

EA-Anglian Box 4

Environmental Snapshot

for the

East of England

OCTOBER 2000



ENVIRONMENT AGENCY

Foreword

Our Quality of Life depends in part on the State of the Environment in which we live, work and enjoy. It is therefore important to have a clear understanding of the current condition of our environment and the pressures it is under.

As one of the fastest growing regions in the country, it is vital that its development is sustainable for us and future generations. There are already pressures on development in the Region, for example:

- in our low lying flood risk areas
- how we use water
- how we dispose of waste
- the way in which we travel

We all have a part to play in maintaining and improving the environment. To do this we need to understand our environment.

To help this understanding we have produced this updated 'Snapshot on the Environment'.



ROBERT RUNCIE

Regional Director

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Introduction

The East of England

The East of England Region comprises of the six counties of Cambridgeshire, Bedfordshire, Norfolk, Suffolk, Essex and Hertfordshire and the four Unitary Authorities of Luton, Peterborough City, Southend-on-Sea and Thurrock, (Figure 1).

This Region has extensive sparsely populated rural areas and coastline interspersed with metropolitan centres, around which urban populations and industry has developed. Agriculture has a considerable influence over the rural economy and community.

The East of England is a centre of leading-edge technology, biotechnology and world class research. It has major ports at Felixstowe, Harwich and Tilbury. Its cultural, historical and tourist attractions bring in large numbers of visitors.

Cambridge, in particular, has had a successful record in attracting inward investment.

To support a regional response to local, national and international issues, the East of England Regional Assembly (EERA), the East of England Development Agency (EEDA) and a supporting network of regionally focussed partnerships have now been established in the East of England. These organisations and partnerships are providing the resources to look closely at social, economic and environmental pressures impacting upon the region. It is widely recognised that there is a need to secure sustainable development in the region, now and for future generations.

The Environment Agency

The Environment Agency, which has approximately 1470 staff and carries out £62m of expenditure in the Anglian Region, is a major stakeholder in ensuring that future growth contributes to the goal of sustainable development and that environmental sustainability is at the heart of future decision making. To help achieve this the Environment Agency is working closely with its regional partners such as EERA and EEDA.

To equip ourselves and others to consider the environmental consequences of differing development scenarios, we have prepared this second Environmental Snapshot, updating data given in the Snapshot produced a year ago. We hope it will be an interesting and useful reference document for those preparing policies and strategies. This booklet is a summary of an array of available information and highlights some of the key environmental issues.



Figure 1. Regional Context

Key Environmental Issues

Key Environmental Issues, which need to be addressed in future regional strategies, are as follows:

- Ensuring the prudent use of natural resources in one of England's fastest growing regions.
- Ensuring sustainable water management in England's driest region.
- Restoring the quality of degraded habitats and reclaiming fen and reedbed habitats that have been lost.
- Considering climate change scenarios and the implication of flood risks.

Everyone has a role to play in ensuring a better quality of life today and for future generations - through integrating social, economic and environmental goals. The term 'sustainable development' has been used frequently in recent years. Figure 2 gives an illustration of the most commonly used definition.

As we begin the twenty-first century, reflection on what the future holds is commonplace, but do we know where we are going or what a sustainable future may mean?

On a global scale our current situation is not a comfortable one. We are experiencing rapid socio-economic change which looks set to continue. Society is changing so that many traditional sources of personal security are no longer applicable. Information technology and global markets are transforming our economy. However, in our efforts to improve material standards of living, we are rapidly transforming our environment and in the process, we risk destroying its ability to support us.

Moving forward and planning future change, in a sustainable way, creates the future we want rather than allowing the future to 'happen' to us. This means both individual change and collective action.

In order to assess progress towards a more sustainable approach to development, the government has produced a number of 'headline indicators'. Figure 3 gives a summary of what these indicators are.

Where appropriate, in an environmental context, these 'headline indicators' will be identified in the following text.

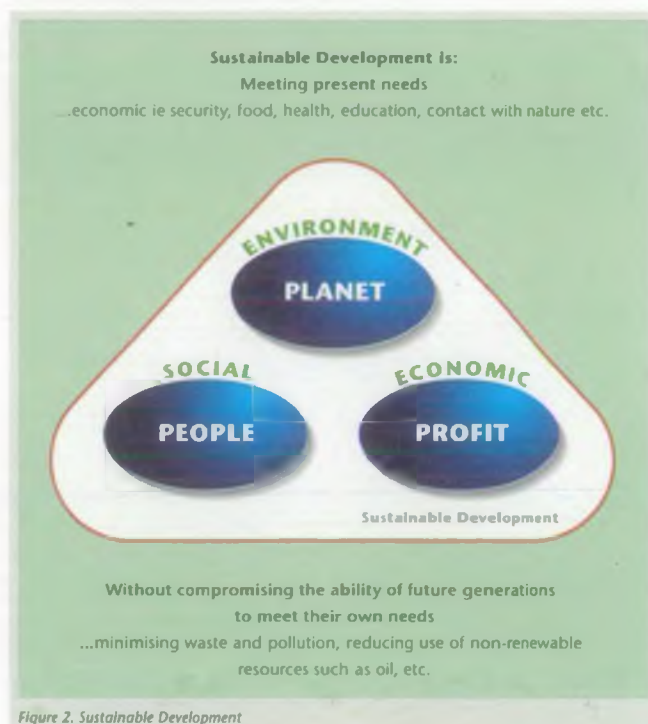


Figure 2. Sustainable Development

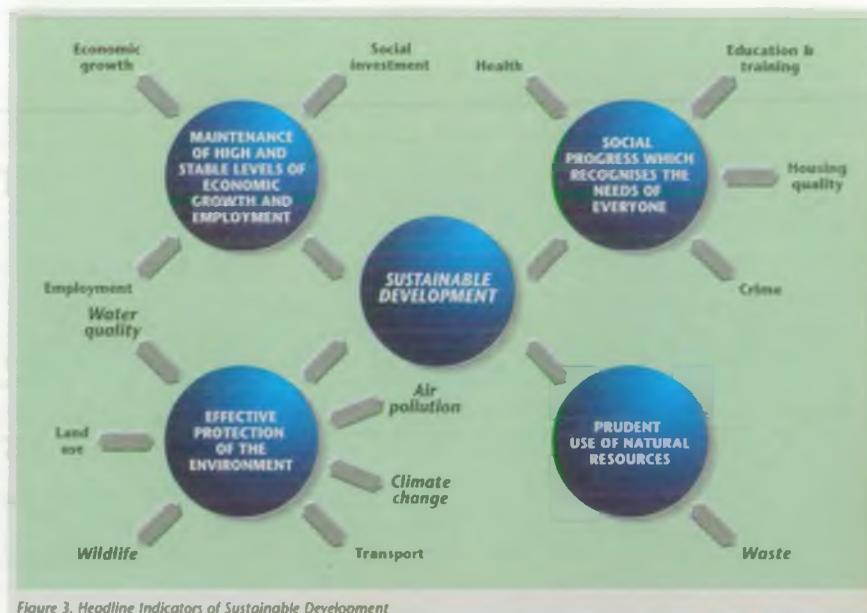


Figure 3. Headline Indicators of Sustainable Development

Climate change

Climate changes naturally, but man's impact on this process is now evident and believed to be causing more marked effects than would occur naturally. Since the industrial revolution (18th century), there has been a rise in the global-mean surface air temperature of 0.6°C. 'Global warming', as this is now known, is potentially one of the most serious global environmental problems facing society.

Latest climate change forecasts for the East of England

Temperature: Increase by 0.5°C over the next 30 years.

Rainfall: Increase by 1 - 5% over the next 30 years.

However, more rain will fall with greater daily intensity between November and March - increasing run-off and flood risk. Less rainfall from April to October will make the summer water resources more limited.

Evapotranspiration: Increase by 10% over the next 30 years.

Soil Moisture Deficit: Higher in autumn. Therefore, less water available for the winter recharge of the regions chalk aquifers.

Actions to reduce climate change

The UK has a legally binding target under the Kyoto Protocol to reduce emissions of six greenhouse gases by 12.5% below 1990 levels by 2008-2012 (Figure 4). It has also set itself a tougher domestic goal of reducing CO₂ emissions by 20% below 1990 levels by 2010 [Government Headline Indicator].

Ultimately, the Government's commitment to CO₂ reduction will be delivered locally. Local Authorities have been working to raise awareness of the issues, e.g. through schools and Local Agenda 21 (LA21), energy efficiency and transport initiatives, CO₂ reduction strategies, and audits of the use of energy and production of CO₂.

CO₂ emissions are mainly driven by energy consumption. Transport has been the fastest growing source in the UK as a result of a sharp increase in road traffic, and accounts for about a quarter of all CO₂ emissions. These are forecast to continue to rise. People can help by reducing their dependency on the car and using other modes of transport.

For business and the public sector, which account for almost half of the total emissions, there is considerable scope to use less energy and save more money. Households, responsible for about one quarter of all CO₂ emissions, can also reduce emissions and save money by being more energy efficient.

We need good air quality for our own health and to sustain the environment. Air pollution is caused mainly by road transport, energy generation, industrial processes and domestic sources such as open fires. Road transport is often the major source of pollution, especially in urban areas such as Cambridge and Norwich. Local industry may occasionally contribute significantly to local air quality problems but this is unlikely to be a major cause of problems on a regional scale.

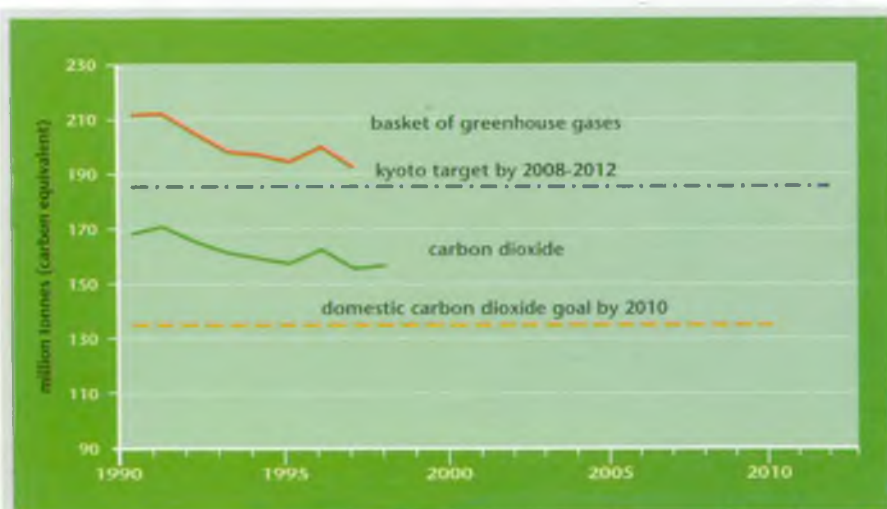


Figure 4: Emissions of Greenhouse Gases in the United Kingdom

Air quality

The National Air Quality Strategy attempts to protect health by setting objectives for eight main air pollutants. It was introduced in 1997 and has just been revised. Local authorities are responsible for ensuring that air quality meets these standards. However other bodies have a major involvement in the process and the Environment Agency, as the regulator of major industry, has a key role to play.

Air quality is generally good across the whole of the East of England. Levels of most pollutants, including SO_2 and NO_2 , are 'low' according to the UK classification system. Ozone may be an occasional problem in summer, which is likely to continue for some years, under certain conditions in the south of the region. Particle levels can be a cause of concern under certain meteorological conditions, when polluted continental air is blown across the region.

Days of Air Pollution

National figures indicate that in general, urban sites experienced around 25 days in 1998 when pollution levels were above the national air quality standard (at which mild health effects may be experienced by sensitive groups of people). Rural areas experienced around 30 days of moderate or poor air quality in 1998, (Figure 5).

Nitrogen Dioxide (NO_2)

The revised annual air quality standard for NO_2 is 21 particles per million (by 2005). Some urban areas and major roads may have the potential to exceed this, but it is unlikely to be a major problem for the East of England compared with other regions.



Figure 5: Days of Air Pollution in the United Kingdom



Particles (PM10)

It is now generally acknowledged that PM10s are made up of several different types of particles from different sources and consequently the measurement of them is not as accurate or reliable as we would wish.

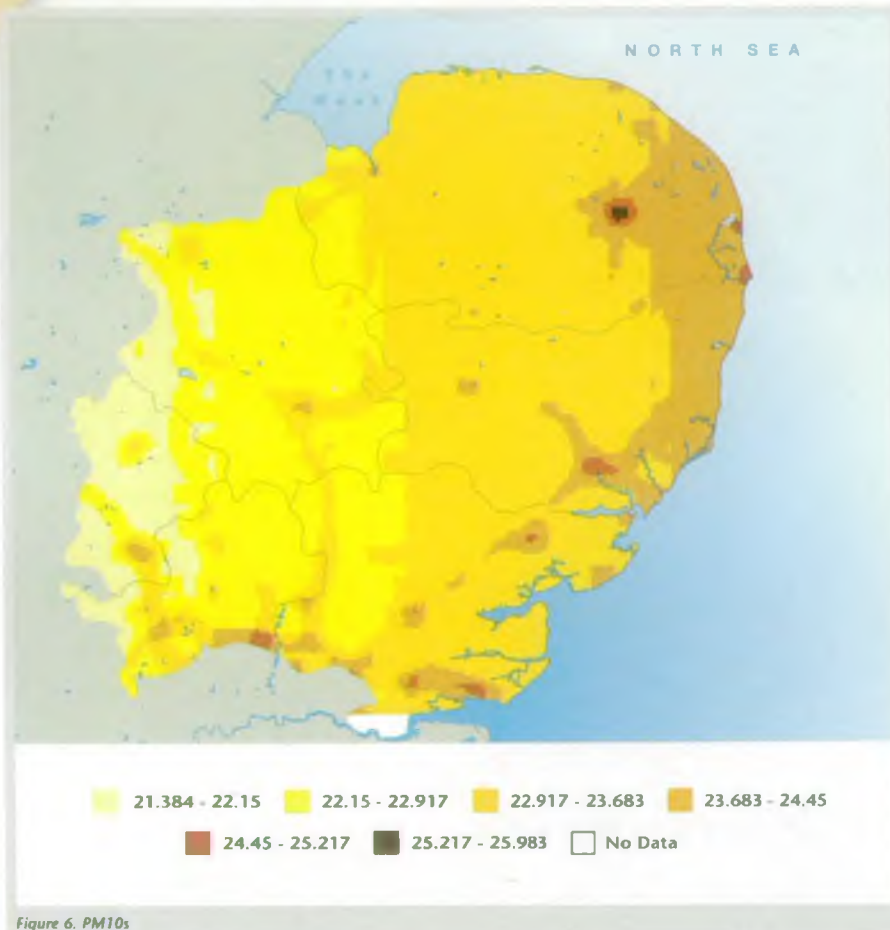


Figure 6. PM10s

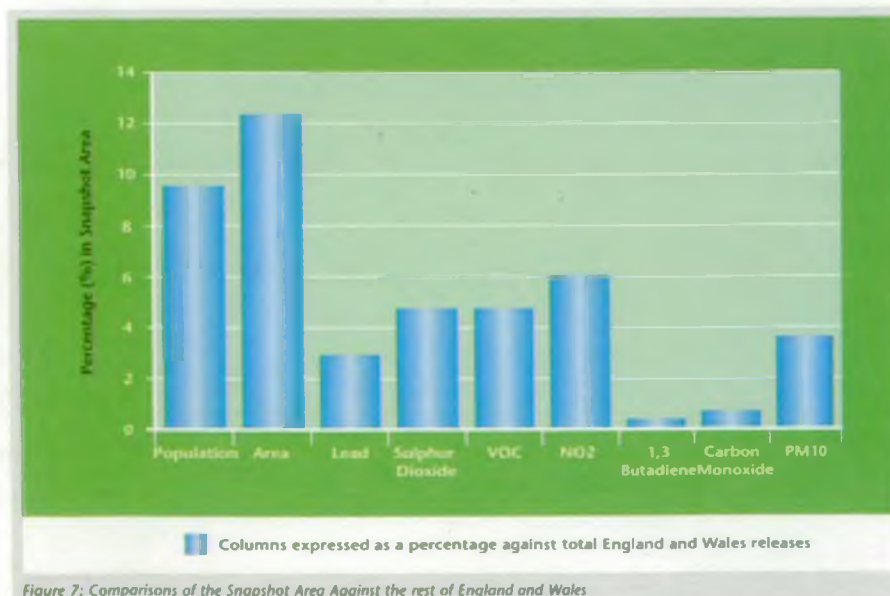


Figure 7: Comparisons of the Snapshot Area Against the rest of England and Wales

Levels of particles higher than the original air quality standard were sometimes experienced throughout the UK. The revised standard now allows more exceedences per year. Most areas in the East of England, even in the worst meteorological conditions (transboundary transport of particulates) will probably meet the new standards. Figure 6 illustrates the east to west banding of concentrations that result from this transport of particles from Europe.

Ozone (O₃)

Ozone does not feature in the Air Quality Regulations, despite featuring in the National Air Quality Strategy, as it is a secondary pollutant formed by complex interactions initiated by sunlight on certain precursor pollutants, and it is recognised that local air quality management measures cannot control it. However, provisional ozone objectives are being exceeded, especially in the south of the region. This is probably due to the airborne transport of the precursors generated in London and Europe. Ozone tends to be a rural, summertime problem, as it requires sunlight to react with precursors such as certain volatile organic compounds (VOCs) and nitrogen oxides. It tends to be less of an urban problem as the higher concentrations of traffic in these areas produce more nitric oxide, which reacts with the ozone to produce nitrogen dioxide.

Sulphur Dioxide (SO₂)

As a result of the Clean Air Act (1993), the replacement of coal as a fuel and the use of cleaner technologies in the industrial sector, emissions of SO₂ have fallen by 63% in the UK since 1970. Nationally emissions of SO₂ are generally dominated by a few large emitters, none of which are sited in the East of England, although there are a number of smaller lower volume sources within the region.

Figure 7 gives the releases of key air pollutants from Environment Agency regulated (IPC) processes for 1999 as a percentage of the national (England and Wales) total from these processes. Releases are low when compared with the percentage of the population in the area, reflecting the generally non-industrialised state of the six counties.

Water resources

Water Resources – Context

The East of England is the driest part of England and Wales (Figure 8) and efficient use of water resources is vital if future development is to be sustainable. The water environment (rivers, streams, wetlands and estuaries) of the East of England is a valuable one, containing many wildlife sites of national and international importance. The Environment Agency recognises this and is working with the water companies, English Nature and other organisations to ensure that abstractions do not take place to the detriment of the environment.

Uses of Water

The main sources of water are rivers and groundwaters which are replenished by rainfall. These sources supply man's needs for domestic water supply, agriculture and industry as well as a number of recreational and amenity uses. At the same time, water is needed to sustain many aspects of the environment, both rivers and its habitats – wetlands and associated wildlife.

We can provide detailed information on industrial, agricultural and domestic water use, (Figure 9). The general trend is that spray irrigation is on the increase, whilst public use has stabilised and general industrial use has decreased over recent years.

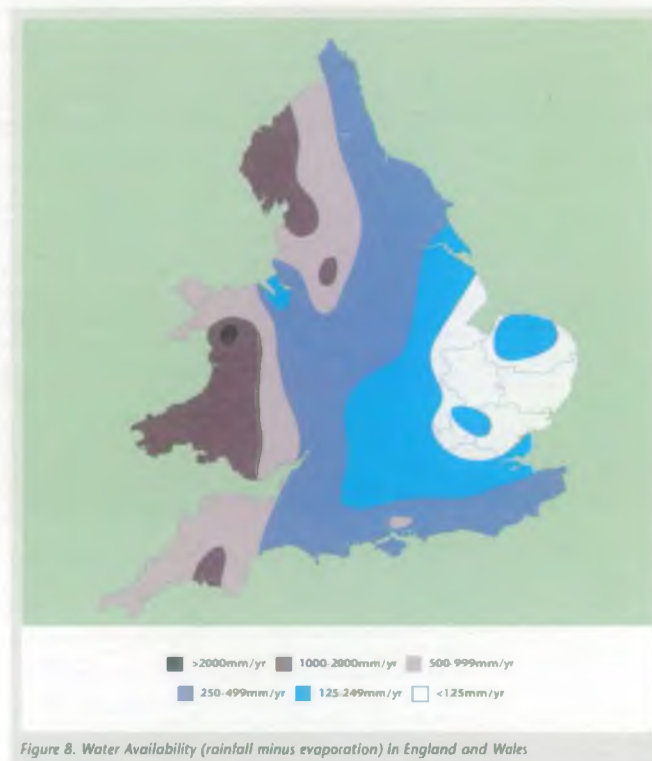


Figure 8. Water Availability (rainfall minus evaporation) in England and Wales

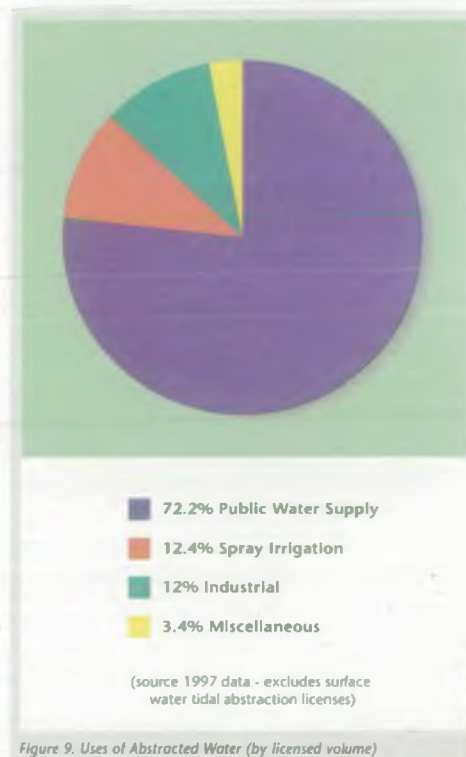


Figure 9. Uses of Abstracted Water (by licensed volume)



Figure 10: Water Consumption 1998 - 1999

How much do we use?

Figure 10 shows the consumption per person for measured (metered) and unmeasured households for the water companies in the region in 1998/99.

This shows that the average unmeasured per capita consumption is 151 litres/head/day. 130 litres/head/day in measured households.

Leakage

Figure 11 shows the average leakage in litres per property per day in the region as compared to the water industry as a whole.

The average leakage is 127 l/pr/d.

The graph shows that the water companies in this region have a lower level of leakage than the national average. They are active in maintaining low levels and reducing leakage.

Sustainable Development Issue

In a dry region (with intense development) both metering and leakage control are ways of securing the prudent use of water resources and as such these measures are good indicators of sustainable development. However, there are costs and social implications associated with these controls.

Water Efficiency?

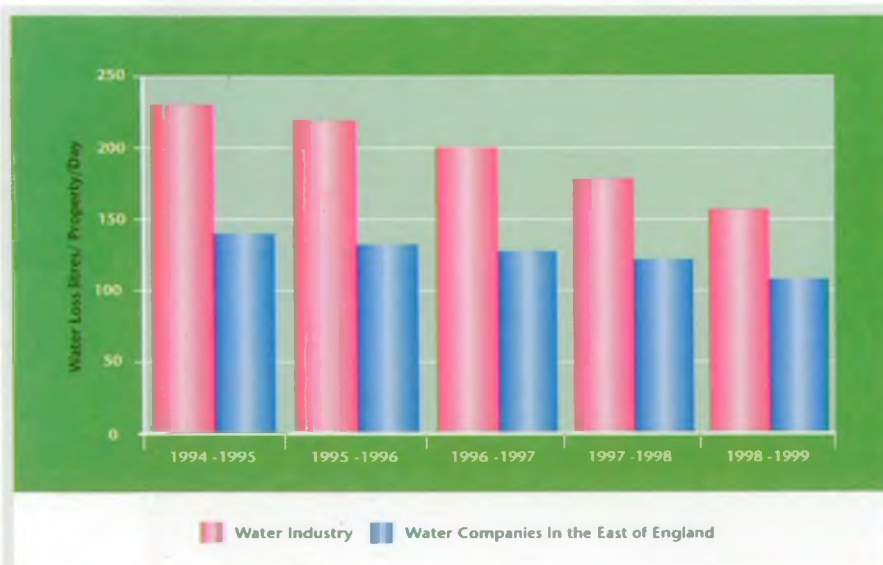


Figure 11: Leakage

River Water Quality

The Environment Agency has a method for classifying the water quality of rivers and canals, known as the General Quality Assessment scheme (GQA). This provides a consistent assessment of the state of water quality across England and Wales and any changes in this over time.

The chemical GQA describes quality in terms of three chemical measurements (ammonia, dissolved oxygen and biochemical oxygen demand) which detect the most common types of pollution [**Government Headline Indicator**]. It allocates one of six grades, from very good (Grade A) to bad quality (Grade F), to each river stretch.

For estuaries, the Classification of Estuaries Working Party (CEWP) scheme ranks water from Good Quality (Class A) to Bad Quality (Class D). The CEWP scheme combines an assessment of biological and aesthetic state of the water with a measurement of minimum levels of dissolved oxygen, (Figure 12).

The biological GQA is another measure of quality, based on the groups of small animals (such as mayfly nymphs, snails, shrimps and worms) that are found on the river bed. It also allocates one of six grades (a to f) to each stretch of river. The majority of rivers in the East of England are of "good" or "very good" quality. It is important to use biological GQA as an indicator as it can detect pollutants that occur infrequently and may be missed by the spot-sampling procedures used in the chemical GQA scheme.

The Environment Agency uses River Quality Objectives (RQOs) to plan improvements to river quality (Figure 13). RQOs ensure that river quality is checked against the standard of water quality required for certain uses.

RQO failures that are due to water utility companies, or which might be caused by these companies in the next five years, will be addressed by the periodic review of company investment plans by Government regulators. The remaining risk to water quality is from the intensity of land use and agriculture. It is clearly desirable that any future development should not worsen water quality or undermine the ability to meet any agreed RQOs.

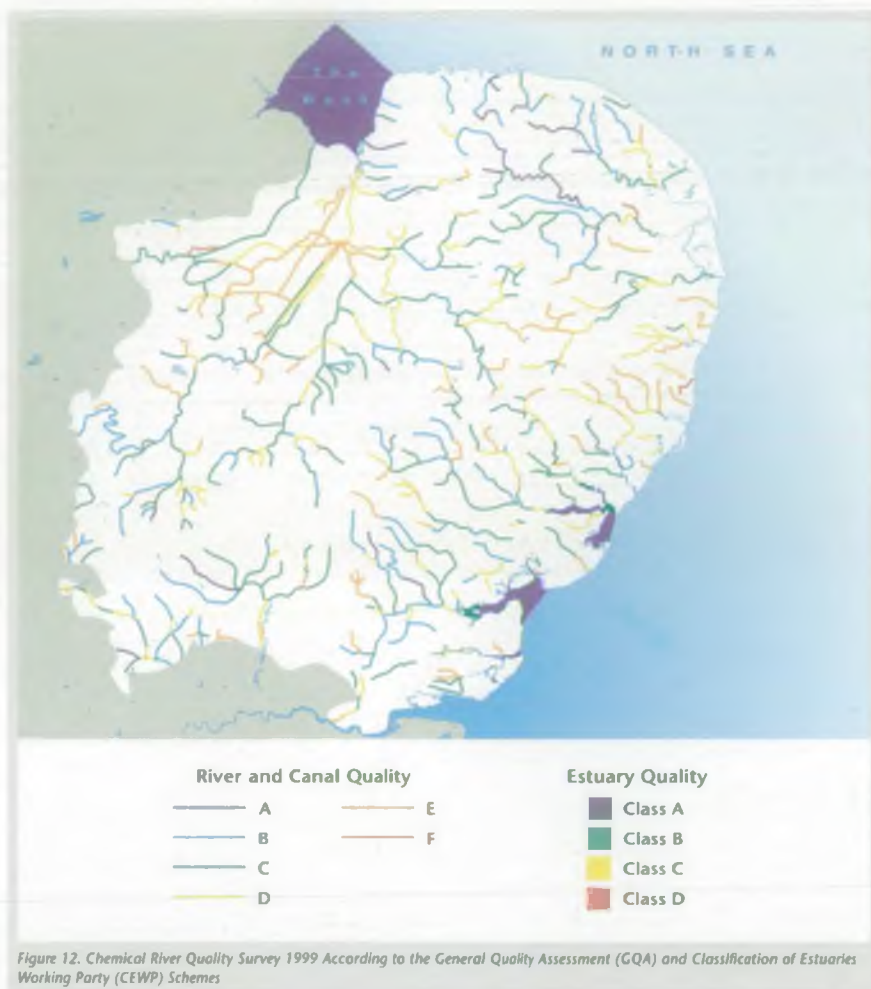


Figure 12. Chemical River Quality Survey 1999 According to the General Quality Assessment (GQA) and Classification of Estuaries Working Party (CEWP) Schemes



Figure 13. RQO Compliance 1999

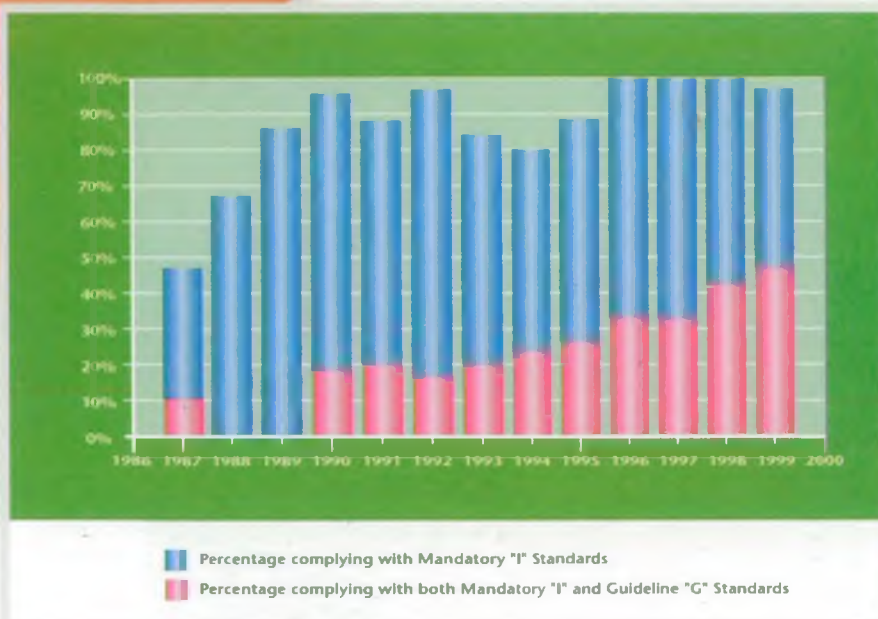


Figure 14: Percentage Complying with Bathing Water Directive "I" and "G" Coliform Standards

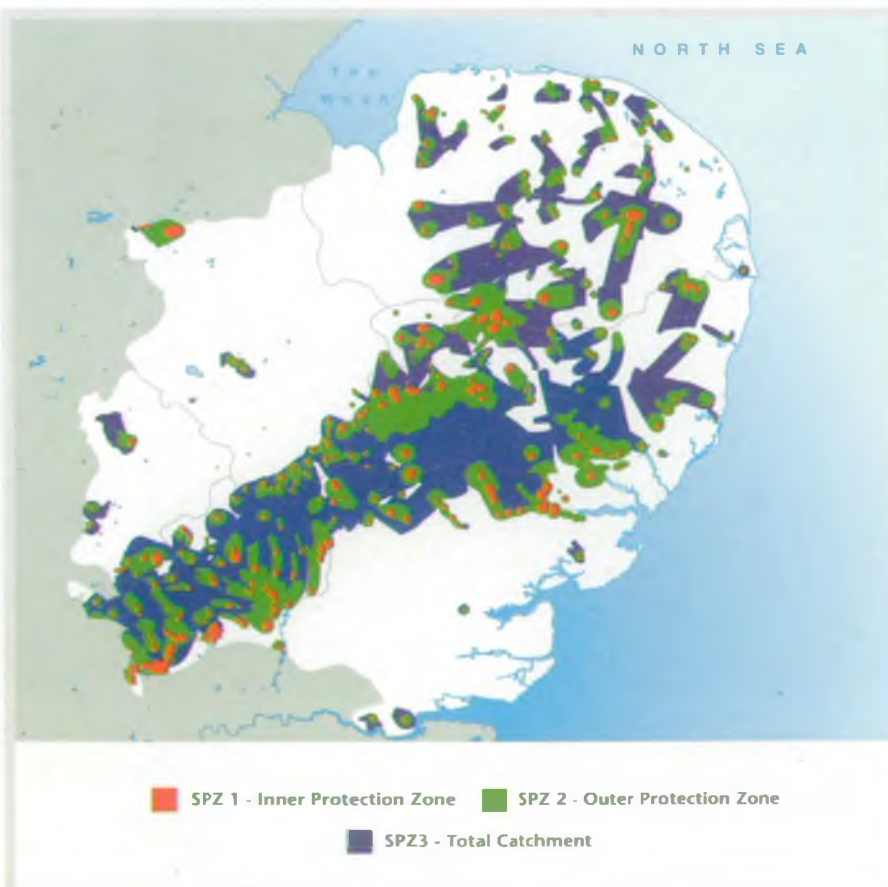


Figure 15. Source Protection Map

Bathing Waters

Bathing water quality has shown a continued improvement since 1987. Indeed, in 1997 and 1998 all bathing waters in the East of England complied with the mandatory standards in the Bathing Water Directive. Although in 1999 one bathing water did fail against the mandatory standards in the Bathing Waters Directive, the underlying trend of bathing water quality still shows improvement, (Figure 14).

This improving quality represents an opportunity to further tourism in the East of England.

Groundwater Protection

Groundwater is particularly vulnerable to pollution and, once polluted, aquifers are difficult, if not impossible to clean up. In order to protect groundwater, the Environment Agency has defined sets of protection zones (Figure 15).

The proximity of an activity to a groundwater abstraction is one of the most important factors in assessing the risk to an existing groundwater source. This is reflected in the Source Protection Zones (SPZ); SPZ 1 (closest to the source), SPZ 2 and SPZ 3 (furthest away from the source):

- SPZ 1 - in this area a contaminant entering the water table can take 50 days or less to reach the source.
- SPZ 2 - in this area the travel time is 400 days or less.
- SPZ 3 - this area defines the whole catchment of the source.

The Environment Agency seeks to restrict certain types of development in these areas.

Nitrate Vulnerable Zones

The pollution of rivers and groundwater by nitrate from agricultural sources can pose a risk to human health and the environment. Nitrate Vulnerable Zones (NVZs) have been designated in certain areas where agricultural nitrate pollution is a problem. Within these zones, farmers are required to follow a set of rules, known as the Action Programme Measures, which require the careful management of fertilisers and manures. The Environment Agency is responsible for assessing farmers' compliance with these rules.

In the East of England 250,000ha, of the national total of 600,000ha, fall within designated NVZs. This reflects the intensity of agriculture in the area.

Pollution Incidents

We follow up reports of pollution and attempt to catch and prosecute people who cause incidents.

In the East of England in 1998, six substantiated incidents were Category 1 (major), and 124 were Category 2 (significant). This represents 4.7% and 10% respectively of the total number of incidents nationally, (Figure 16).



Figure 16. Category 1 & 2 Pollution Incidents 1998

Coastal and river processes



Figure 17. Strategic Coastal Defence Options Identified in Shoreline Management Plans

Shoreline Management Plans (SMPs)

SMPs are part of an initiative, backed by the Ministry of Agriculture, Fisheries and Food, the Association of District Councils, English Nature and the Environment Agency, to improve the future planning of our coastlines.

The objectives of SMPs are to:

- improve our understanding of coastal processes;
- work in partnership with all interested parties and organisations; and,
- prepare an agreed framework for long term planning of coastal defences.

Figure 17 details the current and proposed long term options within the East of England.

Areas at Risk of Flooding

The information provided in Figure 18 represents the best available knowledge on the area at risk of flooding. **NB. This figure assumes that none of the current defences are in place.** This indicative floodplain represents land which lies beneath either the tidal 1:200 year or river 1:100 year return period water level.

The Environment Agency is currently undertaking a floodplain mapping exercise of areas that have been identified as being under greatest development pressure. These refined floodplain maps, known as Section 105 maps, will provide planning authorities with floodplain information.

To accelerate the transfer of information to the planning authorities the Environment Agency provided indicative floodplain maps in September 1999. These maps included cover for both statutory main and non-main rivers. A further update was released in September 2000 and will also be available on the Environment Agency Web Site in December 2000. These maps are an interim measure and will be replaced by Section 105 maps when they become available. As an enhancement to the indicative floodplain maps the Section 105 maps should show indicative defended areas to either the tidal 1:200 year or river 1:100 year return period water level.

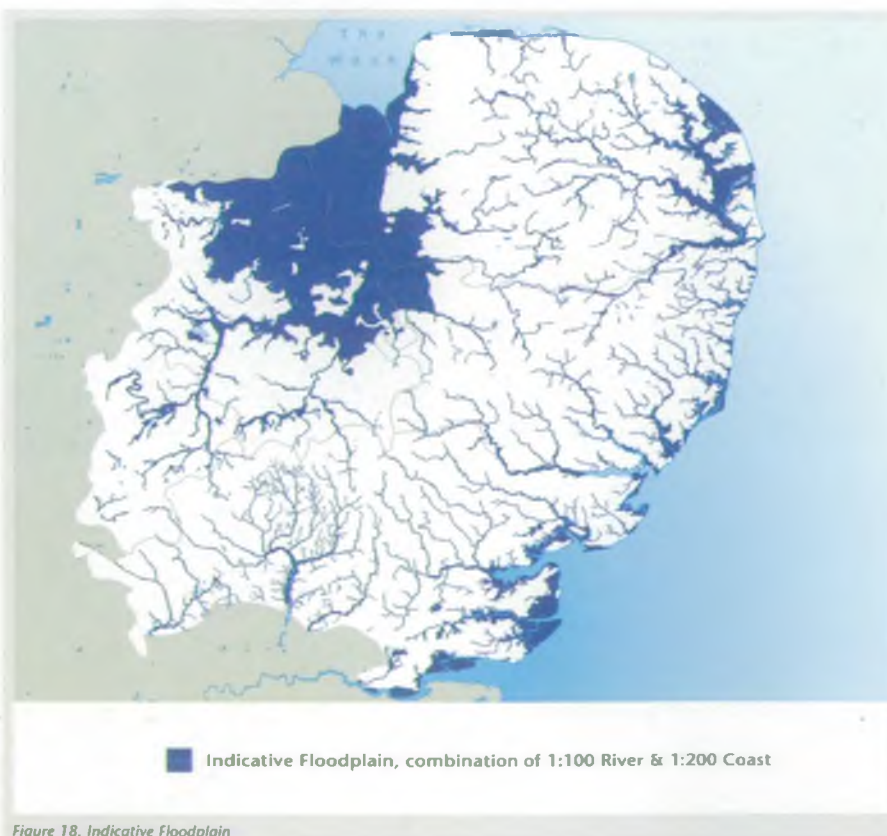


Figure 18. Indicative Floodplain

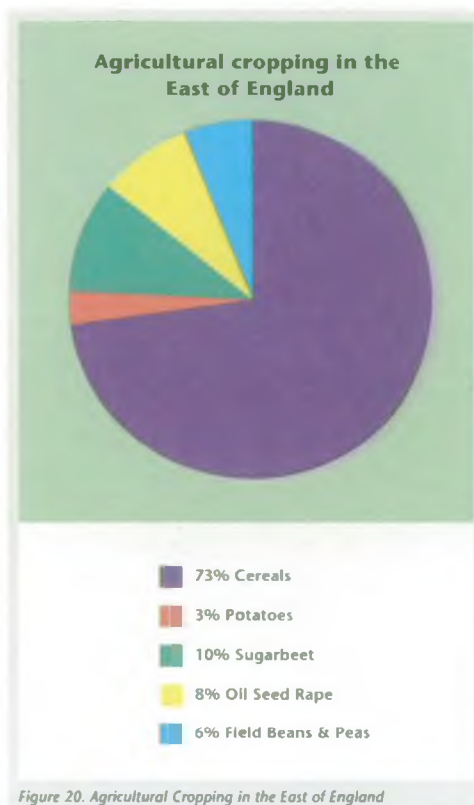
Landscape Character

The Countryside Agency (formerly the Countryside Commission and Rural Development Commission) and English Nature have identified Character Areas. Character Areas are landscape definitions based on locally distinctive areas which have developed from the interaction between land use, wildlife, natural features, human impacts and the built environment (Figure 19).

This analysis has shown us that the landscape in the region is varied - ranging from the unique character of the Fens in the north, to the chalk area of the Chilterns in the west and the coastal zones such as the Greater Thames Estuary. The value of the region's landscape has been recognised and certain areas are statutorily designated, e.g., the Norfolk and Suffolk Broads, which has equivalent status to a National Park, and the Chilterns Area of Outstanding Natural Beauty (AONB).



Figure 19. Character Areas



Rural Land Use

A significant proportion of the East of England is high quality agricultural land. 58% of the country's grade 1 and 2 land (the most versatile agricultural land) is in the East of England. Much of the grade 1 and 2 land is in and around the Fens. This is mainly in Cambridgeshire, (Figure 20).

Although the East of England is normally associated with arable farming, parts of the region have traditionally been associated with livestock. For example, it is the second largest pig and poultry area in the country.

The Government has stressed the importance of 'a living and working countryside'. As the economic climate changes it is desirable that traditional rural industries such as agriculture are complemented by a range of other businesses to sustain the economy. However, it should be noted that agriculture will continue to play an important role in the rural economy of the East of England.

Urban Land Use

Figure 21 illustrates the extent of urban development in the East of England. This highlights the rural nature of the region and the increased urban density as one travels south towards London. Issues surrounding the built environment are inseparable from others such as landscape, archaeology, air quality and the need for infrastructure. Discussion on the region's urban areas can be found in regional planning guidance and county-level reports.



Land quality

Contaminated Land

Land quality is a complex issue, and the Environment Agency is only one of the many organisations in the private, public and voluntary sectors with interests and responsibilities in land contamination. To secure a better environment and make a contribution to sustainable development, the Environment Agency's vision is to see more contaminated land made safe and brought back into beneficial use. The main mechanism by which this is expected to occur will be through the planning system and the redevelopment of land for new uses. The reuse of previously developed land, which may or may not be contaminated, should reduce the number of new homes that need to be built on green field sites. However, within the East of England there is a high demand for land for housing but a low stock of vacant and derelict land, (estimated to be less than 3000 hectares).

Soil Quality

Though Figure 22 illustrates the many different types of soils within the East of England, we do not have a good knowledge of how the quality and quantity of these soils are changing. The general picture for soils suggests a continued decline in quality.

For example, organic matter is an essential component for soil structure, aiding stability from erosion, cycling of nutrients, and its waterholding capacity. Because soils within the East of England include those with both too little and too much organic matter these functions may be breaking down, leading to a loss in soil quality. The quality of soil can be reduced when they are eroded by water and wind.

The lowland peats of East Anglia are very vulnerable to erosion, especially by wind. For example, during severe wind erosion up to 2cm of topsoil can be removed from fields. Figure 23 shows the actual erosion risk of soils in the East of England.

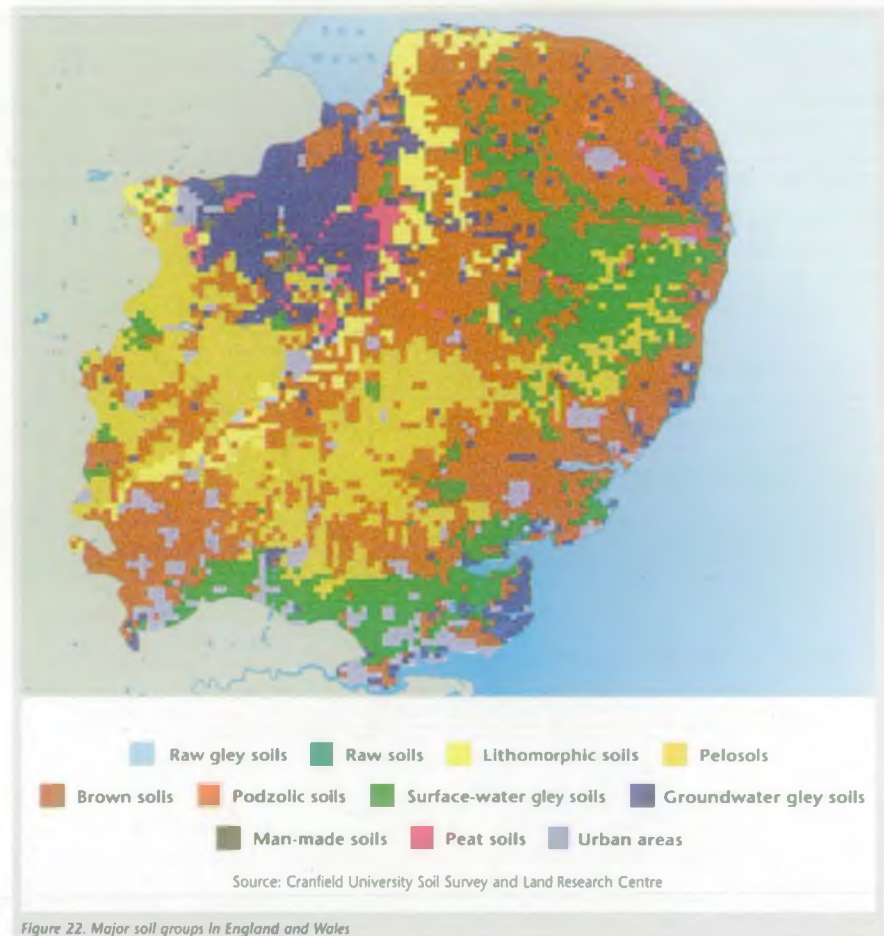


Figure 22. Major soil groups in England and Wales

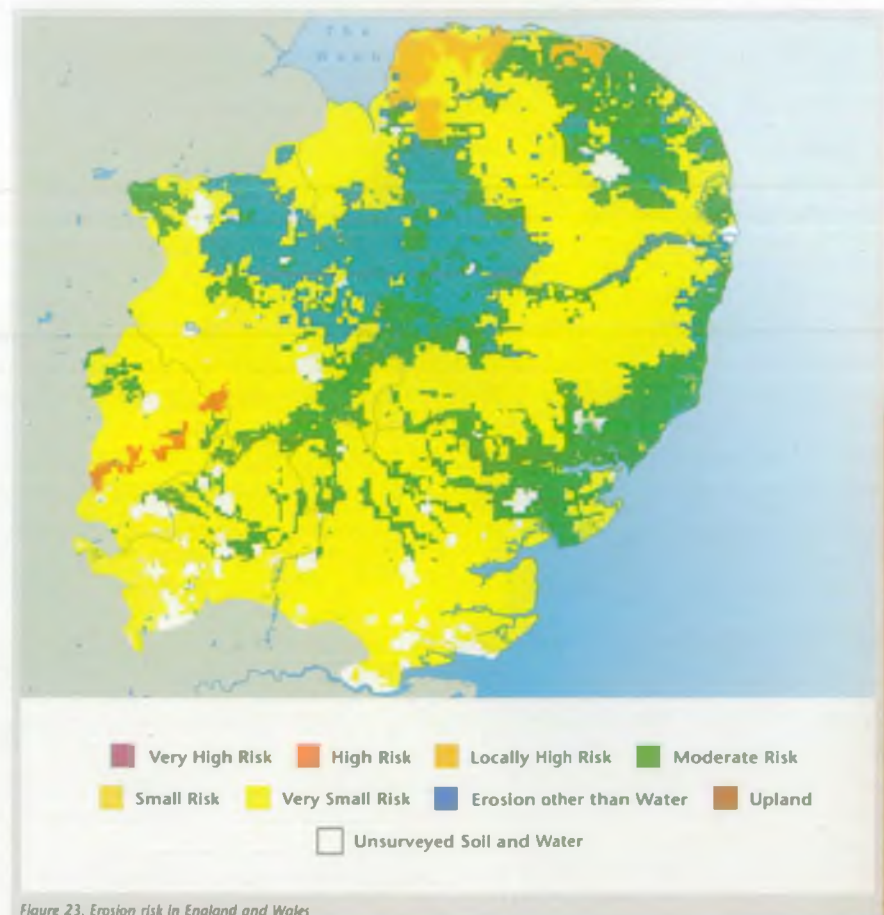


Figure 23. Erosion risk in England and Wales

Waste



Figure 24. Waste Disposal Facilities 2000

Waste Disposal Facilities

Figure 24 shows the location of landfill facilities in the East of England with an annual input of 90,000 tonnes or more. It also shows the location of IPC authorised incinerators and cement kilns taking waste. The distribution of large landfill sites in the region is characterised by the influence of London and the South East. The availability of landfill within the local authorities of Bedfordshire, Essex and Thurrock, and the ease of transport between them and the Capital, mean that over many years they have taken significant quantities of waste from London and some counties in the South East.

Landfill Waste Disposed 1998/99

Between 1996 and 1998/99, the quantities of waste going to landfill within the East of England fell by 12%. This is probably the result of the introduction of the Landfill Tax in October 1996 and other factors that are increasing the cost of landfill disposal, making other waste management options more economically attractive.

The quantities and types of waste disposed to landfill are shown in Figure 25. It is evident from the chart that the local authorities of Bedfordshire, Essex and Thurrock take approximately two-thirds of the total waste for the Region. Across the Region municipal waste accounts for approximately 30% of input to landfills within the local authority areas. The exception to this is Essex and Thurrock, where municipal waste accounts for 50% of input. The quantities of inert/construction waste vary considerably from as much as 56% in Hertfordshire to as little as 9% in Bedfordshire. Across the Region special waste to landfill accounts for approximately 3% of landfilled waste.

Agricultural Waste and By-Product

Agricultural waste and by-product in the East of England is dominated by the production of animal matter which accounts for 85% of the waste produced. Norfolk and Suffolk produce 73% of the total animal matter and 70% of all agricultural waste and by-product in the East of England. This reflects the relatively rural nature of these areas and in particular, the numbers of intensively reared livestock. Figure 26 shows the types, quantities and proportions of agricultural waste and by-product production.

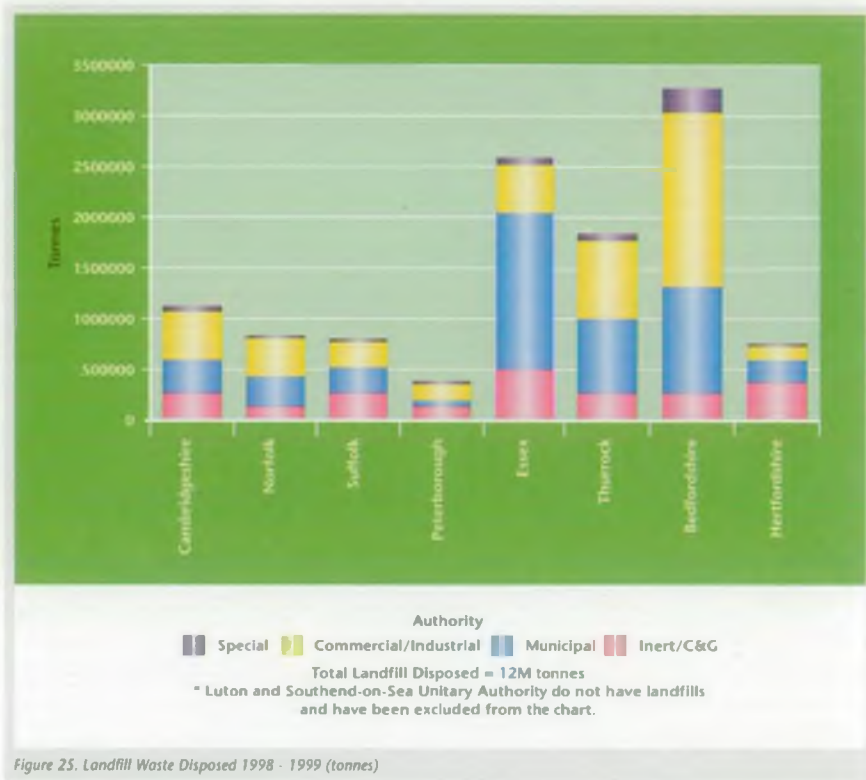


Figure 25. Landfill Waste Disposed 1998 - 1999 (tonnes)

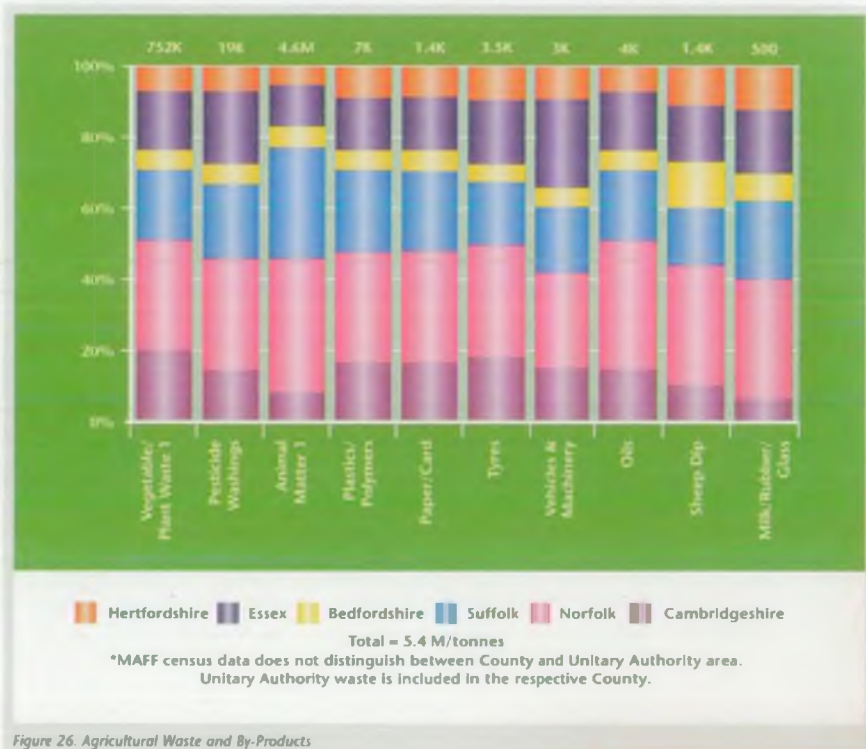
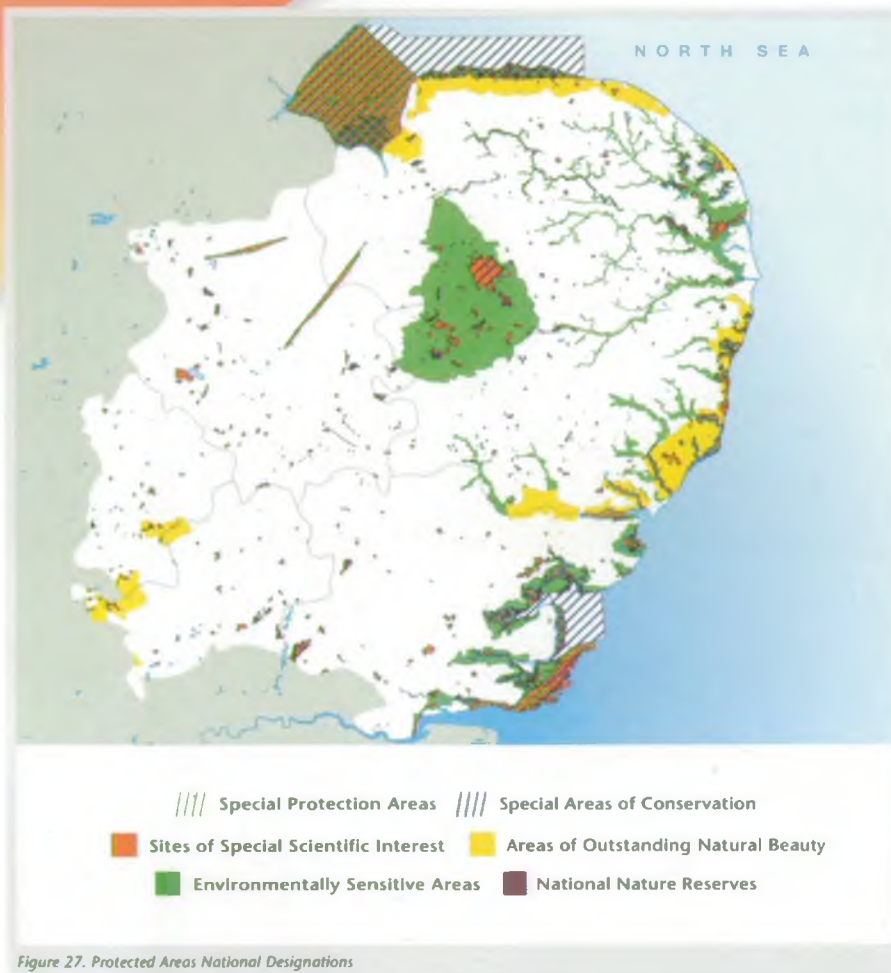


Figure 26. Agricultural Waste and By-Products

Biodiversity and wildlife



The East of England possesses a high quality countryside with a great proportion of some of the UK's rarest species and habitats, for example:

- The floodplain of the Norfolk Broads has the largest expanse of species-rich Fen in lowland Britain and the largest example in Britain of calcareous Fens, which support a number of rare species.
- The largest reedbeds in England are in the Suffolk Coast and Heath areas.
- The Basingstoke Canal is the most species-rich freshwater system in England, containing half of Britain's native aquatic higher plants and 24 dragonfly species.
- Orton Pit supports the largest known population of great crested newts in the UK.
- Most of the recent British records of the rare barbastelle bat are from Breckland.
- The farmed areas of the East of England support the majority of the English population of brown hare, and lowland farmland birds such as corn bunting and linnet **[Government Headline Indicator]**
- The Rex Graham Reserve in Breckland supports 95% of the British population of the military orchid.

Wildlife and its Protection in the East of England

The East of England possesses a wealth of wildlife including many rare species. There are a large number and area of non-statutory and statutory sites designated for nature conservation value (Figure 27). These include Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Special Protection Areas (SPAs) and candidate Special Areas of Conservation (cSACs). Such sites protect the best and rarest examples of biodiversity in the country.

Biodiversity

The Government has made a commitment to protecting and enhancing biodiversity (the wealth of wildlife) through its signing of the Biodiversity Convention at the UN Conference on Environment and Development held in Rio de Janeiro in 1992. The Regional Biodiversity Forum seeks to support the work of Regional and Local Biodiversity partnerships. Local Biodiversity Action Plans have, or are being, produced for all counties in the East of England. Through these plans action has been identified for nationally and locally important habitat and species. The UK Biodiversity Action Plan identifies the white-clawed or native crayfish as being nationally important for which the Environment Agency has been given specific actions. Native crayfish are threatened by the spread of the introduced signal crayfish, as well as other non-native crayfish, which have escaped into the wild. Once widespread in clean rivers and lakes in England, particularly chalk rivers, the distribution of the native crayfish has declined sharply in the UK and the East of England (Figure 28).



Conclusion and next steps

State of the Region

The Environment Agency has a key role to play in securing sustainable development in the East of England. As well as fulfilling our statutory and regulatory duties, we are keen to offer information and advice to support the initiatives of others such as the East of England Regional Assembly, The East of England Development Agency and Government Office for the East of England. We also recognise that we have important working relationships with a wide range of commercial, industrial and academic organisations throughout the region.

An important contribution is our work with the East of England Sustainable Development Round Table. The Round Table is helping the East of England Regional Assembly draw up a Sustainable Development Framework (SDF) for the region. This document will set out a vision for sustainable development that takes account of the key social, economic, environmental and resource issues impacting upon the region and the inter-relationships between them. It will define objectives and set priorities with the help of regional indicators and targets. It will also provide a point of reference for other regional activity and identify the significant challenges and conflicts faced within the region and look towards solutions.

The preparation of this Snapshot report and other data that the Environment Agency is able to provide, including information on sustainable development indicators, will be of assistance to the Round Table in advancing the Framework.

The Environment Agency is also involved in a wide range of other 'regionalism' activity including:

- Advising the East of England Regional Assembly on sustainable development and the environment;
- Assisting the East of England Development Agency (EEDA) in drawing up and reviewing its regional Economic Development Strategy and Action Programme;
- Membership of the East of England Environmental Forum (an association of environmental bodies including the Broads Authority, CPRE, English Heritage, English Nature, Friends of the Earth, the National Trust, RSPB, local Wildlife Trusts and local government representatives). We offer advice and information to assist the Forum in its role of promoting regional environmental issues;
- Membership of the East of England Biodiversity Forum (an association of organisations committed to supporting biodiversity in the Region), offering advice and information to assist the Forum in its role of promoting regional biodiversity;
- The preparation of a Regional Water Resource Strategy aimed at identifying, with the assistance of the water companies and community stakeholders, a more sustainable, long term, policy framework for water management;
- Contributing to a regional study to assess and advise on the links between the economy and the environment of the East of England;
- Membership of the East of England Regional Technical Advisory Body for Waste group, (comprising representatives of the waste planning authorities, government office, private waste operators, and the Environment Agency). We offer advice and information on waste management and waste management data (including producing regional strategic waste management assessment);
- Working with EEDA on the creation of a 'virtual' Observatory to house regional environmental data;
- Working with Go-east, EEDA, MAFF, the local authorities and other regional stakeholders on European and domestic funding strategies that promote, or allow for, environmental enhancement and sustainability;
- Working with partners (Countryside Agency and Morely Research Centre) to promote work on sustainable rural development being trialled in the Norfolk Arable Land Management Initiative (NALMI);
- Contributing to the preparation of Regional Planning Guidance for East Anglia and the South East by responding to proposed modifications to emerging guidance issued by the Secretary of State;
- Promoting knowledge and understanding of the Environment Agency's role and responsibilities with other regional stakeholder groups;
- Learning from, and being influenced by, the policies and action programs emerging from such partners in shaping policy within the region.

Challenges for us in the East of England

Climate Change:

- Climate change affects hundreds of millions of lives, around the globe. The earth is getting warmer, the Poles are melting – and it is everyone's responsibility.
- We will contribute to the national goal to reduce emissions of carbon dioxide by 20% below 1999 concentrations, over the next ten years.

Air Quality:

- Up to 24,000 premature deaths are linked to air pollution in the UK, each year.
- The region carries a disproportionate share of the 22 million cars in Britain, and traffic is set to rise by half as much again in the next 20 years.
- Everyone needs a breath of fresh air so, together, we aim to meet the appropriate air quality standards, by 2005.

Water Resources:

- The East of England is the driest part of the UK. We all remember the droughts of the last decade.
- More than a third of a million new dwellings are proposed across the region over the next 16 years.
- We all fancy a drink, so our strategy will follow management of demand promoting metering in two-thirds of domestic properties, and developing new or enhanced resource for our future raw water.

Water Quality:

- The quality of about one quarter of our rivers is not good enough.
- Through investment, improvements and tighter standards we will contribute to the 1995 National goal of halving this shortfall.

Coastal and River Processes:

- Much of the region is below sea level, and sea levels will rise by up to 50 cm in the next 50 years. What's the price of a river view?
- We will drive to give simple, understandable messages that will trigger people to take action to protect themselves, their families and property from the worst impacts of flooding.

Land Quality:

- Lots of people want to live in the region, but it is short of vacant or derelict land for new dwellings.
- During the next year, we will contribute to cleaning up 11 seriously contaminated land sites, to make them safe and bring them back to beneficial use.

Waste:

- We live in a throwaway society, yet many oppose landfill or incineration.
- With everyone's help, by 2010 we shall increase fourfold, the amount of household waste we recycle.

Biodiversity and Wildlife:

- Taking stock – over 100 species became extinct in the UK, last century.
- Through support in the region of partnership projects, we shall produce plans to secure and improve habitats for our wildlife, concentrating on the 39 species for which we have lead responsibility.

A further challenge for the future is:

Our problem for eternity?

- Three Nuclear Power Stations in the East of England are nearing the end of their useful life, but as yet no permanent disposal method for nuclear waste, is known.

I would appreciate your views on these targets. Please email
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Robert Runcie

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- Area Administrative Boundaries
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