Science Director **Dr S Malcolm**	50 - 55	45 - 50	0 - 5	0 - 5	50 - 55	45 - 50
Finance and Resource Director **J Dawe** (to 31 June 2005) **T Green** (from 22 August 2005)	0 - 20 30 - 35	25 - 30	0 - 5 0 - 5	0 - 5	0 - 20 30 - 35	25 - 30
Commercial Director **B Robinson**	55 - 60	55 - 60	0 - 5	0 - 5	60 - 65	55 - 60
Director of Staff Development **D Carter**	40 - 45	35 - 40	0 - 5	0 - 5	40 - 45	35 - 40

Salaries include gross salaries, overtime, reserved rights to London weighting or London allowances, recruitment and retention allowances, private office allowances and any other allowance to the extent that it is subject to UK taxation. No board members were in receipt of any benefits in kind (2004/05: £NIL).

Non-Executive Directors	Fee band 2005/06 £'000	Fee band 2004/05	Perfomance Bonus 2005/06 £'000	Perfomance Bonus 2004/05	Total Remuneration 2005/06 £'000	Total Remuneration 2004/05 £'000
H Walker	5 - 10	5 - 10	0	0	5 - 10	5 - 10
A Tweedie	10 - 15	10 - 15	0	0	10 - 15	10 - 15
T Daly (to 27 September 2005)	0	0	0	0	0	0
A Robinson (from 30 January 2006)	0	0	0	0	0	0

Neither T Daly nor A Robinson are in receipt of any fees as they are employed by Defra, which funds their position as a non-executive director.

The pension entitlements of the most senior managers of the agency were as follows:

Management Board Member	Real increase in pension and related lump sum at age 60 £'000	Total accrued pension and related lump sum at age 60 £'000	CETV at 31/3/06 £'000	CETV at 31/3/05 £'000	Real increase in CETV £'000
Chief Executive **M Farrar**	0 - 2.5 plus 2.5 - 5 lump sum	5 - 7.5 plus 15 -17.5 lump sum	86	49	21
Deputy to the Chief Executive **Dr J Horwood**	0 - 2.5 plus 2.5 - 5 lump sum	32.5 -35 plus 100 - 102.5 lump sum	774	511	23
Science Director **Dr M Waldock**	0 - 2.5 plus 0 - 2.5 lump sum	15 - 20 plus 55 - 60 lump sum	362	277	15
Science Director **Dr S Malcolm**	0 - 2.5 plus 2.5 - 5 lump sum	15 - 17.5 plus 50 - 52.5 lump sum	326	240	25
Finance and Resource Director **J Dawe** (to 31 June 2005)	0 - 2.5 plus 0 - 2.5 lump sum	0 - 2.5 plus 0 - 2.5 lump sum	0	2	0
T Green (from 22 August 2005)	0 - 2.5 plus 0 - 2.5 lump sum	0 - 2.5 plus 0 - 2.5 lump sum	6	0	4
Commercial Director **B Robinson**	0 - 2.5 plus 2.5 - 5 lump sum	20 - 22.5 plus 65 - 67.5 lump sum	443	336	16
Director of Staff Development **D Carter**	0 - 2.5 plus 2.5 - 5 lump sum	10 - 12.5 plus 30 - 32.5 lump sum	182	121	20

Details of pension arrangements are provided in Note 4 to the Accounts.

The increase in CETVs over and above the real increase is principally due to a change in the basis of actuarial evaluations.

Signed:

Mark Farrar
Chief Executive

Date: 22 May 2006

The Certificate and Report of the Comptroller and Auditor General to the House of Commons

I certify that I have audited the financial statements of the Centre for Environment, Fisheries and Aquaculture Science for the year ended 31 March 2006 under the Government Resources and Accounts Act 2000. These comprise the Income and Expenditure Account and Statement of Recognised Gains and Losses, the Balance Sheet, the Cashflow Statement and the related notes. These financial statements have been prepared under the accounting policies set out within them.

Respective responsibilities of the Agency, the Chief Executive and Auditor

The Agency and Chief Executive are responsible for preparing the Annual Report and the financial statements in accordance with the Government Resources and Accounts Act 2000 and HM Treasury directions made thereunder and for ensuring the regularity of financial transactions. These responsibilities are set out in the Statement of Accounting Officer's Responsibilities.

My responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements, and with International Standards on Auditing (UK and Ireland).

I report to you my opinion as to whether the financial statements give a true and fair view and whether the financial statements and the part of the Remuneration Report to be audited have been properly prepared in accordance with HM Treasury directions issued under the Government Resources and Accounts Act 2000. I also report 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 to you if, in my opinion, the Annual Report is not consistent with the financial statements, if the Agency has not kept proper accounting records, if I have not received all the information and explanations I require for my audit, or if information specified by relevant authorities regarding remuneration and other transactions is not disclosed.

I review whether the statement on pages 31 to 35 reflects the Agency's compliance with HM Treasury's guidance on the Statement on Internal Control, and I report if it does not. I am not required to consider whether the Accounting Officer's statements on internal control cover all risks and controls, or to form an opinion on the effectiveness of the Agency's corporate governance procedures or its risk and control procedures.

I read the other information contained in the Annual Report and consider whether it is consistent with the audited financial statements. This other information comprises the management commentary (Chief Executive's statement, Strong science, Customers, People, Financial performance and Performance against ministerial targets) and the unaudited part of the Remuneration Report. I consider the implications for my report if I become aware of any apparent misstatements or material inconsistencies with the financial statements. My responsibilities do not extend to any other information.

Basis of audit opinion

I conducted my audit in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board. My audit includes examination, on a test basis, of evidence relevant to the amounts, disclosures and regularity of financial transactions included in the financial statements and the part of the Remuneration Report to be audited. It also includes an assessment of the significant estimates and judgments made by the Agency and Chief Executive in the preparation of the financial statements, and of whether the accounting policies are most appropriate to the Agency'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 and the part of the Remuneration Report to be audited are free from material misstatement, whether caused by fraud or error 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 also evaluated the overall adequacy of the presentation of information in the financial statements and the part of the Remuneration Report to be audited.

Opinions

In my opinion:

- the financial statements give a true and fair view, in accordance with the Government Resources and Accounts Act 2000 and directions made thereunder by HM Treasury, of the state of the Agency's affairs as at 31 March 2006 and of the surplus, total recognised gains and losses and cashflows for the year then ended;
- the financial statements and the part of the Remuneration Report to be audited have been properly prepared in accordance with HM Treasury directions issued under the Government Resources and Accounts Act 2000; 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

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

Date: 30 May 2006

accounts

Foreword to the Accounts for the Year Ended 31 March 2006

History and Statutory Background

Cefas is an Executive Agency of the Department for Environment, Food and Rural Affairs (Defra) that was created on 1 April 1997 from the former Directorate of Fisheries Research (DFR) under the Next Steps programme. It is fully accountable to Parliament through Ministers.

The status and legal framework is laid out in the Cefas Framework Document. Its origins date from 1902 when a research station was established to investigate declining fish stocks as part of the UK contribution to the newly created International Council for the Exploration of the Sea (ICES).

Cefas currently operates from three sites: Lowestoft, Weymouth, Burnham-on-Crouch, with bases for sampling officers in Whitehaven, Newlyn, Whitby and Scarborough.

Strategic Aims

Cefas' strategic aims are given in the Chief Executive's introduction on pages 4 to 6 of the Annual Report.

Principal Activities

The Agency's principal activities are to deliver an efficient service of specialist scientific and technical support, consultancy and advice in the fields of fisheries management, environment protection and aquaculture. The Chief Executive's Statement on pages 4 to 6 of the Annual Report, and the sections on delivering science on pages 10 to 23, contain further information on the business activities of Cefas.

Pension Liabilities

Pension liabilities arising from early retirement or other enhancements are accrued in total in the year in which the liability arises.

Pension benefits are provided through the Civil Service Pension arrangements. From 1 October 2002, Civil Servants may be in one of three statutory based "final salary" defined benefit schemes (Classic, Premium and Classic Plus). New entrants after 1 October 2002 may choose between membership of Premium or joining a good quality "money purchase" stakeholder-based arrangement with a significant employer contribution (the Partnership Pension Account). Details are provided in the Remuneration Report and Note 4 to the Accounts.

Accounts Direction

The Accounts have been prepared under a direction issued by HM Treasury in accordance with section 7(2) of the Government Resources and Accounts Act 2000.

Result for the year

The net surplus for the year is £197,000 (2005/04: surplus of £60,000).

Management

The Parliamentary Secretary (Lords) Minister for Sustainable Farming and Food with overall responsibility for Cefas for the period ending 5 May 2006 was Lord Bach of Lutterworth. From that date, Lord Rooker assumed responsibility.

The Chief Executive of Cefas is Mark Farrar. The composition of the Cefas Management Board is shown on page 46 of the Accounts. The Chief Executive was appointed on 1 August 2004 by the Secretary of State for Defra on an interim contract, extended to March 2007. Members of the Management Board are appointed directly by the Chief Executive.

Governance

The Agency's strategic governance involves the Defra Laboratory Strategy Group, chaired by Lynton Barker, which has replaced the Laboratory Strategy Committee set up in response to the recommendations of the Review of Defra's Agencies in 2002. The Group covers the Central Science Laboratory, as well as Cefas.

Employment of Disabled Persons

Cefas follows the Civil Service Code of Practice on the Employment of Disabled People. The Agency's policy is to recruit, train and provide career development facilities for disabled persons on the same basis as for other staff and to make every effort to retrain and assist any individuals disabled in the course of their employment.

The average number of disabled persons employed in 2005–06 is 23 (2004–05: 22)

Equal Opportunities and Employee Involvement

Cefas follows an equal opportunities policy for fair and open recruitment of permanent staff. Regular exchanges of information with staff take place through formal and informal consultative arrangements at Agency and local level. Such exchanges include Agency objectives, plans, progress and matters relating to the interests of staff.

Payment of Suppliers

Cefas' prompt payment policy is described in Note 25 to the Accounts.

Auditors

Comptroller and Auditor General, National Audit Office
157 - 197 Buckingham Palace Road, Victoria, London SW1W 9SP

The cost of work performed by the external auditors is £29,000 and there are no costs for non-audit work.

So far as the Accounting Officer is aware, there is no relevant information of which the auditors are unaware.

Signed:

Mark Farrar
Chief Executive

Date: 22 May 2006

Income and Expenditure Account

For the year ended 31 March 2006

	Notes	2005/06 £'000	2004/05 £'000
Turnover	**2 & 3**	**40,415**	**37,394**
Cost of Sales	**4 & 5**	(38,177)	(35,706)
Operating Surplus		**2,238**	**1,688**
(Loss)/ Profit on Disposal of Fixed Assets		(27)	376
Notional Interest Payable	**26**	(2,014)	(2,004)
Net Surplus	**14**	**197**	**60**
Percentage Total Cost Recovery		**100**	**100**

All amounts relate to continuing activities.

Statement of Recognised Gains and Losses

For the year ended 31 March 2006

	2005/06 £'000	2004/05 £'000
Surplus for the Year	197	60
Net Gain on Revaluation of Fixed Assets	2,877	2,650
Total Gains Recognised in Year	**3,074**	**2,710**

The Notes on pages 47 to 59 form part of these accounts.

Balance Sheet

As at 31 March 2006

	Notes	2005/06 £'000	2005/06 £'000	2004/05 £'000
Fixed Assets				
Tangible Fixed Assets	**7**		59,110	58,271
Investments	**8**		150	150
Total Fixed Assets			**59,260**	**58,421**
Current Assets				
Work in Progress	**9**	701		719
Debtors	**10**	3,285		3,973
Cash at Bank and in Hand	**19**	5,874		4,784
Total Current Assets		**9,860**		**9,476**
Creditors:				
Amounts falling due within one year	**11**	(6,139)		(5,561)
Net Current Assets			**3,721**	**3,915**
Total Assets Less Current Liabilities			**62,981**	**62,336**
Creditors:				
Amounts falling due after one year	**11**		(126)	(173)
Provisions for Liabilities & Charges	**13**		**(972)**	**(1,044)**
TOTAL ASSETS LESS LIABILITIES			**61,883**	**61,119**
RESERVES				
General Fund	**14**		47,658	49,580
Revaluation Reserve	**14**		14,225	11,539
Total Reserves as at 31 March			**61,883**	**61,119**

The Notes on pages 47 to 59 form part of these accounts.

Signed:

Mark Farrar
Chief Executive

Date: 22 May 2006

Cash Flow Statement

For the year ended 31 March 2006

	Notes	2005/06 £'000	2004/05 £'000
Net cash inflow from operating activities	**15**	6,888	6,923
Capital expenditure and financial investment	**16**	(1,458)	(766)
Financing	**17**	(4,340)	(10,582)
Net cash inflow/(outflow)		**1,090**	**(4,425)**

The Notes on pages 47 to 59 form part of these accounts.

Notes to the Accounts

Note 1. Statement of Accounting Policies

1.1 Statement of Accounting Policies
These financial statements have been prepared in accordance with the Financial Reporting Manual issued by HM Treasury. The particular accounting policies adopted by Cefas are described below. The accounting policies used in preparing the accounts are consistent with those used last year.

1.2 Accounting Convention
These accounts have been prepared under the historical cost convention, modified to include the revaluation of fixed assets at their value to Cefas by reference to their current costs.

1.3 Tangible Fixed Assets
Asset values are modified annually by the use of indices for current cost accounting as supplied by the Office for National Statistics.

1.3.1 Land and Buildings
Land and buildings are professionally valued at intervals of no greater than 5 years. The lives given to the buildings fall in the range of 4 to 41 years.

The title to the freehold land and buildings occupied by Cefas is held by Defra.

1.3.2 Other Fixed Assets
The capitalisation threshold for fixed assets is £3,000. Asset pools exist for items of IT equipment with individual values ranging from £500 to £3,000. As from September 2003, computers costing less than £3,000 have not been capitalised.

1.3.3 Depreciation of Tangible Fixed Assets
Depreciation is provided on all fixed assets, with the exception of land, at rates calculated to write off the valuation of each asset on a straight-line basis over its expected useful economic life.

Asset lives are as follows:

Buildings	**4 - 41 years**
Information Technology	**3 - 6 years**
Scientific and General Equipment	**5 - 10 years**
Vessels	**1 - 30 years**
Vehicles	**6 - 8 years**
Fixtures and Fittings	**1 - 30 years**

1.4 Investments
Investments are reported at market value or at cost where market value cannot be readily ascertained. In accordance with the Financial Reporting Manual, the fixed asset investment has not been consolidated as it is outside the Departmental boundary.

1.5 Work in Progress
Work in progress is valued at the lower of cost or net realisable value.

1.6 Research and Development
Expenditure on research and development (Seedcorn Projects) is treated as an operating cost in the year in which it is incurred and taken to the Income and Expenditure Account. Fixed assets, which are acquired for use in research and development, are depreciated over their useful economic life.

1.7 Government Grants
Grants are recognised in the same period as their related expenditure. Grants towards fixed asset purchases are treated as a deferred creditor and recognised as income over the useful life of the asset.

1.8 Operating Income
Operating income is shown net of Value Added Tax (VAT) and comprises fees and charges for services provided to core Defra, external customers, other government agencies and public sector repayment work receipts from the European Union.

Turnover is recognised over the term of the individual contract.

1.9 Capital Charge
A notional charge, reflecting the cost of capital used by Cefas, is included in the Income and Expenditure Account. The charge is calculated at the Government standard rate (3.5%) on the average value of all assets excluding cash held at the Office of the Paymaster General, less liabilities and excluding donated assets.

Notes to the Accounts

1.10 Taxation
No taxation is payable on the surplus generated by Cefas.

Cefas is included under the VAT registration of Defra. Irrecoverable VAT, excluding that on capital purchases, is charged to the Income and Expenditure Account in the year in which it is incurred.

1.11 Foreign Exchange
Monetary assets and liabilities denominated in foreign currencies are translated using the rate of exchange at the balance sheet date. Transactions in foreign currencies are translated using the rate of exchange at the date of each transaction, all differences are charged/(credited) to the Income and Expenditure Account.

1.12 Notional Charges
In addition to the capital charge, the following notional costs borne on the Income and Expenditure Account are credited to the General Fund:

Defra Maintenance Charges
Defra Central Overhead Charges
Redundancy and Early Retirement Interest

1.13 Insurance
Cefas, in common with other Government bodies, does not insure the majority of its assets. Losses and compensations are charged to the Income and Expenditure Account.

1.14 Pensions
Pension benefits are provided through the Civil Service Pension arrangements. From 1 October 2002, Civil Servants may be in one of three statutory based "final salary" defined benefit schemes (Classic, Premium and Classic Plus). The schemes are unfunded with the cost of benefits met by monies voted by Parliament each year. Pensions payable under Classic, Premium, and Classic Plus are increased annually in line with changes in the Retail Prices Index. The provisions of the Principal Civil Service Pension Scheme (PCSPS) cover present and past employees, which is non-contributory and unfunded. Although the scheme is a defined benefit scheme, liability for payment of future benefits is a liability of the PCSPS. Cefas meets the cost of pension cover provided for the staff they employ by payment of charges calculated on an accruing basis. There is a separate scheme statement for the PCSPS as a whole.

New entrants after 1 October 2002 may choose between membership of Premium or joining a good quality "money purchase" stakeholder arrangement with a significant employer contribution (the Partnership Pension Account).

1.15 Provisions
1.15.1 Early Departure Costs
Cefas is required to meet the additional cost of benefits beyond the normal PCSPS benefits in respect of employees who retire early. Cefas provides in full for this cost when the early retirement programme has been announced and is binding on Cefas. Cefas may, in certain circumstances, settle some or all of its liability in advance by making a payment to the Paymaster General's Account at the Bank of England for the credit of the Civil Superannuation Vote. The amount provided is shown net of any such payments and is discounted using the Government standard rate of 3.5%.

1.15.2 Bad Debt Provision
A general provision is held against the debtor balance. This is based on a proportion of the debts outstanding plus any specific amounts.

1.16 Leases
Cefas holds no lease where substantially all the risks and rewards of the leased asset are borne by Cefas. Other leases are regarded as operating leases and the rentals are charged to the Income and Expenditure Account on a straight-line basis over the terms of the lease.

1.17 Going Concern
These accounts have been prepared on the basis that Cefas is a going concern.

Note 2. UK Government Income

	2005/06 £'000	2004/05 £'000
Defra	32,200	30,581
Defra Agencies	781	33
Other Government Departments	3,840	3,230
Total UK Government Income	**36,821**	**33,844**

Note 3. Non-UK Government Income

	2005/06 £'000	2004/05 £'000
UK Public Sector	566	300
UK Private Sector	1,101	1,057
European Union	1,278	1,627
Other	649	566
Total Non-UK Government Income	**3,594**	**3,550**

Note 4. Staff Related Expenditure

(a) Staff Costs

	Employed staff £'000	Others £'000	2005/06 Total £'000	2004/05 Total £'000
Wages and Salaries	13,488	331	13,819	13,622
Social Security Costs	1,039	0	1,039	1,016
Superannuation	2,354	0	2,354	1,694
Total Staff Expenditure	**16,881**	**331**	**17,212**	**16,332**

(b) The average number of persons employed by Cefas during the year was:

	Employed staff No.	Others No.	2005/06 Total No.	2004/05 Total No.
Scientific Research & Development	370	8	378	385
Management/Administration	130	2	132	135
Marketing	8	0	8	8
Total	**508**	**10**	**518**	**528**

Notes to the Accounts

Note 4. Staff Related Expenditure (continued)

(c) Pension benefits

Pension benefits are provided through the Civil Service Pension (CSP) arrangements. From 1 October 2002, Civil Servants may be in one of three statutory based "final salary" defined benefit schemes (Classic, Premium and Classic Plus). The schemes are unfunded with the cost of benefits met by monies voted by Parliament each year. Pensions payable under Classic, Premium, and Classic Plus are increased annually in line with changes in the Retail Prices Index. New entrants after 1 October 2002 may choose between membership of Premium or joining a good quality "money purchase" stakeholder arrangement with a significant employer contribution (the Partnership Pension Account).

Employee contributions are set at the rate of 1.5% of pensionable earnings for Classic and 3.5% for Premium and Classic Plus. Benefits in Classic accrue at the rate of 1/80th of pensionable salary for each year of service. In addition, a lump sum equivalent to three years' pension is payable on retirement. For Premium, benefits accrue at the rate of 1/60th of final pensionable earnings for each year of service. Unlike Classic, there is no automatic lump sum (but members may give up (commute) some of their pension to provide a lump sum). Classic Plus is essentially a variation of Premium, but with benefits in respect of service before 1 October 2002 calculated broadly as per Classic.

The Partnership Pension Account is a stakeholder pension arrangement. The employer makes a basic contribution of between 3% and 12.5% (depending on the age of the member) into a stakeholder pension product chosen by the employee. The employee does not have to contribute but where they do make contributions, the employer will match these up to a limit of 3% of pensionable salary (in addition to the employer's basic contribution). Employers also contribute a further 0.8% of pensionable salary to cover the cost of centrally-provided risk benefit cover (death in service and ill health retirement).

Further details about the CSP arrangements can be found at the website: www.civilservice-pensions.gov.uk

The cash equivalent transfer value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. The CETV figures include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the CSP arrangements and for which the CS Vote has received a transfer payment commensurate to the additional pension liabilities being assumed. They also include any additional pension benefit accrued to the member as a result of their purchasing additional years of pension service in the scheme at their own cost.

The real increase in the value of the CETV reflects the increase in CETV effectively funded by the employer. It takes account of the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme arrangement) and uses common market valuation factors for the start and end of the period.

CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries.

(d) Early departure costs

Early departure costs in 2005/06 amounted to £46,000 (2004/05: £600,000), exclusive of employer's contributions to national insurance and superannuation, for lieu of notice and compensation for loss of pension.

Note 5. Other Expenditure

	2005/06 £'000	2004/05 £'000
Laboratory Consumables	5,663	4,811
Depreciation	3,616	3,856
Vessels & Charters	3,579	3,122
Accommodation	2,996	2,962
Rent & Rates	393	369
Vehicles	110	93
Audit	57	40
Hospitality	33	28
Travel & Subsistence	1,159	939
Training	385	316
IT Costs	1,073	884
Lease Charges - IT	126	170
Lease Charges - Other	134	139
Insurance Losses	21	32
Defra Management Overheads	135	152
Telecommunications	117	125
Exchange Losses/(Gains)	10	(4)
Early Departure Costs	46	600
Other Expenditure	1,312	740
Total Expenditure	**20,965**	**19,374**

Note 6. Segmental Report

	2005/06			2004/05		
	Governmental Bodies £'000	Other £'000	Total £'000	Governmental Bodies £'000	Other £'000	Total £'000
Turnover	36,821	3,594	40,415	33,844	3,550	37,394
Cost of Sales	(34,266)	(3,911)	(38,177)	(32,362)	(3,344)	(35,706)
Surplus for the Year	**2,555**	**(317)**	**2,238**	**1,482**	**206**	**1,688**
Return on capital employed	**5.0%**	**(6.3)%**	**4.0%**	**3.0%**	**4.0%**	**3.1%**

Notes to the Accounts

Note 7. Tangible Fixed Assets

	Land	Buildings	Fixtures and Fittings	Vessels	Information Technology	Scientific Equipment	General Equipment	Vehicles	Assets in Course of Construction	Total
Cost or Valuation	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**
At 1 April 2005	1,386	33,164	480	27,707	4,023	9,272	317	319	292	76,960
Indexation	70	1,712	0	1,226	(18)	92	0	3	0	3,085
Revaluation	0	(24)	0	0	0	0	0	0	0	(24)
Additions	0	67	0	0	109	394	7	27	1,007	1,611
Transfers	0	1038	0	0	0	0	0	0	(1,038)	0
Disposals	0	0	0	0	(312)	(159)	(4)	(7)	0	(482)
At 31 March 2006	**1,456**	**35,957**	**480**	**28,933**	**3,802**	**9,599**	**320**	**342**	**261**	**81,150**
Depreciation										
At 1 April 2005	0	(7,462)	(230)	(1,844)	(2,736)	(5,896)	(284)	(237)	0	(18,689)
Indexation	0	(75)	0	(82)	6	(32)	0	(1)	0	(184)
Revaluation	0	0	0	0	0	0	0	0	0	0
Provided in Year	0	(1,450)	(37)	(963)	(385)	(735)	(25)	(21)	0	(3,616)
Transfers	0	0	0	0	0	0	0	0	0	0
Disposals	0	0	0	0	294	144	4	7	0	449
At 31 March 2006	**0**	**(8,987)**	**(267)**	**(2,889)**	**(2,821)**	**(6,519)**	**(305)**	**(252)**	**0**	**(22,040)**
Net Book Value										
At 31 March 2006	**1,456**	**26,970**	**213**	**26,044**	**981**	**3,080**	**15**	**90**	**261**	**59,110**
At 31 March 2005	**1,386**	**25,702**	**250**	**25,863**	**1,287**	**3,376**	**33**	**82**	**292**	**58,271**

Land and buildings were revalued with effect from 1 April 2005 by the Valuation Office Agency, 50 Frederick Street, Edinburgh. The assets were revalued on an existing use basis. This valuation has been used in preparing the accounts up to 31 March 2006.

Note 8. Fixed Asset Investments

	£'000
Cost	
At 1 April 2005	150
Additions	0
Disposals	0
At 31 March 2006	**150**
Provisions	
At 1 April 2005	0
Movement	0
At 31 March 2006	**0**
Net Book Value	
At 31 March 2006	**150**
At 31 March 2005	**150**

In 2001, Cefas purchased the entire share capital of Cefas Technology Limited (CTL) for £150,000. The Management Board has considered the value of the investment and has recorded the investment at cost. This will be reviewed on a regular basis and provision made for any impairment in value.

Cefas' share of the net assets and results of the above investment are as follows:

	2005/06 £'000	2004/05 £'000
Net assets at 31 March	650	476
Turnover	572	442
Profit for the year	173	59

Note 9. Work In Progress

	2005/06 £'000	2004/05 £'000
United Kingdom	356	367
European Union	295	228
Other	50	124
Total Work In Progress	**701**	**719**

Notes to the Accounts

Note 10. Debtors

	2005/06 £'000	2004/05 £'000
Amounts falling due within one year:		
Trade Debtors	1,382	1,672
VAT	100	301
Defra	1,505	1,316
Prepayments and Accrued Income	293	678
Sundry Debtors	5	6
Total Debtors	**3,285**	**3,973**

Note 11. Creditors

	2005/06 £'000	2004/05 £'000
Amounts falling due within one year:		
Trade Creditors	998	1,520
Other Taxation and Social Security	571	475
Accruals	1,329	1,043
Defra	84	110
Other Creditors	6	10
Deferred Income	3,151	2,403
Total under one year creditors	**6,139**	**5,561**
Amounts falling due after more than one year:		
Grants not yet credited to income	0	2
Deferred Income	126	171
Total Creditors	**6,265**	**5,734**

Note 12. Intra-Government Balances

	Debtors: Amounts falling due within one year	Debtors: Amounts falling due after more than one year	Creditors: Amounts falling due within one year	Creditors: Amounts falling due after more than one year
	£'000	£'000	£'000	£'000
Balances with other central government bodies	2,221	0	110	0
Balances with local authorities	37	0	0	0
Balances with NHS Trusts	0	0	0	0
Balances with public corporations and trading funds	0	0	0	0
Balances with bodies external to government	1,027	0	6,029	126
Balance at 31 March 2006	**3,285**	**0**	**6,139**	**126**
Balances with other central government bodies	1,770	0	150	40
Balances with local authorities	0	0	0	0
Balances with NHS Trusts	0	0	0	0
Balances with public corporations and trading funds	0	0	0	0
Balances with bodies external to government	2,203	0	5,411	133
Balance at 31 March 2005	**3,973**	**0**	**5,561**	**173**

Notes to the Accounts

Note 13. Provisions for Liabilities and Charges

	Early Retirement £'000	Estate Dilapidations £'000	Total £'000
Balance at 1 April 2005	1,044	0	1,044
Provided in the year	20	200	220
Utilised in the year	(292)	0	(292)
Balance at 31 March 2006	**772**	**200**	**972**

The provision relates to early retirement and pension commitments, to provide for the cost of future pension payments to staff who have retired before their 60th birthday. The timing and amounts payable are reviewed annually by the Pay and Personnel Agency.

The estates delapidations provision relates to leases on stores at Pinbush Road, Lowestoft, due to end May 2006, and an unused site at Headcorn, due to end September 2007. Under the terms of the leases, Cefas is required to make good the respective sites to the state in which the leases were entered into.

No reimbursement is expected in relation to any of the amounts provided for.

Note 14. Movement on Reserves

	General Fund £'000	Revaluation Reserve £'000	Total £'000
Balance at 1 April 2005	49,580	11,539	61,119
Notional Charges	135	0	135
Notional Interest	2,014	0	2,014
Revaluation	0	2,877	2,877
Realised Element of Revaluation Reserve	191	(191)	0
Income & Expenditure Account	197	0	197
Provision for Early Departure Costs	(119)	0	(119)
Excess Cash Funding Repayable to Defra	(4,340)	0	(4,340)
Balance at 31 March 2006	**47,658**	**14,225**	**61,883**

Note 15. Reconciliation of Net Operating Cost to Net Cash Flow from Operating Activities

	2005/06 £'000		2004/05 £'000
Net surplus/(deficit)	197		60
Adjustments for non-cash transactions			
Depreciation charges	3,616	3,856	
Notional charges	2,149	2,156	
Loss/(Profit) on disposal	27	(376)	
Provisions	220	586	
	6,012		6,222
Adjustments for movements in working capital other than cash			
Decrease in work in progress	18	82	
Decrease/(Increase) in debtors	688	(201)	
Increase in creditors	384	905	
	1,090		786
Use of provisions	(411)		(145)
Net cash inflow from operating activities	**6,888**		**6,923**

Note 16. Capital Expenditure and Financial Investment

	2005/06 £'000	2004/05 £'000
Payments to acquire tangible fixed assets	(1,464)	(1,716)
Receipts from sale of tangible fixed assets	6	950
	(1,458)	**(766)**

Note 17. Financing

	2005/06 £'000	2004/05 £'000
Excess cash funding repaid to Defra	(4,340)	(10,582)
	(4,340)	**(10,582)**

Notes to the Accounts

Note 18. Analysis of Changes in Cash During the Year

	2005/06 £'000	2004/05 £'000
Balance at 1 April	4,784	9,209
Net Cash Flow	1,090	(4,425)
Balance at 31 March	**5,874**	**4,784**

Note 19. Cash at Bank and in Hand

	2005/06 £'000	2005/06 £'000
Commercial Banks	200	721
Office of Paymaster General	5,672	4,061
Cash in Hand	2	2
Total Cash at Bank and in Hand	**5,874**	**4,784**

The balance at 31 March comprised amounts issued from the Consolidated Fund for supply but not spent at year end.

Note 20. Capital Commitments

Cefas had at 31 March capital commitments totalling £NIL (2004/05: £42,000).

Note 21. Post Balance Sheet Events

There are no post balance sheet events to report.

Note 22. Contingent Liabilities

There are no material contingent liabilities.

Note 23. Operating Leases

Rentals under operating leases are charged to the Income and Expenditure Account on a straight-line basis over the term of the lease. At 31 March 2006, the Agency was committed to making the following payments during the next financial year in respect of operating leases:

	2005/06 £'000 Vehicles	2005/06 £'000 Land	2005/06 £'000 IT Equipment	2004/05 £'000 Vehicles	2004/05 £'000 Land	2004/05 £'000 IT Equipment
Operating Leases which expire:						
Within 1 Year	6	14	0	30	21	60
Between 2 to 5 Years	62	10	18	31	91	37
After 5 Years	0	10	0	0	10	0
Total	**68**	**34**	**18**	**61**	**122**	**97**

Note 24. Related Party Transactions

Cefas has dealings with the Department for Environment, Food and Rural Affairs (Defra) and its sponsored bodies, notably the Veterinary Medicine Directorate and the Central Science Laboratory. One of Cefas' non-executive directors is employed by Defra.

Cefas Technology Limited is a fixed asset investment (see Note 8). The shares are held by M Farrar as nominee of the trustee for Cefas.

No Board Member, member of key management staff or other related party has undertaken any material transactions with Cefas, Cefas Technology Limited or other related parties during the year.

Note 25. Prompt Payment Policy

Cefas has a duty to meet the CBI 30 day payment policy. During the year, the percentage of invoices that met the policy is as below:

	2005/06 %	2004/05 %
Quarter 1	85	84
Quarter 2	86	52
Quarter 3	92	66
Quarter 4	94	82
Average percentage of invoices paid within 30 days	**89**	**71**

No interest was paid in respect of late payment of commercial debt (2004/05: £NIL).

Note 26. Notional Interest

	2005/06 £'000	2004/05 £'000
Fixed Assets	2,014	2,004
Total Notional Interest	**2,014**	**2,004**

acronyms

BEQUALM	Biological Effects Quality Assurance in Monitoring Programmes
BTEC	Business and Technology Education Council
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CiB	British Association of Communicators in Business
CMB	Cefas Management Board
CSL	Central Science Laboratory
CTL	Cefas Technology Limited
Defra	Defra for Environment, Food and Rural Affairs
DFID	Department for International Development
DTI	Department of Trade and Industry
EC	European Commission
EU	European Union
FSP	Fisheries Science Partnership
GIS	geographic information system
ICES	International Council for the Exploration of the Sea
IiP	Investors in People
iSEA	interactive Spatial Explorer and Administrator
KHV	koi herpes virus
MCCIP	Marine Climate Change Impacts Partnership
MDIP	Marine Data & Information Partnership
MPAs	marine protected areas
NERC	Natural Environment Research Council
ODPM	Office of the Deputy Prime Minister
OSPAR	Oslo and Paris Commission for the Protection of the Marine Environment of the North-East Atlantic
SEA	Strategic environmental assessment
SVC	spring viraemia of carp
UKAS	United Kingdom Accreditation Service
VLA	Veterinary Laboratories Agency

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