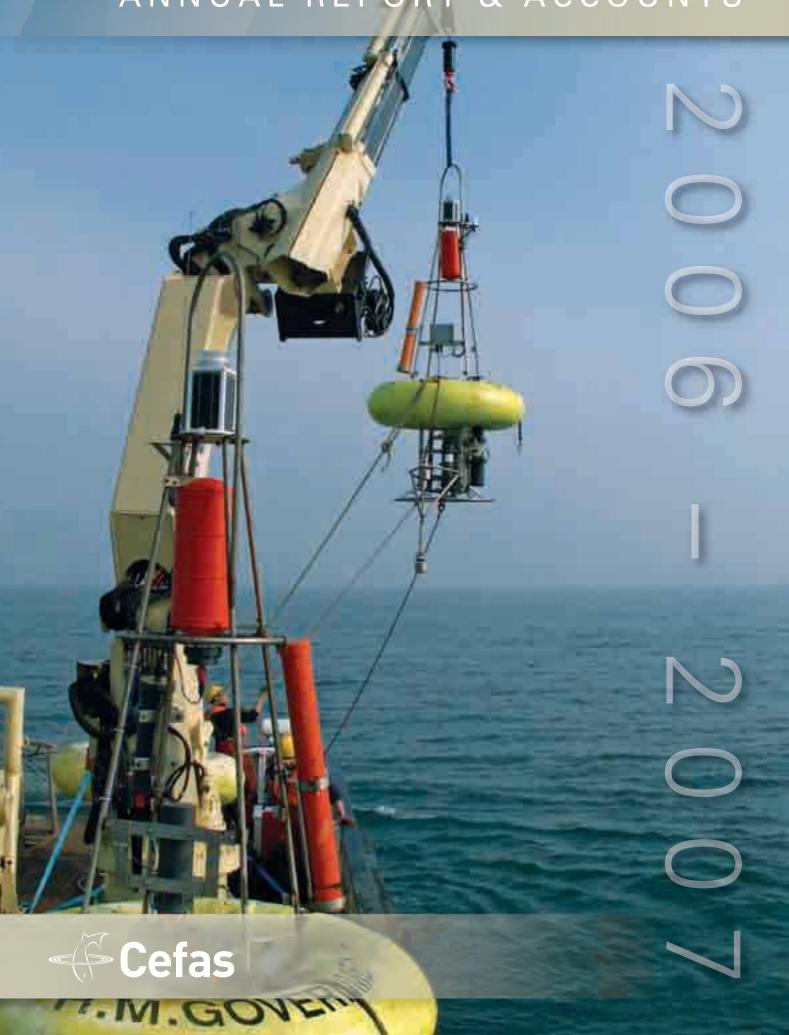
### ANNUAL REPORT & ACCOUNTS



#### **Cefas Annual Report and Accounts** 2006 – 2007

Presented to the House of Commons Pursuant to Section 7 of the Government Resources and Accounts Act 2000

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agreement

## introduction

Cefas is at the heart of marine and fisheries management in the UK, helping to shape and implement policy through high-quality science. The growing importance of the marine environment within the context of what BioRegional and WWF has called "One Planet Living" – with its attendant issues surrounding climate change and the use of natural resources – means there are huge opportunities emerging. Cefas is uniquely placed to exploit these.

Examples of our science, and of how we work with others in both government and industry to ensure a real and positive impact from our science, follow in subsequent sections. The enthusiasm, energy and expertise of our staff in delivering these projects give great confidence in Cefas' ability to rise to the challenges ahead.

Significant decisions on Cefas' future were taken last June as part of Defra's Laboratory Strategy Review. Under the leadership of my predecessor, Mark Farrar, Cefas put in place the key elements of a transformation plan that will secure a long-term sustainable future for the agency. These include investment in major new laboratory facilities, a continuing drive for improved efficiency and the exploitation of complementary wider-market opportunities.

In addition we signed a major ten-year agreement with our policy customers within Defra, which reflects the value they place on Cefas' contribution as a strategic partner. This provides a stable base for core activities while we deliver our transformation plan. The agreement also brings improved governance arrangements with Defra.

Cefas continues to provide a valuable contribution towards better understanding important marine and fisheries issues through its internationally renowned science. The agreements reached over the past year enable us to exploit the growing need for this science. It is a pleasure to be part of such an exciting opportunity!

Richard Judge, Chief Executive

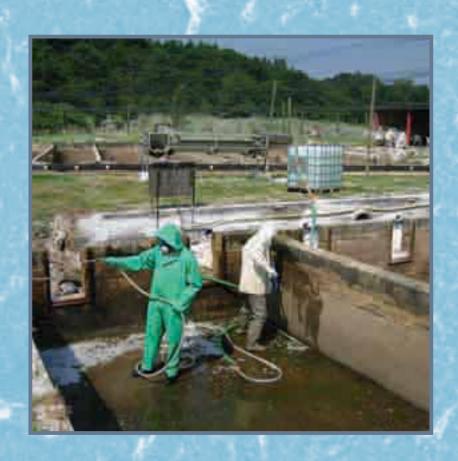
### Organism health

Science in this area examines the way in which aquatic animals respond to stressors, disturbance, chemical and pathogenic insult. Impact on growth, reproduction, and disease and behaviour are core studies in our programme.

Work on food safety underpins our studies on the links to human health through the consumption of fish and shellfish.

Highlights this year include the integrated emergency response to the outbreak of a notifiable fish disease in Yorkshire rivers, and a substantially increased programme of monitoring and research on natural biotoxins and viral/bacterial contamination of shellfish.

Work on food safety underpins our studies on the links to human health through the consumption of fish and shellfish



### Enforcing EU Fish Health Regulations

Further evidence of the growing realisation across the industry that disease prevention is not only the responsibility of the authorities became apparent in 2006. Cefas works ever more closely with fish farmers, angling organisations and fishery owners to improve awareness, increase bio-security and encourage greater responsibility in preventing fish diseases. We treat illegal imports and exports of live fish as one of our top priorities in preventing the spread of disease.

Fish health inspectors with HM Revenue and Customs (HMRC) officers intercepted vehicles at Holyhead docks that were carrying tanks holding a total of 226 small live carp, roach and rudd to be used as bait on a pike-fishing trip to Ireland. Exports to other EU member states of live fish susceptible to spring viraemia of carp (SVC) are prohibited unless accompanied by certification showing they come from a disease-free site. The two men intercepted at Holyhead had no such certification. Their actions, which met with strong disapproval from fellow anglers, resulted in each being fined £500 and ordered to pay £800 costs.

Two other illegal consignments, from France, intercepted at Dover were believed to be destined for stocking fisheries for angling. One tonne of carp (intercepted and prosecuted with the help of HMRC and the State Veterinary Service) led to the person responsible being fined £3,500 and ordered to pay £5,341 costs. In another case, 0.8 tonnes of carp were intercepted. This case is awaiting trial.



Left: Disinfecting rearing tanks after the VHS outbreak in Yorkshire

Left background: Histology of liver tumour in flatfish

Above: Fish health inspectors weighing and measuring smuggled fish at Dover

Below: Rainbow trout (*Oncorhynchus mykiss*) with VHS

# Emergency response to a disease outbreak

On 26 May 2006 Cefas confirmed viral haemorrhagic septicaemia (VHS) on a rainbow trout farm in Yorkshire. The outbreak was the first known occurrence of this notifiable disease in a freshwater fish farm in the UK. However, VHS has a long history of devastating effects in rainbow trout farms across Europe, with losses of over 90% in severe outbreaks.

As the first step, under the Defra VHS contingency plans for England and Wales, a National Control Centre (NCC) was immediately established to coordinate the emergency response. The primary aim was to quickly contain the outbreak, establish its extent, and to limit the threat to Great Britain's farmed and wild fish stocks. Defra contingency plans for VHS require the slaughter of affected farmed fish to eradicate the disease and re-establish VHS-free status for the UK.

On 27 May Cefas fish health inspectors established footbaths and vehicle disinfectant facilities, and supervised a humane cull of the remaining 19 tonnes of fish stocks on site. The entire cull was completed within 24 hours, with all the dead fish removed and sent to a government-approved animal waste processing plant for rendering and subsequent incineration. This rapid response was effective in containing and eradicating the outbreak. The farm has since restocked with trout without the disease reappearing and no other cases have occurred elsewhere in Great Britain.



# Expertise in identifying shellfish diseases

Tropical marine shrimp farming is a multi-billion dollar global industry, with significant expansion predicted.

Several species (eg, tiger shrimp) are produced at farms in China, India, south-east Asia and South America, with raw and frozen shrimp exported to the United States, Japan and Europe.

Diseases, particularly viral ones, have greatly affected the industry in recent years. White spot syndrome virus (WSSV) is estimated to have caused \$10 billion of production losses since the late 1990s.

Raw and frozen shrimp can potentially be infected with viral diseases. There is a risk that these viruses will be transmitted to wild crustacea within the importing countries. For this reason, WSSV and two other viruses – taura syndrome virus (TSV) and yellowhead virus (YHV) – will be added to the list of notifiable diseases in the new EU Fish Health Regulations from 2008.

Cefas has significant expertise in identifying crustacean diseases from temperate-water species and is building capacity to work with tropical shrimp diseases. Recent collaborative visits by Cefas staff to OiE reference laboratories in Thailand and the United States have assisted this capacity-building exercise. Visits to production centres and testing laboratories in South America are helping to build strong relations between Cefas and producing nations.

Cefas is committed to promoting the long-term sustainability of this important food industry while managing disease risk to importing nations within the EU.

Top right: Crab (Cancer pagurus)

Right: Pacific white shrimp (Penaeus vannamei)



#### Understanding food risks

Cefas is at the forefront of research into the potential risk from disease associated with seafood-borne *Vibrio* bacteria.

Several *Vibrio* species can cause gastrointestinal or septicaemic disease commonly linked to the consumption of contaminated seafoods or exposure to seawater. In the United States the Centre for Disease Control reports about 2,800 cases a year of gastroenteritis caused by *Vibrio parahaemolyticus*, mainly associated with the consumption of oysters. A distinct serotype of *V. parahaemolyticus* (O3:K6) is the leading cause of outbreaks in many countries; in south-east Asia this pandemic serotype is responsible for an estimated 40% of all seafood-associated illness.

Although historically in Europe cases of *V. parahaemolyticus* have been sporadic, 74 cases of food poisoning caused by O3:K6 were reported at a Spanish wedding in 2004 after consumption of crabs originating from the UK. Subsequently, molecular and serological characterisation at Cefas revealed identical clones in patients with *V. parahaemolyticus*-associated illness in the UK.

Working with colleagues in the United States, Japan and Spain, and academic institutes across Europe, Cefas has pioneered novel molecular detection and characterisation methods that enable measurement of pathogenic strains of *V. parahaemolyticus* in seafood and recognition of pandemic clones. The International Standards Organisation (ISO) has recently adopted methods developed by Cefas, and work is progressing on standardisation and validation.



### New approaches for studying cancer

The health of our native fish populations provides a direct indication of the overall condition of our rivers, estuaries and seas. Diseases such as cancer are known to be associated with exposure to environmental contaminants. Levels of liver cancer of up to 25% are observed in certain flatfish species found at some marine locations around the UK.

Cancer and other pathologies in the liver have been recommended as key markers for monitoring pollution effects under the OSPAR Joint Assessment and Monitoring Programme (JAMP). In addition to monitoring cancers and pre-cancers using histopathology (studying microscopic changes in diseased tissues), we have demonstrated how state-of-the-art technologies such as laser capture microscopy (LCM) and emerging "omics" technologies can be applied to enhance our understanding of cancer formation in these fish.

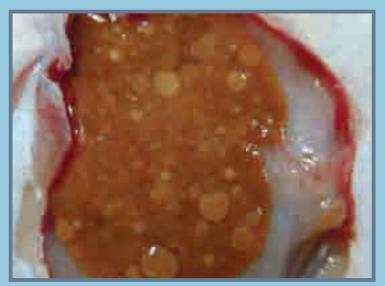
"Omic" technologies include new methods to study multiple gene, protein and metabolite changes in whole cells, tissues or animals. They are particularly useful for studying diseases such as cancer in which cells and tissues undergo large deviations from their normal make-up.

Using LCM, microscopic cancers can be dissected and analysed for changes in specific genes, proteins and metabolites during the early stages of the disease. By linking these changes to specific geographical sites and by integrating data with specific environmental conditions (eg, contaminants) at these sites, we are closer to discovering the cause of cancer development in fish in the UK. Using the liver of flatfish as a model, we are demonstrating how existing technologies can be aligned with emerging approaches to improve understanding of complicated biological systems.

Cefas is collaborating closely with scientists studying human cancer to define potential similarities between the formation of liver cancer in fish and humans.

Right: Stickleback placed in a beaker of water for steroid measuring

Below: Fish liver with tumours





# Significant advances in endocrine research

Cefas is constantly developing new and better ways to test adverse effects of the many industrial compounds and waste products that humans release into the environment. One such effect is endocrine disruption, or sex changes in fish.

Recently we have developed a method for measuring the ability of environmental anti-androgens to alter sex- and stress-steroid production in male fish, thereby suppressing their reproductive behaviour. Traditionally, because sticklebacks are such small fish this would involve killing the fish to obtain sufficient blood for analysis of their steroids. However, based on another discovery at Cefas – that, in fish, steroids naturally "leak" across the gills from the blood to the water – we have developed a new, totally non-invasive, procedure.

Fish are placed in a small beaker of water for 30 minutes and then returned to their tank. The fish release sufficient steroid in the beaker for numerous steroids to be measured. Totally unaffected, the fish can be sampled many times without anaesthesia or sacrifice. This is a significant advance not only in the field of endocrine disruption but also in terms of animal welfare.

### **Ecosystem** interactions

Ecosystem interactions is understanding the links between physical, chemical and biological processes. Through our research we describe and predict how ecosystems affect, and are affected by, human activities. This helps ensure the rational management of finite resources. We work on multiple scales, from rivers and estuaries to the global oceans, and develop and deploy new methods and instruments to support this research.

The strength, depth and diversity of the science of ecosystem interactions have been highlighted by our role in responding to national emergencies, such as the grounding of the MSC *Napoli* and the poisoning of Alexander Litvinenko. And we continue to provide advice to government, and to conduct fundamental and influential research on ecology, ecosystem processes and climate.

Through our research we describe and predict how ecosystems affect, and are affected by, human activities



#### Sheep dips and salmon

Cefas research on the impacts of insecticides in sheep dip on Atlantic salmon and trout was pivotal in the decision by the Veterinary Medicines Directorate (VMD) to suspend the marketing authorisation for sheep-dips containing cypermethrin. The work demonstrated that cypermethrin at a concentration of only one part in a billion disrupted reproduction in Atlantic salmon, by reducing sperm production and egg survival.

Cefas scientists worked closely with stakeholders, including the Salmon and Trout Association, to highlight the results of the research on these fish. With studies on freshwater invertebrates and monitoring by the Environment Agency (EA), our research provided the evidence to show that sheep dips containing cypermethrin were polluting many rivers and streams in England and Wales.



#### MSC Napoli

On 18 January 2007 the container ship MSC *Napoli* was 40 miles south of the Cornish coast when she suffered structural damage that threatened the integrity of her hull. She beached just off Branscombe, Devon, on 20 January. Cefas scientists acted immediately to run the emergency response spill model and predict the likely fate of any oil and containers that were released from the vessel.

Model predictions showed that slightly positively buoyant particles released from the grounding site a few days after the incident would be expected to ground on the beach at Branscombe, with some particles also moving offshore. The results were used to define the area likely to be affected by pollution and to identify a reference area to the west of Lyme Bay in the design of a pollution monitoring programme which was developed and co-ordinated by Cefas.

As part of the response, Cefas scientists also worked with the Maritime and Coastguard Agency (MCA) to categorise all of the 2,000 or more containers on board for the hazards their contents posed to the salvors, the public and the environment.

Left: MSC Napoli aground off the Cornish coast © MCA

Left background: Flooding at Dunwich, Suffolk, caused by high tides © Mike Page

Above: Texel sheep

Top right: Urine testing for the polonium-210 investigation



# The poisoning of Alexander Litvinenko

When Alexander Litvinenko, a former Russian security officer, died in a London hospital on 23 November 2006 Cefas was contacted as soon as poisoning by polonium-210 was suspected. Cefas is one of the few laboratories in the UK with experience of analysis of this radioactive element. Cefas procedures for polonium-210 testing have been fully verified from earlier work done on human samples. We were able to provide expert advice on the specific radioanalytical procedures and contextual information on normal concentrations in urine.

Polonium-210 has a relatively short halflife (138 days). Given this and the political profile of the case, it was essential to produce high-quality radioanalytical data as quickly as possible. The primary purpose was to ensure the safety of people who came into direct contact with the material that had contaminated Litvinenko.

We collaborated with the Health Protection Agency in the radioanalysis of polonium-210 in urine samples from those who had been in contact with Litvinenko. Working in co-operation with other laboratories, our input supported a rapid and accurate assessment of cross-contamination of those who had come into contact with the polonium-210.

### Halloween storms

When severe storms struck the UK on 31 October 2006 the UK's national WaveNet system (designed and run by Cefas, www.cefas.co.uk/wavenet) measured the size and frequency of huge waves travelling down the North Sea. Wave data were captured in near real-time and sent by satellite to Cefas. They were quality assured and sent onto the Met Office for input to the storm surge model that was used to provide information to EA flood managers and local authorities on the size and timing of any potential flood events.

Based on Cefas' data, several flood warnings were issued for the East Anglian coastline and surrounding areas. The accuracy of the warnings was borne out by the damage caused to the Norwich to Lowestoft railway line, which was washed away at Haddiscoe. The effects of the surge were also caught on camera by a joint Cefas-University of East Anglia project on sandbanks

(www.uea.ac.uk/env/blinks), which has installed several digital cameras on Cefas' roof to monitor the exchange of sediment between Lowestoft's beach and nearby inshore sandbanks.

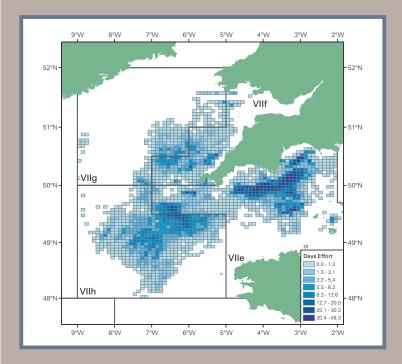
Right: Geographic information system (GIS) map created using satellite fishing data

Below: Flooding at Dunwich, Suffolk, caused by high tides © Mike Page

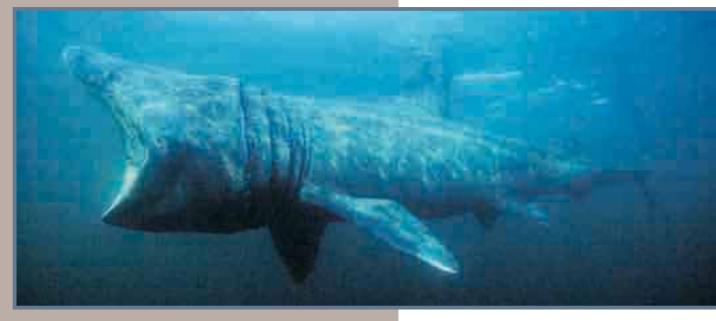
#### Fishing seen from space

Fishing is by far the most widespread human activity in UK waters. To help with marine planning and integrated management of our seas, we need accurate maps showing the location and intensity of fishing. Since 2000 the location of large fishing vessels is continuously monitored by onboard satellite transmitters, allowing us to produce high-quality maps of fishing effort.

Cefas is leading the way in the use of satellite fishing data for understanding the fine-scale distribution of fishing and how it interacts with habitats and species. For example, we have recently developed methods for separating "fishing" and "non-fishing" position records, based on methods for characterising fishing behaviour from vessel movements. Fishing positions are then displayed and analysed in a customised geographic information system (GIS), which allows us to examine annual spatial distribution of fishing and its effect on sensitive habitats. These analyses have highlighted how the impacts of fishing on sensitive habitats can vary in space and time, science that will help to underpin advice on the costs and benefits of marine protected areas and other management measures.







Genetic tools identify basking sharks

Cefas scientists have successfully developed molecular genetic tools, in association with the department of zoology at Aberdeen University and Plymouth's Marine Biological Association, to aid in the conservation of basking sharks. This research will allow us to establish the extent to which the basking sharks seen in the summer in UK waters are a distinct sub-population, and support advice on the development of conservation strategies for this rare species.

The new genetic tools will also help facilitate the enforcement of the Control of International Trade in Endangered Species (CITES) regulations where it has proved almost impossible to obtain data on catches of and trade in basking sharks because tissue cannot be identified in processed products and unlabelled imports. The project has successfully designed a panel of primers for two gene regions that allow accurate and unambiguous identification of basking shark parts at extremely low concentrations (less than 1% and less than 1 nanogram). This represents a significant improvement in sensitivity over current methods and will provide reliable evidence when infringements of CITES regulations are suspected.



Above: Basking shark (*Cetorhinus maximus*)
© Jeremy Stafford-Deitsch and The Shark Trust

### Cod and climate

The recent warming of the North Sea has been accompanied by a decline in cod abundance. Over-fishing has been a factor and the distribution of cod has also shifted to the north. Cefas scientists, working in collaboration with FRS in Aberdeen, set out to test whether adult cod movements could explain the northward shift.

Hundreds of North Sea cod were tagged with electronic data loggers, developed at Cefas to record sea temperature. Fishermen returned 129 data storage tags from caught cod, and these tags showed that most cod had occupied warmer areas, despite cooler waters being within reach. The results suggest that adult cod do not avoid warm water, and that climate change is just one of many factors that influence cod distribution. Further studies of cod ecology, using data storage tags, are providing new insights into rates of migration, stock mixing, natal homing and spawning behaviour and their vulnerability to fisheries.

Left: Tagged cod (Gadus morhua) © FRS

#### Resource management

We investigate and assess a wide range of human activities that potentially affect living and non-living resources

Understanding and assessing the impacts of human activities on the aquatic environment help us to better support and inform policy and regulatory decisions for sustainable development. This science area underpins the advice that we provide to a range of UK government departments, as well as non-governmental organisations, overseas governments, the EC and industry consortia.

We investigate and assess a wide range of human activities that potentially affect living and non-living resources. This covers the assessment of activities including fishing, navigational dredging, disposal of dredged material, the extraction of sand and gravels from the seabed, the extraction of oil and gas from beneath the seabed, and marine constructions such as wind farms, sea defences and harbour works.

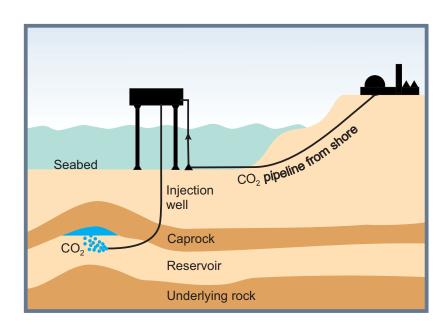
Our advice encompasses measures to manage impacts, research to understand the mechanisms of those impacts and potential mitigations, and monitoring activities to check the effectiveness of controls. We are continuously updating and developing approaches to study the status of fish stocks, and to provide better predictions of the likely effects of fishery management decisions on stocks and fishermen. Additionally, Cefas contributes to the UK's national emergency response capability for oil and chemicals.

### Managing the use of offshore chemicals

The Offshore Chemicals Notification Scheme applies to all chemicals that are used in the exploration and production of oil and gas on the UK continental shelf and which are expected to be discharged to the sea. Cefas administers the scheme on behalf of the Department of Trade and Industry (DTI), assessing about 1,600 products per year and ranking their potential to be hazardous to the environment.

Over the years Cefas has built the highest reputation with industry and governments for fairness, practicality, on-time delivery and scientific excellence. The presence of Cefas at international meetings to provide technical support to the DTI has exposed our science to international scrutiny and has led to Cefas being contracted to administer a parallel notification scheme for the Netherlands government. Cefas has worked with industry representatives, and the Netherlands and UK governments, to ensure the smooth transition to a single registration system for chemicals to be used by both countries' offshore industries from January 2007.





# Carbon capture and storage in the seabed

Reduction of carbon dioxide ( $CO_2$ ) emissions to the atmosphere has been identified as an important element in plans to combat global warming. This can be achieved either by reducing emissions or by storing some of the  $CO_2$  produced.

One of the most promising storage options is the capture and subsequent storage of CO<sub>2</sub> in sub-seabed geological formations, particularly depleted oil and gas fields and saline aquifers. These formations have considerable storage capacity, with worldwide estimates of up to 11 million million tonnes of CO<sub>2</sub>, compared with current annual emissions of around 24,000 million tonnes. Formations beneath the North Sea are estimated to be able to store up to several hundred years' worth of CO<sub>2</sub> emissions from Europe at current rates.

Cefas has provided technical support to Defra in negotiations on proposed amendments to the international marine protection conventions to allow storage of  $\mathrm{CO}_2$  in sub-seabed geological formations. We have also actively participated in meetings and workshops that have developed risk assessment, management frameworks and technical guidance for scientific assessments to support the licensing process.

Far left background: Rare beluga sturgeon (*Huso huso*) onboard RV *Guilan* in the Caspian Sea, released alive after tagging

Left above: Oil platform

Left: Schematic showing carbon capture and storage option



# Fisheries and science in partnership

Defra's Fisheries Science Partnership (FSP) has been running for four years. This scheme has been highly successful in bringing UK fishermen and scientists together to collect new data that are vital to the sustainable management of fish stocks.

One programme in the North Sea, focused on reducing discards, has identified the best times of year for a targeted lemon-sole fishery, which has minimised bycatch of plaice.

Increasingly, Defra officials rely on such FSP data in preparing for the EU Council of Fisheries Ministers.

Our scientists provided technical support to the joint North Sea and North Western Waters Regional Advisory Councils' symposium on cod recovery. The symposium was the first of its kind to bring together fishermen, scientists, managers, consumers, environmentalists, the EU Parliament and the EU Commission in order to debate the state and future management of cod stocks.

Top: Sorting a fish sample

Right: Cadmium sulphide nanoparticles in suspension indicated by its a characteristic orange colour

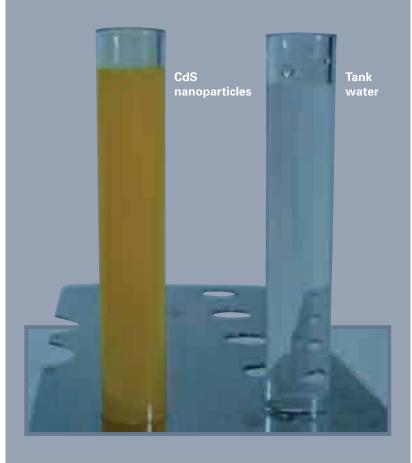
### Understanding the risks of nanoparticles

Nanotechnology refers to the construction of simple structures, such as tubes or functional systems, at the molecular scale. This is a rapidly developing field, attracting significant investment from industry and governments.

The incredibly small size of nanomaterials results in them having physical and chemical properties that differ from other solid materials and so their environmental effects are unknown. There is a strong likelihood that the biological activity of nanoparticles will depend on physical and chemical properties that are not routinely considered in the current assessment of contaminants in the environment.

Materials based on nanotechnology are already being developed for self-cleaning windows, paint, diesel fuel additives, environmental remediation and drug delivery. As new materials are developed it will be essential to confirm that appropriate approaches are available to assess any environmental risks.

Cefas is working with the University of Manchester and other organisations to develop the techniques necessary to determine appropriate measurement of these materials and to investigate their potential accumulation in, and effects upon, aquatic organisms and their environment. Cefas has been developing a programme of work to contribute to a fuller understanding of the properties of nanoparticles as an essential step to proportionate regulation of any risk from such materials.



### Encouraging "clean fishing"

Fishing nets frequently capture or damage unwanted species in addition to those that are being sought by fishermen. A wide variety of species may be affected, ranging from simple bottom-dwelling invertebrates to fish, birds and marine mammals.

Cefas has been working closely with fishermen to design fishing gears that still allow them to catch the fish they seek, but which reduce the catches of unwanted fish they discard. Reducing discards has many conservation benefits as it lessens the overall environmental impact of the fishery on the marine ecosystem. Cleaner fishing could also benefit the fishermen by providing higher-quality catches and better prices at market.

Cefas has been working with beam trawler skippers in recent years to develop simple trawl modifications that reduce discard levels of unwanted fish and invertebrates. In September 2006 Cefas launched the "Clean Fishing" competition to encourage fishermen to propose and test new ways to reduce their catch of unwanted species. The competition is a practical way to engage and harness the fishermen's skills. Competition entrants have been encouraged to build on previous studies. Alternatively, they are free to develop completely new ways to produce cleaner catches. If this competition is successful, further events could be held for other fleet sectors.





### Managing shellfish

The shellfish sector of marine fisheries is growing in importance. Shellfish species such as crabs, lobsters, Nephrops, scallops, cockles and mussels now account for over 40% of the total value of all fish and shellfish landed in England and Wales. This compares with around 15% in 1980. This increasing importance is due partly to the decline in traditional finfish fisheries but also because of an extension of shellfish grounds and a wider range of exploited species.

The development of new fisheries for previously unexploited species creates specific problems because often little biological or fisheries knowledge is available at the onset of a fishery. An example is the opening of an experimental fishery for razorfish (Ensis directus) in The Wash. There is a high biomass of this introduced species in The Wash and other estuaries such as the Thames, but many stocks are found in coastal waters in candidate Special Areas of Conservation. Cefas has therefore worked closely with Defra and Natural England to evaluate the potential impact of a fishery on the interest features of the conservation area. This process exemplifies the ecosystem approach, which is a prerequisite of modern fisheries management.

Left: Fitting a benthos release panel to a beam trawl

Top: Harvesting razorfish (Ensis directus)

## management commentary

#### **Background**

As an executive agency of Defra, Cefas is fully accountable to Parliament through ministers. The agency was created on 1 April 1997 from the former Directorate of Fisheries Research under the Next Steps programme.

#### Governance

The Parliamentary Secretary (Lords) Minister for Sustainable Farming and Food with overall responsibility for Cefas is Lord Rooker. Cefas' strategic governance involves the Defra Laboratory Strategy Group, chaired by Lynton Barker.

The Chief Executive and Accounting Officer is Dr Richard Judge, who joined Cefas during the year, assuming full formal responsibility from 5 March 2007. He took over from Mark Farrar, who held these responsibilities until the beginning of March 2007.

#### **Principal activities**

Cefas is an internationally renowned scientific research and advisory centre working in fisheries management, environmental protection and aquaculture. Its principal activities are to deliver specialist scientific and technical research, support, consultancy and advice in fisheries management, biodiversity and aquaculture.

We aim to be the prime source of high-quality science used to conserve and enhance the aquatic environment, promote sustainable management of its natural resources, and protect the public from aquatic contaminants.

With such a wide range of activities, we have a key role in forging and maintaining strong links with governments, international agencies, commercial companies, aid organisations and the public.

Richard Judge (Mark Farrar to 5 March 2007) Chief Executive

Joe Horwood Deputy Chief Executive

Hugh Walker Non-executive Advisory Director

Mike Waldock Science Director

Diane Carter Staff Development Director

Andrew Robinson Non-executive Advisory Director

Alex Kerr Programme Director

Brian Robinson Commercial Director

**Stephen Malcolm** Science Director

Tim Green Finance and Resource Director

Alex Tweedie Non-executive Advisory Director

### Waveney Campus: a brighter future

Waveney Campus is a flagship project involving three government partners: Cefas, Waveney District Council (WDC) and Suffolk County Council (SCC). The partnership is breaking new ground in co-operation between local and national government, and is believed to be the largest such co-location in the UK. As such, it has been referenced as a case study in the 2006 Varney Report.

(www.hm-treasury.gov.uk/pre\_budget\_report)

The Campus project was proposed as a result of the partners' different but complementary requirements for modern, fit-for-purpose facilities and more efficient service delivery. A key factor in Cefas' business transformation plan is the intention to consolidate its existing operations in Lowestoft and Burnham-on-Crouch on the Waveney site.

The project will create a landmark administrative and scientific complex housing 1,000 staff in offices, laboratories and technical facilities. It is being designed to improve customer service, increase productivity and stimulate joined-up thinking across Cefas and the partnership. It will further enable "smart working" practices, and facilitate data and science sharing across Cefas.

The building will provide a working environment that is open and flexible; and it will be an exemplar for "build quality" and environmental sustainability.

- At least 10% and preferably 15% of the Campus energy requirements will be met from zero- and low-carbon technologies.
- At least 25% of the value of materials will be derived from recycled content.
- 100% of the wood used during construction and as part of the building must be from recycled and/or sustainable sources.

The Campus will provide shared services and facilities such as computer technology; reception, cafeteria and meeting areas; and cleaning and building maintenance. It will enable savings on lighting, heating, water usage, waste and storage: savings that will be re-invested in frontline services.

An innovative funding route is being proposed, with WDC acting as developer and using prudential borrowing to improve value for money for all three partners. The building is designed to reduce running expenses, with all costs being met from existing budgets and efficiency savings generated by the project.

The Campus will transform a largely derelict brown-field site in the former docks area of Lowestoft, providing easy but secure access to Cefas' research vessel and offering an attractive public space on the waterfront. It will act as a catalyst for attracting jobs and stimulating wider regeneration, thereby providing a sound basis for the sustainable future for the local economy and the partners.

Now in the design phase, completion of the complex is scheduled for 2010.

Far left and background: Wind farm, Scroby Sands, off Great Yarmouth, Norfolk © Mike Page Below: Artist's impression of Wavenev Campus



# strategic aims

With an emphasis on excellence in science and its associated delivery standards, Cefas has now embarked on a period of change to ensure a healthy and sustainable future. Recognising that the outcome of Defra's Laboratory Strategy Programme will need to mesh with these plans, Cefas is pursuing initiatives that will benefit both Defra and itself.

Defra has committed to a ten-year agreement, defining its requirement of Cefas. Income from increasingly diverse markets will increase year-on-year to achieve long-term sustainability.

The Cefas science strategy has been updated to acknowledge new national and European drivers, and is complemented by a Science Action Plan managed by the Cefas Science Committee.

Our targets are reviewed annually to ensure continued relevance to the business. They are set by the Minister with overall responsibility for Cefas, and announced in the House of Commons. Achievement is audited by Defra at the end of the financial year.

### Performance against ministerial targets

#### 1. Delivery of outputs

Ministerial importance weighting 30%

2004-2005

2005-2006

2006-2007

#### 2. Customer focus

Ministerial importance weighting 20%

2004-2005

2005-2006

2006-2007

#### 3. Strong science

Ministerial importance weighting 20%

2004–2005

2005-2006

2006-2007

#### 4. Financial

Ministerial importance weighting 10%

2004-2005

2005-2006

2006-2007

#### 5. Efficient, cost-effective operation

Ministerial importance weighting 10%

2004-2005

2005-2006

2006-2007

#### 6. Investment in people

Ministerial importance weighting 10%

2004-2005

2005-2006

2006-2007

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

Target achieved

Target achieved

**Target:** Overall delivery of milestones to exceed 90%. Data on delivery against milestones is taken from the contracts management database, and performance is reported on as a proportion of agreed outputs weighted by value of contracts.

**Outturn: Target achieved** 

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

Target achieved

Target achieved

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

**Outturn: Target achieved.** 110 responses to the customer satisfaction survey were received, representing 52% of Cefas' customer base, and 56% by value of the programme. The weighted average score, based on seven aspects of service quality, exceeded 82%. The overall average unweighted score was 83%.

To enhance scientific capability and reputation

Target achieved

Target achieved

**Target:** To achieve a high standard of excellence based on indicators of scientific and technical quality, with an overall score to exceed 75%. Indicators are grouped around research, wider dissemination and use of our science, and our scientific capability. Measures include customer satisfaction survey returns, number of peer-reviewed scientific papers and investment in new science.

**Outturn: Target achieved** 

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

Target fully achieved

Target fully achieved

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

**Outturn: Target fully achieved** 

To operate with simple, reliable and effective processes

Target achieved

Target achieved

**Target:** To achieve agreed Gershon Efficiency Plan savings of 2.5%. Data is taken from the quarterly monitoring of progress against Cefas' efficiency plan.

**Outturn: Target achieved** 

To respect and help the agency's people to develop

Target achieved

Target achieved

**Target:** Overall annual staff survey satisfaction score to exceed 63%. Measured by an annual questionnaire to staff, using a weighted scale for the eight survey categories.

**Outturn: Target achieved** 

# "One Planet Living"

Defra's Strategy Refresh in 2006 was to enable a move to what BioRegional and the Worldwide Fund for Nature (WWF) has called "One Planet Living": the need to live within the earth's natural capacity. The strategy flags the increasing need for Cefas' science not only to be excellent, but also to play its part in linking the evidence base across the world's seas.



#### Defra's strategic objectives

- healthy, resilient, productive and diverse natural environment
- an economy and society resilient to environmental risk and adapted to the impacts of climate change

have direct links to the outcomes of

- clean, healthy, safe, productive and biologically diverse seas
- public health and the economy protected from animal diseases

which are key aspects of Cefas' delivery, and so we continue to develop our science themes of

Organism health: looking at the effects of contaminants and pathogens on aquatic species and their impact upon consumers of fish and shellfish

**Ecosystem interactions:** examining how ecosystems function and the requisites to protect species diversity

**Resource management:** focusing on productivity and making the best use of the sea without damaging it.

#### Our world agenda

Shared international use of marine resources, particularly fish, has always fostered an integrated approach to management of marine systems. Cefas has been a key player in the International Council for the Exploration of the Sea (ICES) since its formation at the turn of the last century. Our Deputy Chief Executive, Dr Joe Horwood, was elected its president this year as ICES refocuses its science and delivery. We also provide scientific advice for various EC committees and other organisations such as the Oslo and Paris Commission for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), the London Convention, the International Maritime Organisation and the Office International des Epizooties (OiE).

European collaboration has been fostered by our success in the major EU seventh framework programme for research and technological development (FP7) and other research programmes. Cefas is currently engaged in over 30 EU projects, and we expect this to increase as FP7 advances. One element of the EU programmes is the "Networks of Excellence". Cefas is involved in many of these, including EUR-OCEANS (www.eur-oceans.eu), which integrates activities on global change and open-ocean marine ecosystems. Through our membership of the European Fisheries and Aquaculture Research Organisation, we seek to manage European fisheries and aquaculture resources.

Climate change has received particular media emphasis this year. Cefas hosts the Marine Climate Change Impact Partnership and, with Defra, successfully launched the climate change annual report card this year. Dr Bob Dickson, a Cefas emeritus fellow, led the development of the integrated Arctic Ocean Observing System science plan, which was endorsed in 2006 by the International Council for Science Joint Committee for International Polar Year 2007-08 as one of its "co-ordination proposals". Cefas will also lead an ICES expert group, supported by Defra, exploring the potential consequences of increased acidification on the resources of our shelf seas.

In North America, under the auspices of the Centre for Independent Experts, Cefas provides independent reviews of the assessments of fish and shellfish stock.

We have also advised the government of Jamaica on the development of a Fisheries Bill and its associated instruments to establish its fishery division as an executive agency, facilitating discussions and workshops with relevant stakeholders.

In Europe, our scientists participated in studies of the fisheries sector in Turkey. As part of the Common Fisheries Policy, we clarified key opportunities and constraints to the sustainable and profitable future operation of Turkey's fisheries. Implications for Turkey's future fishery policy were also identified.

Further east, Cefas staff assisted in evaluating types of information to use for regional resource management of the Caspian Sea, helping to strengthen the scientific capabilities of neighbouring countries and to develop guidelines for stock assessment and management.



### **Emergency** response

A full science programme was stretched even further this year by an outbreak of VHS in fish in North Yorkshire, the beaching of the container ship MSC *Napoli* and assisting with tracing polonium during the Litvinenko incident.

The NCC team that dealt with the disease outbreak was made up of nearly 50 field, laboratory and administrative staff of all grades at Cefas, working in close liaison with colleagues in Defra's policy, legal and communications teams, and the Environment Agency. In recognition of the speed and efficiency of the response in dealing with this disease emergency, the Cefas team won the "Excellence in Delivery" award at the Defra Team Awards 2006 in London. The same team was also "Highly Commended" in the 2006 Civil Service Awards.

Even as this report goes to press, containers of hazardous materials are still being unloaded from the MSC Napoli. Cefas has been involved from the start of the incident, providing risk assessments of the likely impact of oil and hazardous cargo on the environment, predicting the distribution of contaminants and containers, and assisting the locally based Environment Group.

### **Developing** talent

Predictive science and risk management are increasing in profile in the investment fund to deliver our science strategy. We have increased the number of PhD studentships sponsored by the programme to ten and recruited new staff in this key area. The outputs of the programme continue to be highly innovative

- a joint collaboration with colleagues at the Central Science Laboratory (CSL) and the Veterinary Laboratories Agency (VLA) to produce a "lab on a chip" (a molecular approach to disease diagnosis)
- demonstrating the effects of nanoparticles on fish behaviour
- modelling the human contribution to eutrophication in the open sea.

#### First among equals

Introduced this year, the "Paper of the Year" award broadcasts Cefas' science. It is a reminder that science needs to be published. It is also an acknowledgment of the effort involved in presenting excellent science in an interesting way.

Each week a winning paper has been displayed on our intranet front page, and from these *What seafood prices can tell us about the status of fish stocks* has been judged to be our overall Paper of the Year.

We congratulate all the authors for communicating their fascinating work so well.

# What seafood prices can tell us about the status of fish stocks

#### John Pinnegar, Trevor Hutton, Vincenzo Placenti

This paper considers fish and shellfish prices on UK and Italian fish markets. It explores the possibility that changes in seafood prices can provide useful insights into the availability of different species to fishermen and to fish markets. As large top predators are usually the species most adversely affected by fishing, their prices tend to spiral upwards as they become scarce (decline in supply). By contrast aquaculture has the effect of increasing the availability of certain fish (such as salmon, sea bream and sea bass) and thus through the laws of supply and demand results in lower than normal prices for these species.

Unlike biological data, detailed records of financial transactions may extend back many decades or even centuries in some instances. Thus, economic and commercial time series might represent a rich source of useful data for biologists hoping to reconstruct long-term changes in marine ecosystems.



### Possible oestrogen contamination in the open sea

Alexander P Scott, Ioanna Katsiadaki, John Thain, Peter Witthames, Ketil Hylland, Ian M Davies, Alastair D McIntosh

Cefas' 1980s research showed the freshwater environment was contaminated with oestrogenic compounds. Elevated levels of female egg yolk protein (vitellogenin; VTG) were demonstrated in the blood plasma of male caged trout placed in UK rivers – especially in the vicinity of sewage treatment works. The finding was extended to male flounders in UK estuaries in the 1990s.

About four years ago, Cefas started to look for evidence of oestrogenic endocrine disruption in the open sea. In at least three areas, on the continental shelf, male cod were found with significantly elevated levels of VTG. Furthermore, elevated VTG levels in males showed a strong positive correlation with the size of the fish.

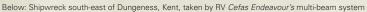
Until the causative agent is identified we cannot state whether this size effect is due to the well-known fact that, as cod grow larger, they increasingly feed on bottom-living (ie, potentially more contaminated) animals, or to a lifetime build-up of a persistent organic pollutant with oestrogenic properties. Presently there is no way of proving that this exposure to oestrogens is necessarily "bad" for the cod. However, in other fish, exogenous oestrogens have been shown, among other things, to reduce fertility and delay the time of spawning.

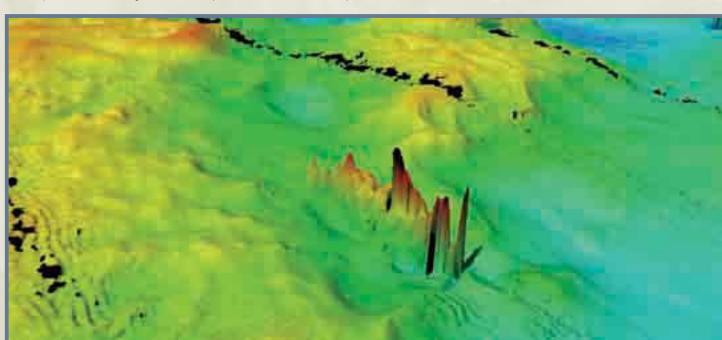
### Mapping the seabed

Paul Eastwood, Sami Souissi, Stuart Rogers, Roger Coggan, Craig Brown

Shipborne acoustic sensors are routinely used to map seabed environments. One of the challenges when using this technology is to understand the connection between acoustic maps of physical environments and the real world distribution of seabed animals. Mapping these biological features can be slow and costly as the maps are based on the analysis of samples that have to be collected with grabs and corers; hence the growing interest in the use of remote acoustic technologies for mapping biological features.

This paper demonstrates how maps of seabed animal communities are affected by the inclusion or exclusion of acoustic data. While acoustic methods generate maps of seabed features in less time and at lower cost, the paper shows why maps of biological communities are not necessarily improved by the addition of acoustic data, and showcases a method for analysing the strengths and weaknesses of biological and acoustic sampling. This method will help plan future surveys, efficiently using expensive ship time.

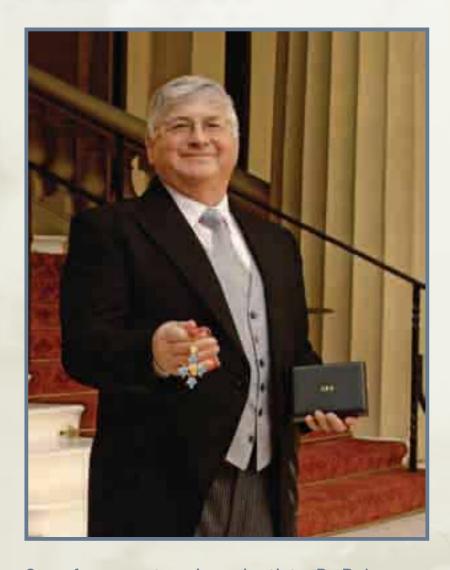




# making a difference...

"It's a great thrill that someone notices the work. But it's equally good to know that the problem I've been working on ... is itself recognised as important."

**Bob Dickson** 



One of our most senior scientists, Dr Bob Dickson FRSE, was appointed a CBE in the New Year's Honours List for services to oceanographic and climate science. Bob is the chairman of a major international study designed to investigate and understand the role of the northern seas in climate. He is also a member of the UK national committee for International Polar Year 2007–08 (www.ipy.org), the first such international event since the 1950s.

Cefas has a long association with the Winston Churchill Memorial Trust (WCMT: www.wcmt.org.uk), which awards travelling fellowships in a range of specialist fields. This year pathologist Grant Stentiford travelled to South and North America to study disease in cultured prawns, which is a rapidly expanding global industry. Grant's web blog provided a wider audience with a fascinating account of his explorations along the way.

Nicola Lower, 2004 WCMT Fellow, attended a prestigious ceremony at Buckingham Palace in June 2006. The occasion marked the 40th anniversary of the WCMT, when Her Majesty the Queen presented 100 Fellows from recent years with the silver Churchill Medallion.

"Her Majesty the Queen asked me about my job and how different the fishfarming industries were in each of the countries I visited. The whole experience of the Travel Fellowship has been so rewarding, but to have the achievement honoured by The Queen has been the proudest moment." Nicola Lower

Several charities benefited from Cefas' generosity and enthusiasm. Once again our support for the Lowestoft Sea Fayre kept this annual civic event viable and helped to raise £11,000 for the Royal National Mission for Deep Sea Fishermen.

Fees offered for talks given to local community and volunteer groups were redirected to the Royal National Lifeboat Institution, and nearly £1,300 was raised for the East Anglian Air Ambulance and the National Alzheimer's Society after an epic cycle ride from Land's End to John O'Groats. Other Cefas staff entered into the spirit of fun runs ("Race for Life", Cancer Research UK), coffee mornings (Macmillan Cancer Support) and affinity campaigns ("Wear it Pink", for Breast Cancer Campaign) to raise funds for cancer research.

Every day our staff demonstrate their commitment to a wide range of activities, both within their fields and outside the "day job". And word is spreading about our scientific and environmental achievements, helping us to reach even wider audiences

#### Inspiring a new generation

Sharing our knowledge with young people and providing opportunities for work experience in a science setting continues to be one focus of our outreach programme.

National Science Week, held annually in March, focused on the theme of engineering this year. Our exhibition covered SmartBuoy and tagging technology, and explained how this clever kit enables us to go far beyond the ocean's surface.

Scientific surveys and state-of-the-art seabed images were made available in a fun and interactive way at the National Marine Aquarium, in Plymouth. The "Mineral Wealth - Seabed Health" project (www.mineralwealth-seabedhealth.org) offers side-scan sonar images, bathymetric information, models, video clips and still images to promote and excite the public about marine life, and the role of surveys and scientific exploration.

"We're really excited about making our material more easily accessible. We've got some stunning images that really unlock the secrets of the seabed to wider audiences." Silvana Birchenough

Project Trident enables 14- to 15-year-olds to work for two weeks at our Burnham laboratory, developing life- and scientific skills. Our Weymouth laboratory continued its close affiliation with Abilities, a local continuous work-placement programme for those experiencing difficulty returning to work. Five current staff have joined Cefas after successful placements.



Our Science Masterclass, held at our Lowestoft laboratory in February, saw some 50 sixth-form students engaged in a full day of presentations, hands-on laboratory work and debate. The programme grows from strength to strength, with this year's scientists getting as much out of the sessions as the students themselves.

"... really enjoyed the wind farm debate. We got to express opinions and engage everyone in something relevant to everyday life ..."

Student participant

The Science Student Partnership, now in its third year, provides mentoring for two promising sixth-form science students. The participants undertake real scientific study with practising scientists for the whole of their final year at school. The 2005-06 student partners produced their own reports. Both are now pursuing scientific studies at university and may return during their holidays to work with us, like previous Science Student Partnership candidates.

"... for anyone looking for a career in science the Student Partnership is a highly unique opportunity to both observe and experience first-hand the work that is carried out in these fields, which is fantastic ..." Aaron Boardley, 2005-06 student

partner

Above: A student using Cefas equipment during our Science Masterclass

### Playing our part

#### Cefas' Sustainable Development Action Plan

(www.cefas.co.uk/about/sdap) shows our vision for lightening the agency's environmental footprint. Our ongoing commitment to improve our existing environmental management has led to the Burnham and Weymouth laboratories, plus the RV *Cefas Endeavour*, obtaining ISO14001 certification in August and October 2006, respectively. The Lowestoft laboratory gained the same certification in February 2006.

Looking ahead, the planned Waveney
Campus development will be built to
Building Research Establishment
Environmental Assessment Method
(BREEAM) (www.breeam.org)
"excellent" standard, so that our new
laboratory and offices will be highly
sustainable and make as little impact on
the planet's resources as possible.

#### Reaching a wide audience

Our media work grows with our reputation. We were featured once again in the popular BBC TV series *Coast*, and in BBC Radio 4's *Nature* series. The latter included a programme about the natural history of cod and the state of this important commercial stock, and one about the lessons learned 40 years after the *Torrey Canyon* incident, something we could relate to with our more recent experience of dealing with the MSC *Napoli* incident.

Channel 4 featured our work in their hour-long documentary, *When the Whale Swam to London*; and the VHS outbreak received extensive coverage in regional and national press and broadcast media.

Other stories about Cefas were featured in the *Times, Guardian, Western Daily Mail, Eastern Daily Press* and a range of regional TV outlets. FSP survey articles appear in *Fishing News*; and we are regularly contacted for comment and background from domestic, international and specialist media outlets.

The BA Festival of Science (www.the-ba.net), which attracted more than 174,000 adults and over 4,200 students aged 12 to 16+, this year included our presentation "Should I Eat Fish?". Cefas scientists covered fishing activity and its effect on world stocks, and our groundbreaking research into liver cancer in fish. Media coverage of our session was widespread, including BBC News 24, The Scotsman, the Evening Standard and the Daily Mail.

Below: Sorting benthos at sea on BV Cefas Endeavour



### Diversity and women in science

Cefas is committed to building and maintaining a truly diverse workforce. We ensure equality of opportunity in all aspects of personnel management, career development and the working environment, and we prevent discrimination and harassment.

As one example, we are proud of our success at addressing the gender imbalance that has traditionally existed at senior levels within Cefas. We have worked hard to achieve this, and the five years from 2000 to 2005 saw the proportion of women at senior pay bands almost double, rising to 21% in 2005.

Enhanced flexibility in the work–life balance has also enabled over 90% of mothers to return to Cefas after maternity leave. Our growing number of female scientists has formed an informal network to encourage the "women in science" ethic at Cefas.

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

#### **Professional development**

Cefas is working with the Professional Skills for Government (PSG) initiative. This is a different and more structured way of thinking about civil service jobs and careers. It is a major, long-term programme designed to ensure that no matter where people work, they have the right mix of skills and expertise to enable their department or agency to deliver effective services.

Leadership training, now a mandatory competency for all senior staff, will be extended further over the next year. To enhance leadership and support the PSG initiative, we have extended our learning and development portfolio to include the BTEC levels 3, 5 and 7 Practical Management and Leadership qualification. Fifty-eight staff have completed this, or are on course for completion, with more planned next year. Levels 5 and 7 include a compulsory unit on Managing Change, which is available as a stand-alone module to staff not pursuing the qualification.

Cefas views external experience as a positive developmental opportunity, which will become increasingly common in the future with more staff taking up secondment opportunities following the successful secondment of scientists to Defra's Marine Environment Division and Head of Science Profession team, and to the Environment Agency.

#### **Employee involvement**

Cefas ensures that staff are consulted and involved in decision-making. The Committee on Staff Matters meets every two months, enabling input from staff representatives. Focus groups within management units are active, and specific workshops are conducted to address issues associated with the relocation to the new Waveney Campus.

Every year a staff attitude survey gives all staff the opportunity to have their say on a wide range of issues. An action plan is developed and implemented to address the concerns of highest priority.



Above: Cefas staff and the design team reviewing the Waveney Campus plans

### Health and safety

We have made good progress against our key performance indicators for this year in support of our health and safety strategy (www.cefas.co.uk/about/ healthandsafety). The accident rate for 2006 remained consistent with the three-yearly average of 63, most of which were of a minor nature, only one being RIDDOR reportable.

Cefas already complies with the forthcoming Public Health Bill regarding smoking at work: it is permitted only at designated external areas. Internal smoking areas on RV *Cefas Endeavour* remain, pending further guidance from Defra.

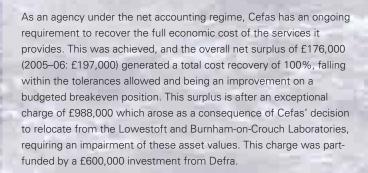
The occupational health contract, which provides on-site access to an occupational health nurse, has been renewed. A health surveillance programme has started, with a programme of health screening for those most at risk.

### High standards

Our Charter www.cefas.co.uk/ about/charter details the high service standards we seek to provide, and we are pleased that once again almost 100% of letters were responded to within 15 working days, and all visitors to our laboratories were met within ten minutes of their arrival. One complaint was received during the report period.

# financial performance

Cefas has managed to deliver another impressive year of stable business growth, working on over 500 customer projects while also investing significant time and resources in a transformation plan to ensure a financially sustainable future. The key ministerial targets set for financial performance and efficiency for the year ended 31 March 2007 have been met.



The accounts for the year 2006-07 have been prepared on a going concern basis.

Cefas was required to meet the Gershon efficiency target of a 2.5% reduction in annual costs. This was exceeded, with reductions of 6% (2005–06: 4.4%) being achieved against the Gershon baselines. Efficiency gains in excess of £800,000 were realised in year as a result of the disposal of Cefas' second research vessel in 2005. Additionally, close control over the costs of support services to the operational science front line saw the average number of support staff fall from 140 in 2005–06 to 127 in 2006–07, a 9% reduction, while turnover has risen by 7%. The financial benefits from the 2005 early retirement scheme amounted to £349,000 in-year.

Left: Scallop dredges being deployed from RV Cefas Endeavour

Far top right: Elasmobranch species including lesser spotted dogfish (Scyliorhinus canicula) and starry smooth hound (Mustelus asterias)

Background: Fulmars (Fulmaris glacialis)

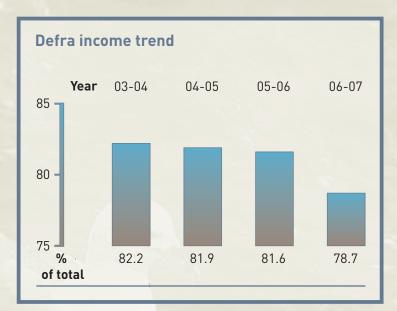


#### **Operating Performance**

Turnover for the year was £43,342,000, a 7.2% increase on 2005–06 (2005–06: £40,415,000). Income from Defra and its agencies of £34,102,000 (2005–06: £32,981,000) accounted for 79% of turnover (2005-06: 82%). This included £715,000 of one-off income related to our work in containing the VHS disease outbreak in May 2006 (see page 7) and an ongoing £400,000 per annum contract to maintain a high-specification emergency tanking facility. Another 13% of income (2005–06: 11%) came from competitively sourced work for other UK government departments and agencies, where a continuation of the growth in the services Cefas supplies to the Food Standards Agency was achieved. The Food Standards Agency is now Cefas' second largest customer, generating £3,164,000 of income (2005–06: £2,734,000). The remaining 8% of income came from the EU, commercial and foreign government sources.

Included within the results for the year are charges for the staff performance bonus paid for the year 2005-06 (£651,000) and payable for the year 2006-07 (£709,000). This change of presentation is as a result of Cefas committing to the annual bonus in the year in which it is earned, where this is affordable. This is the case in 2006-07.







Cefas was subjected to significant cost pressures in the year. The most material increase was staff pay, where the second year in a three-year pay agreement was delivered, through a pay progression arrangement, providing an average annual increase of 4.4% to staff. Additionally the steep increases in heat and power prices saw increases of more than 40%, increasing our year-on-year costs by £140,000.

Substantial maintenance cost reductions have been achieved at our Lowestoft and Burnham-on-Crouch sites due to a policy change which allows repair as required, for work outside health and safety requirements, rather than pre-emptive maintenance. The resulting reduced maintenance spend has lead to a £100,000 saving across the two sites. Although further benefits are expected from this change in policy, there is a risk in the remaining three years of the useful lives of these assets that material repairs may be required.

There were no charitable donations greater than £200 made in the year (2005-06: Nil).

#### **Assets**

Underlying capital charges relating to land, buildings and the research vessel rose in the year due to the indexed increase in their values. However, interest costs reduced, primarily because of the impairment in value of the Lowestoft and Burnham-on-Crouch laboratories. A reduction of £141,000 in the year was attributable to these lower asset values.

Capital investment in the business was £1,575,000 (2005–06: £1,611,000). £1,170,000 (2005–06: £394,000) was principally incurred on scientific equipment, which is typically replaced at a rate close to that depreciated to maintain the asset base. Other additions included information technology equipment and enhancements to laboratory facilities.

Cefas acquired 100% of the share capital of Cefas Technology Limited (CTL) in 2001. CTL specialises in the application of Cefas created technology, examples include electronic fish tag production and fish disease testing. In line with accounting policy, CTL accounts are not consolidated into Cefas' statements of accounts. In the year 2006-07 CTL traded profitably, making £168,000 after tax, on turnover of £659,000.

#### Post Balance Sheet events

The accounts were authorised for issue by the Cefas Accounting Officer on 24 May 2007, and there were no post Balance Sheet events to be reflected in the financial statements or to disclose up to this date.

Background: Fulmars (Fulmaris glacialis)

Right: Aquaculture farm, Mauritius © O Do Porto

Far right: Crab pots on the north Norfolk coast

#### **Cash management**

The business generated a positive operating cash flow of £7,666,000 (2005–06: £6,888,000) primarily because of the notional nature of depreciation, capital charge interest and improvements in working capital management.

Working capital has been reduced again in the year, generating £833,000 of cash. This improvement has continued over recent years, generating over £2,500,000 over the last three. Working capital is now effectively managed and further improvements are not anticipated as our non-Defra business expands and we maintain the central government policy requiring Cefas to make settlement within 30 days of the receipt of goods and services. Performance against this target during the year was 93% (2005–06: 89%) of supplier invoices paid within 30 days.

Having reviewed the cash requirements of Cefas with Defra, we have repaid £5,000,000 (2005–06: £4,340,000) in the year, which reduces the General Fund reserve balance. This leaves Cefas in a sound cash position, with sufficient liquid funds and customer contracts to meet all its expected obligations within the coming financial year.

#### Financial risk

The primary financial instrument risk that Cefas is exposed to is the receipt of payments from customers that are 98% in pounds sterling and 2% in foreign currencies, and the payments of certain goods and services in foreign currencies. This risk is believed to be low, and our policy is to accept the currency conversion risk of Euros and US dollars or closely linked currencies. Cefas manages its own collections risk and reduces its exposure to foreign currencies by netting receipts and payments in the same currencies before translating any remaining funds to pounds sterling.



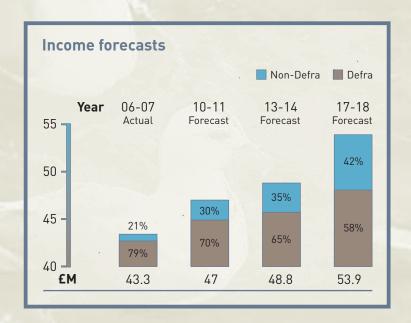
#### Future plans

The most important financial event in the year was the agreement of the Minister (Lord Rooker) to support the Cefas transformation plan, which commits us to deliver financial sustainability over the 11-year period to 2017–18. Defra signed a 10-year agreement with Cefas on 2 April 2007 to buy approximately £30,000,000 of Cefas services per annum until 2016–17. This amount is similar to current core levels of Defra spend but the agreement has no annual inflator and therefore represents an inflationary reduction each year. This could equate to an approximate 30% reduction over the period of the agreement, representing a significant financial challenge to Cefas.

The successful implementation of the transformation plan will place Cefas on a sound financial footing over the ten-year life of the Defra agreement. There are three core change programmes that support the plan:

#### **Growing non-Defra income**

Non-Defra Income, which has grown from £6,300,000 in 2003–04 to £9,240,000 in 2006–07 (compound annual growth of 13.6%), is planned to continue to grow to significantly replace the real reduction in spend from Defra. A compound annual growth rate of 8% is targeted. This will result in a decrease in the reliance in Defra income from currently 79% to approximately 55% by the end of the current plan.



#### Improving support cost efficiency

Cost savings of approximately £1,000,000 per annum are being planned for implementation over the coming four years. Some of these will be linked to the opportunities presented from the new and modern facility at Waveney Campus, enabling new ways of working and providing more opportunities for sharing services. Other costs are being driven out by improving efficiencies and streamlining working methods across Cefas.

#### Rationalising facility costs

Cefas operates from four main facilities: the Lowestoft, Burnham-on-Crouch and Weymouth laboratories and the research vessel *Cefas Endeavour*. The Lowestoft and Burnham-on-Crouch sites were identified as ageing, failing to support modern ways of working, and having an increasing cost of occupation. The decision has therefore been taken to close these two sites in 2009/10 and relocate to a new fit-for-purpose facility within Lowestoft, named the Waveney Campus. This facility will be a shared facility with our local Government partners, Waveney District Council (WDC) and Suffolk County Council, and so will benefit from the synergies of multiple occupancy. Future savings close to £1,000,000 per annum are expected over the projected costs of the existing facilities.

Work on detailed specification and design of the new facility is well underway. WDC, as the future landlord of the facility, has incurred costs relating to Cefas' involvement in the joint project of £295,000 as at 31 March 2007. If the project does not proceed to successfully provide a facility that Cefas contracts from WDC then these costs will be charged to Cefas. The level of this balance will continue to rise until a contract is signed between the partners to provide the facility from landlord (WDC) to occupier (Cefas).



#### 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; however, 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 Cefas Management Board (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. There is 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 was as follows:

٤	Salary band 2006-07 £'000	Salary band 2005-06 £'000	Performai 2006-07 £'000	2005-06 £'000	Total Rem 2006-07	uneration 2005-06
Management Board Member	1000	1 000	1 000	1 000		
Chief Executive (to 5 March 2007)  M Farrar	80 - 85	75 - 80	10 - 15	0 - 5	90 - 95	80 - 85
Chief Executive (from 5 March 2007) <b>R Judge</b>	10 - 15	0	0	0	10 - 15	0
Deputy to the Chief Executive  J Horwood	70 - 75	70 - 75	5 - 10	0 - 5	75 - 80	75 - 80
Science Director  M Waldock	55 - 60	55 - 60	0 - 5	0 - 5	60 - 65	55 - 60
Science Director S Malcolm	50 - 55	50 - 55	0 - 5	0 - 5	50 - 55	50 - 55
Finance and Resource Director <b>T Green</b>	50 - 55	30 - 35	0 - 5	0 - 5	55 - 60	30 - 35
Commercial Director  B Robinson	60 - 65	55 - 60	0 - 5	0 - 5	66 - 70	60 - 65
Director of Staff Development  D Carter	40 - 45	40 - 45	0 - 5	0 - 5	40 - 45	40 - 45
Programme Director (from 25 September 200 A Kerr	6) 35 - 40	0	0	0	35 - 40	0

Salaries include gross salaries, performance pay or bonuses, 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 (2005-06: £NIL). No board members held any company directorships or other significant interests which may have conflicted with their management responsibilities.

	Fee band	Fee band	Performance Bonus		Total Remuneration	
	2006-07 £'000	2005-06	2006-07 £'000	2005-06	2006-07 £'000	2005-06 £'000
Non-Executive Directors						
H Walker	5 - 10	5 - 10	0	0	5 - 10	5 - 10
A Tweedie	15 - 20	10 - 15	0	0	15 - 20	10 - 15
A Robinson	0	0	0	0	0	0

A Robinson is employed by Defra, and therefore is not in receipt of any fees

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

ir	Real increase n pension and related lump sum at age 60	Total accrued pension and related lump sum at age 60	CETV at 2006-07	CETV at 2005-06	Real increase in CETV
Management Board Member	£'000	£'000	£'000	£'000	£'000
Chief Executive (to 5 March 2007)					
M Farrar	0 - 2.5	5 - 10	101	86	13
	plus 2.5 - 5	plus 20 - 25			
	lump sum	lump sum			
Chief Executive (from 5 March 2007)					
R Judge	0 - 2.5	0 - 2.5	6	3	2
ii daage	plus 0 - 2.5	plus 0 - 2.5	O	0	۷
	lump sum	lump sum			
	·	·			
Deputy to the Chief Executive					
J Horwood	0 - 2.5	35 - 40	816	774	6
	plus 0 - 2.5	plus 105 - 110			
	lump sum	lump sum			
0 0					
Science Director  M Waldock	0 - 2.5	15 - 20	387	362	12
IVI VVAIGOCK	plus 0 - 2.5	plus 55 - 60	307	302	12
	lump sum	lump sum			
	idilip saili	iump sum			
Science Director					
S Malcolm	0 - 2.5	15 - 20	349	326	12
	plus 0 - 2.5	plus 55 - 60			
	lump sum	lump sum			
Finance and Resource Director					
T Green	0 - 2.5	0 - 2.5	15	6	8
	plus 0 - 2.5 lump sum	plus 0 - 2.5 lump sum			
	iump sum	lump sum			
Commercial Director					
B Robinson	0 - 2.5	20 - 25	469	443	10
	plus 0 - 2.5	plus 65 - 70			
	lump sum	lump sum			
Director of Staff Development					
D Carter	0 - 2.5	10 - 15	201	184	10
	plus 0 - 2.5	plus 25 - 30			
	lump sum	lump sum			
Programme Director (from 25 September 2006)					
A Kerr	0 - 2.5	25 - 30	528	531	-1
	plus 0 - 2.5	plus 85 - 90	020	331	
	lump sum	lump sum			

# Pension liabilities and entitlements

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 October 2002 may choose between membership of the Premium scheme or joining a good-quality "money purchase" stakeholder-based arrangement, with a significant employer contribution (the Partnership Pension Account). Further details are provided in Note 4(c) to the accounts.



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 £38,000 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. The Accounting Officer has taken all the steps that he ought to have taken to make himself aware of any relevant audit information, and to establish that the entity's auditors are aware of that information.

**Richard Judge** Chief Executive

Date: 18 May 2007

# Statement Officer's Responsibilities

- 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.
- 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.
- Defra has appointed the Chief Executive of Cefas 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 Cefas 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.

# Statement 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 2007 and up to the date of approval of the annual report and accounts, and accords with HM 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, two Science Directors, Commercial Director, Staff Development Director, Finance and Resource Director, and Programme 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

Continued

# 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, and People.

Heads of Science Groups and Heads of Support Units carry responsibility for specific activities within their areas of operation. The Audit and Risk Committee is an entirely external, non-executive, 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 and referred to in the Staff Handbook. 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 described in the Cefas Risk Register, together with mitigating actions, concern:

- impact of the new Marine Management Organisation;
- disruption during business transformation, including site move and co-location and the potential for failure to hit targets for efficiency and income; and
- the maintenance of people with the key skills to manage business continuity and deliver organisational development.

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 CMB 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 directors and myself. 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 with customers is managed 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 owner. 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 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 competences 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. To achieve longer-term business sustainability, Cefas has been set business transformation targets facilitated by a programme of major change management that is being overseen by 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 (ARC) is a formally constituted committee of the CMB. The committee is chaired by an external independent member and includes two further external independent members and, until September 2006, the committee included three members of the Cefas executive management team. From September 2006 the membership was reduced to the three non-executive CMB members only. Internal and external auditors and executives attend the meetings with others as required by the committee.

The ARC 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, significant adjustments resulting from the audit.

The ARC 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 and safety reporting as well as routine review of audit reports.

Cefas receives regular reports by internal audit, to Government Audit Standards, which include 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 Board.
- 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 10% 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 network. The OGC's mandatory PPM controls are in place and operating consistently and effectively in Cefas, for suitable projects.

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

#### Significant internal control problems

An internal audit of Applied Technology identified some weaknesses in the IT control environment. Whilst there has been no consequence of these weaknesses to report, I accept that they may potentially put at risk the achievement of organisational objectives. An action plan to remove the identified weaknesses has been initiated under the control of a CMB director.

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 ARC, and a plan to ensure continuous improvement of the system is in place.

Richard Judge

Chief Executive

Date: 18 May 2007

# 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 2007 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. I have also audited the information in the Remuneration Report that is described in that report as having being audited.

# Respective responsibilities of the Agency, the Chief Executive and auditor

The Agency and Chief Executive, as Accounting Officer, are responsible for preparing the Annual Report, which includes the Remuneration 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 and the part of the Remuneration Report to be audited 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 report to you whether, in my opinion, certain information given in the Annual Report, which comprises the Chief Executive's Introduction, Strong Science, Management Commentary and the unaudited part of the Remuneration Report, is consistent with the financial statements. 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.

In addition, I report to you 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 HM Treasury regarding remuneration and other transactions is not disclosed.

I review whether the Statement on Internal Control reflects the Agency's compliance with HM Treasury's guidance, and I report if it does not. I am not required to consider whether this statement covers 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. 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**

#### **Audit Opinion**

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 2007, and of the net surplus, 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
- the information given within the Annual Report, which comprises the Chief Executive's Introduction, Strong Science, Management Commentary and the unaudited part of the Remuneration Report, is consistent with the financial statements.

#### **Audit Opinion on Regularity**

In my opinion, 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.

#### Report

I have no observations to make on these financial statements.

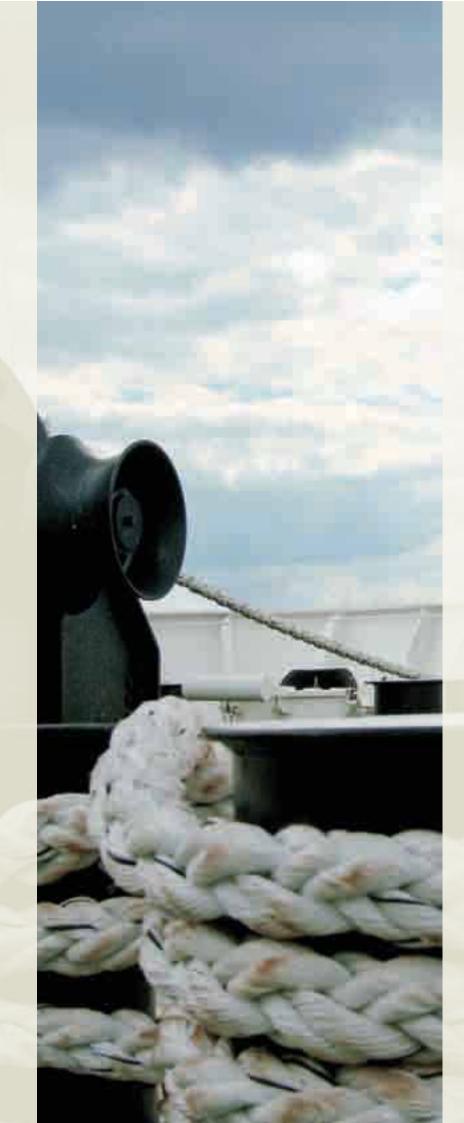
#### John Bourn

Comptroller and Auditor General

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

Date: 23 May 2007

The maintenance and integrity of the Cefas website is the responsibility of the Accounting Officer; the work carried out by the auditors does not involve consideration of these matters and accordingly the auditors accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the website.



Right and background: Mooring rope around bollards and winch on RV  $\it Cefas\ Endeavour\ @$  Stuart Hawes

# financial statements of accounts

# **Income and Expenditure**

#### For the year ended 31 March 2007

	Notes	2006-07 £′000	2005-06 £′000
Turnover	2 & 3	43,342	40,415
Cost of Sales	4 & 5	(41,288)	(38,177)
Operating Surplus		2,054	2,238
(Loss) on Disposal of Fixed Assets		(52)	(27)
Notional Interest Payable	26	(1,826)	(2,014)
Net Surplus	14	176	197
Percentage Total Cost Recovery		100	100

# Statement of Recognised Gains and Losses

#### For the year ended 31 March 2007

	2006-07 £′000	2005-06 £′000
Surplus for the year	176	197
Gain on the indexation of Fixed Assets	1,430	2,877
Impairment of Land & Buildings	(6,812)	0
Total (Losses)/Gains Recognised in Year	(5,206)	3,074

The notes on pages 51 to 63 form part of these accounts.

## **Balance Sheet**

#### As at 31 March 2007

	Notes	2006-07 £'000	2006-07 £'000	2005-06 £'000
Fixed Assets				
Tangible Fixed Assets	7		50,694	59,110
Investments	8		150	150
Total Fixed Assets			50,844	59,260
Current Assets				
Work in Progress	9	703		701
Debtors	10	3,537		3,285
Cash at Bank and in hand	19	7,143		5,874
Total Current Assets		11,383		9,860
Creditors				
Amounts falling due within one year	11	(7,454)		(6,139)
Net Current Assets			3,929	3,721
Total Assets less Current Liabilities			54,773	62,981
Creditors				
Amounts falling due after one year	11		0	(126)
Provisions for Liabilities & Charges	13		(1,154)	(972)
TOTAL ASSETS LESS LIABILITIES			53,619	61,883
TAXPAYERS' EQUITY				
General Fund	14		44,585	47,658
Revaluation Reserve	14		9,034	14,225
Total Reserves as at 31 March			53,619	61,883

The notes on pages 51 to 63 form part of these accounts.

Richard Judge

Chief Executive and Agency Accounting Officer

Date: 18 May 2007

# **Cash Flow Statement**

#### For the year ended 31 March 2007

	Notes	2006-07 £'000	2005-06 £′000
Net cash inflow from operating activities Capital expenditure and financial investment	15 16	7,666 (1,397)	6,888 (1,458)
Financing	17	(5,000)	(4,340)
Net cash inflow		1,269	1,090

The notes on pages 51 to 63 form part of these 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 five 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:

Buildings4-41 yearsInformation Technology2-7 yearsScientific and General Equipment5-10 yearsVessels15-30 yearsVehicles6-8 yearsFixtures and Fittings3-30 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 (Turnover)

Operating income (turnover) 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 in line with work done.

#### 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 on the average value of all assets excluding cash held at the Office of the Paymaster General, less liabilities and excluding donated assets.

#### 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
- Audit fees
- 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 (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. 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 it employs 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 (CSV). 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 outstanding debts.

#### 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 Inc	come
---------------------------	------

			2006-07 £'000	2005-06 £'000
Defra			33,103	32,200
Defra Agencies			999	781
Other Government Departments			4,846	3,840
Total UK Government Income			38,948	36,821
Note 3. Non-UK Government Income				
			2006-07	2005-06
			£′000	£′000
UK Public Sector			744	566
UK Private Sector			876	1,144
European Union			1,842	1,278
Other Non-UK Government			932	606
Total Non-UK Government Income			4,394	3,594
Note 4. Staff Related Expenditure				
(a) Staff Costs				
			2006-07	2005-06
	Employed staff	Others	Total	Total
	£′000	£′000	£′000	£′000
Wages and Salaries	15,350	377	15,727	13,819
Social Security Costs	1,160	0	1,160	1,039
Superannuation	2,693	0	2,693	2,354
Total Staff Expenditure	19,203	377	19,580	17,212
Total otali Experiature	13,203		13,300	17,212
(b) The average number of persons employed by Cefas during the	year was:			
			2006-07	2005-06
	Employed staff	Others	Total	Total
	No	No	No	No
Scientific Research & Development	394	12	406	378
Scientific Research & Development  Management/Administration	394 117	12 1	406 118	378 132
Management/Administration	117	1	118	132

# Note 4. Staff Related Expenditure (continued)

#### (c) Pension benefits

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 CSV 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.

The pension entitlements of the agency's most senior managers are shown on page 36 of the Report.

#### (d) Early departure costs

Early departure costs in 2006-07 amounted to £51,000 (2005-06: £46,000), exclusive of employer's contributions to national insurance and superannuation, for lieu of notice and compensation for loss of pension.

## Note 5. Other Expenditure

	2006-07	2005-06
	£′000	£′000
Laboratory Consumables	5,816	5,769
Depreciation	3,493	3,617
Impairment	988	0
Vessels & Charters	3,090	3,579
Accommodation	3,317	3,390
Professional charges and fees	842	469
Postage	164	153
Stationery & Printing	181	158
Library Purchases	160	163
Provision for future losses	365	40
Internal Audit	49	52
External Audit	38	30
Travel & Subsistence	1,511	1,424
Training	467	517
IT Costs	681	1,198
Defra Management Overheads	138	135
Telecommunications	125	117
Doubtful Debt Provision	85	0
Other Expenditure	198	154
Total Expenditure	21,708	20,965

# Note 6. Segmental Report

		2006-07			2005-06	
	Governmental Bodies £'000	Other £'000	Total £′000	Governmental Bodies £'000	Other £′000	Total £'000
Turnover	38,948	4,394	43,342	36,821	3,594	40,415
Cost of Sales	(37,204)	(4,084)	(41,288)	(34,266)	(3,911)	(38,177)
Surplus for the Year	1,744	310	2,054	2,555	(317)	2,238
Return on capital employed	3.5%	5.5%	3.7%	5.0%	(6.3)%	4.0%

Note 7. Tangible Fixed Assets

						Assets In	
	Land &		Information	Scientific	General	Course of	
	Buildings	Vessels	Technology	Equipment	Equipment	Construction	Total
Cost or Valuation	£′000	£′000	£′000	£′000	£′000	£′000	£′000
At 1 April 2006	37,413	28,933	3,802	9,600	1,141	261	81,150
Indexation	1,527	24	(20)	(49)	(6)	0	1,476
Revaluation	(6,812)	0	0	0	0	0	(6,812)
Additions	152	101	358	1,170	28	(234)	1,575
Transfers	0	0	0	0	0	0	0
Disposals	(579)	0	(151)	(212)	(88)	0	(1,031)
At 31 March 2007	31,701	29,058	3,989	10,509	1,074	27	76,358
Depreciation							
At 1 April 2006	(8,987)	(2,889)	(2,821)	(6,519)	(825)	0	(22,040)
Indexation	(69)	(2)	6	17	1	0	(46)
Revaluation	0	0	0	0	0	0	0
Provided in Year	(1,380)	(964)	(314)	(715)	(119)	0	(3,493)
Impairment	(988)	0	0	0	0	0	(988)
Transfers	0	0	0	0	0	0	0
Disposals	524	0	139	176	64	0	903
At 31 March 2007	(10,900)	(3,855)	(2,990)	(7,040)	(879)	0	(25,664)
Net Book Value							
At 31 March 2007	20,801	25,203	999	3,469	195	27	50,694
At 31 March 2006	28,426	26,044	981	3,081	316	261	59,110

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 2007.

Some individual asset groups have been combined where the individual amounts for the class of asset are less significant. Land & Buildings is now combined, as are Furniture, Fixtures & Fittings and Vehicles, which are now included under General Equipment.

An amount of £988,000 has been charged in respect of the impairment of Lowestoft and Burnham-on-Crouch Laboratories as a consequence of Cefas' decision to relocate. The revaluation reserve relating to these assets has been released, reducing their value by £6,800,000.

#### Note 8. Fixed Asset Investments

	£′000
Cost	
At 1 April 2006	150
Additions	0
Disposals	0
At 31 March 2007	150
Provisions	
At 1 April 2006	0
Movement	0
At 31 March 2007	0
Net Book Value	
At 31 March 2007	150
At 31 March 2006	150

In 2001, Cefas purchased the entire share capital of Cefas Technology Limited (CTL) for £150,000.

The Cefas Management Board (CMB) 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.

In accordance with the Financial Reporting Manual, the fixed asset investment has not been consolidated, as it is outside the Departmental boundary.

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

	2006-07	2005-06
	£'000	£′000
Net assets at 31 March	818	650
Turnover	659	572
Profit for the year	168	173
Note 9. Work In Progress		
11010 71 1101K III 1 1 0 g. 1 0 0 0		
:	2006-07	2005-06
	£′000	£′000
United Kingdom	309	356
European Union	219	295
	175	50
Other	173	00
Total Work In Progress		

#### Note 10. Debtors

	2006-07 £′000	2005-06 £'000
Trade Debtors	1,434	1,382
VAT	26	100
Defra (including agencies)	1,753	1,505
Prepayments and Accrued Income	311	293
Sundry Debtors	13	5
Total Debtors	3,537	3,285
Note 11. Creditors		
	2006-07 £'000	2005-06 £′000
Amounts falling due within one year:		
Trade Creditors	496	998
Other Taxation and Social Security	629	571
Accruals	1,990	1,329
Defra (including agencies)	127	84
Other Creditors	3	6
Deferred Income Defra	2,427	1,672
Deferred Income other	1,782	1,479
Total under one year creditors	7,454	6,139
Amounts falling due after more than one year:		
Deferred Income	0	126
Total Creditors	7,454	6,265

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	2,856	0	127	0
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	681	3	7,327	0
Balance at 31 March 2007	3,537	3	7,454	0
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 1 April 2006	3,285	0	6,139	126

Note 13. Provisions for Liabilities and Charges

	Balance at 1 April 2006	Provided in the year	Utilised in the year	Change in discounted Amount	Balance at 31 March 2007
	£′000	£′000	£′000	£′000	£′000
Early Retirement	772	38	(261)	13	562
Estate Dilapidations	200	7	0	0	207
Contract Losses	0	200	0	0	200
Legal Claims	0	185	0	0	185
Total	972	430	(261)	13	1,154

The early retirement 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.

Leases on stores at Pinbush Road and an unused site at Headcorn include terms that require Cefas to return the respective sites to the original state on taking out the lease.

Contract Losses reflects a provision for losses that are reasonably likely to be incurred in respect of OCNS. The delivery of this project is already overdue and there is a significant risk of incurring substantial additional reworking of system code.

The incidence of Legal Claims levied against Cefas has increased, and with this the expectation of liabilities arising and the difficulty of defending Cefas against the onus of responsibility.

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

Note 14. Movement on Reserves

	General	Revaluation	
	Fund	Reserve	Total
	£′000	£′000	£′000
Balance at 1 April 2006	47,658	14,225	61,883
Notional Charges	176	0	176
Notional Interest	1,826	0	1,826
Revaluation	0	(5,382)	(5,382)
Adjustment to Realised Element of Revaluation Reserve	(191)	191	0
Income & Expenditure Account	176	0	176
Provision for Early Departure Costs	0	0	0
Disposal of Sea Life Centre Defra Receipt	(60)	0	(60)
Excess Cash Funding Repayable to Defra	(5,000)	0	(5,000)
Balance at 31 March 2007	44,585	9,034	53,619

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

	£′000	2006-07 £'000	£′000	2005-06 £′000
Net surplus/(deficit)		176		197
Adjustments for non-cash transactions				
Depreciation charges	3,493		3,616	
Impairment	988		0	
Notional charges	2,002		2,149	
Loss on disposal of fixed assets	52		27	
Defra Receipt re: disposal of asset	(60)		0	
Provisions	443		220	
		6,918		6,012
Adjustments for movements in working capital other than cash				
(Increase)/Decrease in work in progress	(2)		18	
(Increase)/Decrease in debtors	(252)		688	
Increase in creditors	1,087		384	
		833		1,090
Use of provisions		(261)		(411)
Net cash inflow from operating activities		7,666		6,888
Note 16. Capital Expenditure and Financial Investment				
		2006-07		2005-06 £'000
		£′000		£ 000
Payments to acquire tangible fixed assets		(1,472)		(1,464)
Receipts from sale of tangible fixed assets		75		6
		(1,397)		(1,458)
		<del></del>		
Note 17. Financing				
		2006-07		2005-06
		£′000		£′000
Excess cash funding repaid to Defra		(5,000)		(4,340)
		(5,000)		(4,340)

#### Note 18. Analysis of Changes in Cash During the Year

	2006-07 £′000	2005-06 £′000
Balance at 1 April	5,874	4,784
Net Cash Flow  Balance at 31 March	1,269 —	1,090 ———————————————————————————————————
Note 19. Cash at Bank and in Hand		
	2006-07	2005-06
	£′000	£′000
Commercial Banks	834	200
Office of Paymaster General	6,307	5,672
Cash in Hand	2	2
Total Cash at Bank and in Hand	7,143	5,874

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 (2005-06: £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 terms 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:

	2006-07 £′000 Vehicles	2006-07 £′000 Land	2006-07 £'000 IT Equipment	2005-06 £'000 Vehicles	2005-06 £′000 Land	2005-06 £'000 IT Equipment
Operating Leases which expire:						
Within 1 Year	11	7	5	6	14	0
Between 2 to 5 Years	49	0	6	62	10	18
After 5 Years	0	89	0	0	10	0
Total	60	96	11	68	34	18

#### Note 24. Related Party Transactions

Cefas has dealings with Defra and its sponsored bodies, notably the Veterinary Medicines Directorate and the Central Science Laboratory. One of Cefas' non-executive directors is employed by Defra.

CTL is a fixed asset investment (see note 8). The shares are held by R Judge as nominee of the trustee for Cefas.

No board member, members of key management staff or other related parties have undertaken any material transactions with Cefas, CTL or other related parties during the year.

#### Note 25. Prompt Payment Policy

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

	2006-07	2005-06
	%	%
Quarter 1	95	85
Quarter 2	88	86
Quarter 3	92	92
Quarter 4	95	94
Average percentage of invoices paid within 30 days	93	89

No interest was paid in respect of late payment of commercial debt (2005-06: £NIL).

#### Note 26. Notional Interest

	2006-07 £′000	2005-06 £'000
Fixed Assets	1,826	2,014
Total Notional Interest	1,826	2,014

# **A** cronyms

**BEQUALM** Biological Effects Quality Assurance in Monitoring

Programmes

**BREEAM** Building Research Establishment Environmental Assessment

Method

BTEC Business and Technology Education Council

Cefas Centre for Environment, Fisheries and Aquaculture Research
the Convention on International Trade in Endangered Species

of Wild Fauna and Flora

CMB Cefas Management Board
CSL Central Science Laboratory
CTL Cefas Technology Limited

**Defra** Department for Environment, Food and Rural Affairs

**DFID** Department for International Development

**DTI** Department of Trade and Industry

EU European Commission
European Union

FRS Fisheries Research Services
FSA Food Standards Agency
FSP Fisheries Science Partnership
GIS geographic information system
HMRC HM Revenue & Customs

ICES International Council for the Exploration of the Sea

IPY Investors in People
IPY International Polar Year

**iSEA** interactive Spatial Explorer and Administrator

**ISO** International Standards Organisation

JAMP Joint Assessment and Monitoring Programme

**KHV** koi herpes virus

**LCM** laser capture microscopy

MCA Maritime and Coastguard Agency

MCCIP Marine Climate Change Impacts Partnership

MDIP Marine Data & Information Partnership

MPAs marine protected areas
NCC National Control Centre

NERC Natural Environment Research Council

NMA National Marine Aquarium

**OIE** Office International des Epizooties

**OSPAR** Oslo and Paris Commission for the Protection of the Marine

Environment of the North-East Atlantic

**PSG** Professional Skills in Government

**RIDDOR** Reporting of Injuries, Diseases and Dangerous Occurences

Regulations 1995

RNLI Royal National Lifeboat Institution
SEA strategic environmental assessment

SCCSuffolk County CouncilSVCspring viraemia of carpTSVtaura syndrome virus

UKAS
United Kingdom Accreditation Service
VHS
viral haemorrhagic septicaemia
VLA
Veterinary Laboratories Agency
VMD
Veterinary Medicines Directorate
WCMT
Winston Churchill Memorial Trust

WDC Waveney District Council
WWF Worldwide Fund for Nature
WSSV white spot syndrome virus

YHV yellowhead virus

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Further information about Cefas, our activities and services, and news of recent developments can be found on our website: www.cefas.co.uk or email: marketing@cefas.co.uk

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