Appendix 1: State of the Environment in England – problems and trends[1]

Region	Water problems and trends
South West	• Highest proportion of very good or good quality rivers (increasing since 1990) and lowest proportion of bad or poor quality rivers in England. • Agriculture accounted for 27 out of 154 Category 1 and 2 pollution incidents in 2001. • River flows generally good but low flows on some rivers due to abstraction. • Diffuse pollution is a greater risk than point source pollution including faecal pathogens, trace elements and organic waste, pesticides and nutrients. • Amounts of pesticides reaching the sea reducing but Atrazine a particular problem. • In 2001, the quality of drinking water in the South West was generally better than the average for England and Wales. The quality of bathing water has improved since 1991. Shellfish waters in compliance with requirements of EU Shellfish Directive.
South East	• Demand for water is high in the region with some agreements for limiting abstraction in place. • 64% of river lengths were of good chemical quality and 94% were good or fair in 2000; an increase of 25% and 9% respectively since 1990. • 76% of river lengths were of good biological quality and 99% good or fair in 2000; an increase of 14% and 4% respectively since 1990. • Agriculture accounted for 30 out of 256 Category 1 and 2 pollution incidents in 2001.
West Midlands	• There is a concern that groundwater from some of the region's aquifers is being abstracted at an unsustainable rate; of the 55 major aquifers, there are sustainability concerns about 16 and 11 are being utilised at their maximum limit • 62% of river lengths were of good chemical quality and 94% were good or fair in 2000; an increase of 23% and 12% respectively since 1990. • 58% of river lengths were of good biological quality and 96% were good or fair in 2000; an increase of 13% and 11% respectively since 1990. • Agriculture accounted for 29 out of a total 251 Category 1 and 2 pollution incidents in 2001 in the Midlands as a whole.
East Midlands	• Abstraction from some aquifers has depleted available supplies leading to falling groundwater levels, loss of baseflow to water courses and adverse effects on the aquatic and associated habitats. Many aquifers in the East Midlands are now considered fully committed to existing water extraction • 58% of river lengths were of good chemical quality and 95% were good or fair in 2000; an increase of 38% and 16% respectively since 1990. • 58% of river lengths were of good biological quality and 96% were good or fair in 2000; an increase of 29% and 10% respectively since 1990. • Agriculture accounted for 29 out of a total 251 Category 1 and 2 pollution incidents in 2001 in the Midlands as a whole.

[1] Source: GFA-RACE & IEEP (2003) The Potential Environmental Impacts of CAP Mid Term Review Proposals: A report for Defra.

	Water problems and trends (continued)
East	• The region is the driest. Environment Agency supply and demand projections suggest a water deficit will be reached by 2017. Some 12% of water abstracted is used to irrigate horticultural and root crops. • 46% of river lengths were of good chemical quality and 93% were good or fair in 2000; an increase of 25% and 11% respectively since 1990. • 81% of river lengths were of good biological quality and 99% good or fair in 2000; an increase of 36% and 7% respectively since 1990. • Agriculture accounted for 28 out of 145 Category 1 and 2 pollution incidents in 2001.
Yorkshire and Humberside	• Over the next decade, flood defence schemes will become an increasingly significant factor in the management and landscape of the Humber Estuary and lower reaches of the Rivers Ouse and Trent. • 58% of river lengths were of good chemical quality and 90% were good or fair in 2000; an increase of 6% and 14% respectively since 1990. • 57% of river lengths were of good biological quality and 88% were good or fair in 2000; an increase of 2% and 9% respectively since 1990. • Agriculture accounted for 26 out of a total 260 Category 1 and 2 pollution incidents in 2001.
North East	• There are 33 EU- designated bathing waters of which 84% complied with bathing water standards in 1998. EA expects 4 bathing waters will fail the standard in 2005 due to local run-off from agriculture and urban waste water. • 85% of river lengths were of good chemical quality and 97% were good or fair in 2000; an increase of 15% and 5% respectively since 1990 • 80% of river lengths were of good biological quality and 98% were good or fair in 2000; an increase of 13% and 8% respectively since 1990. • Agriculture accounted for 26 out of 260 Category 1 and 2 pollution incidents in 2001.
North West	• Agricultural water demand constitutes a small proportion of overall demand but in localised areas such as West Lancashire is high. • Progressive contamination of groundwater by agricultural nitrate is occurring and sites vulnerable to nitrate leaching are found in Cumbria, Cheshire and the Wirral. • 60% of river lengths were of good chemical quality and 90% were good or fair in 2000; an increase of 19% and 17% respectively since 1990. • 44% of river lengths were of good biological quality and 84% were good or fair in 2000; an increase of 5% and 20% respectively since 1990. • Agriculture accounted for 42 out of a total 470 Category 1 and 2 pollution incidents in 2001.

Region	Soil problems and trends
South West	• Half of all soils at risk from erosion, especially sandy soils in south and east Devon and north and south Somerset, and 6% suffer from erosion. Trend towards winter-sown crops and forage maize leading to increased risk of erosion. Impact on water quality and increased incidence of flooding. • Some contamination of soils with toxic metals, mainly from industrial processes
South East	• No information available
West Midlands	• Contains a significant amount of the national area of potentially erodable soils. These soils are concentrated on the sandier soils found in south Herefordshire, north Worcestershire, east Shropshire and south east Staffordshire.
East Midlands	• Problems include oxidisation of fen peat soils, erosion of upland soils leading to siltation of water courses and riparian habitats and erosion of lighter, sandy soils by wind and pig farming.
East	• Some problems of erosion on lighter soils and associated with spread of outdoor pig rearing.
Yorkshire and Humberside	• Some soil types are at significant risk of erosion, particularly thinner soils in upland areas.
North East	• Localised soil erosion from fields adjacent to watercourses is a problem in some areas contributing to silting and water quality problems • Siltation has been particularly detrimental for spawning gravel used by fish in the North East's rivers. Silt build up in some of the deeper pools is also a problem. • The region has a significant area of restored soils that have been returned to agricultural production, estimated to be approaching 10,000 ha. These sites require particular care and timeliness in their management to avoid soil damage and erosion.
North West	• Soil erosion can be a problem due to increases in the number and density of livestock, particularly on steep land and in fields adjacent to watercourses. The effects include phosphorus-limited eutrophication as well as damage to the in-stream habitat of freshwater fish and invertebrates.

Region	Biodiversity problems and trends
South West	• Nearly a tenth of the Region's land area is designated as nationally and internationally important wildlife sites, many of which are unique in Europe. The South West supports a high proportion of some of the UK's rarest and most endangered habitats including calcareous grasslands (62% of UK total) and flower-rich pastures (57% of UK total). • In 2002, 44% of all SSSIs were in a 'favourable' condition but 25% were 'unfavourable' or 'declining', the highest proportion for any English Region. • Population index for woodland species has declined by 32% since 1970. 16 species have decreased in number and 8 species have increased. • Population index for farmland species has declined by 43% since 1970. 9 species have decreased and 6 species have increased. • Rare species such as stone curlew and cirl bunting are increasing in number. • Almost 90% of specialised butterfly species have declined. • An average of 7 wild plant species are lost from each county every 10 years but in general, declines in South West are not as high as in some other regions.
South East	• Much of the lowland semi-natural habitat of value to wildlife has been lost. The semi-natural habitats that remain are often small and isolated and are adversely affected by agricultural practices and pressure from development. • In 2002, 54% of all SSSIs in favourable condition (second highest proportion of any region), while 72% in favourable or unfavourable recovering condition. • The population index for woodland species has declined by 30% since 1970. 16 species have decreased in number and 13 species have increased. • The population index for farmland birds has declined by 32% since 1970. 10 species have decreased in number and 7 species have increased.
West Midlands	• In 2002, just over one third of all SSSIs were in 'favourable' condition, while 54% were in a 'favourable' or 'unfavourable recovering' condition; • The population index for woodland species for the West Midlands has increased by 59% since 1970. 15 species have increased in number and 6 species have decreased. • Estimates for farmland species for this region are not reliable.

	Biodiversity problems and trends (continued)
East Midlands	• The biodiversity base across the Region is low partly due to the agricultural improvements that have taken place on the high grade soils. The remaining pockets of natural/semi- natural habitat are experiencing problems of fragmentation and isolation which threatens their survival. • In 2002, just under half of all SSSIs were in 'favourable' or 'unfavourable recovering' condition. However, 17.6% were 'unfavourable declining', the second highest proportion for any English region. • Significant variation in condition of SSSI broad BAP habitats: 99% of upland neutral grassland recorded as 'favourable' or 'unfavourable recovering' while only just over 25% of upland heathland and upland acid grassland were classified in this condition. • The population index for woodland species for the East Midlands has increased by 39% since 1970. 15 species have increased in number and 11 species have decreased. • Estimates for farmland species for this region are not reliable, due to relatively small numbers of sampling sites and low numbers of species included in the indicator.
East	• The importance of the Region's biodiversity is reflected in the many designations for habitats and species however, many of these are threatened by intensive farming practices and development. • The population index for woodland species has declined by 9% since 1970. 11 species have decreased in number and 12 species have increased. • The population index for farmland birds has declined by 43% since 1970. 11 species have decreased in number and 5 species have increased. • In 2002, almost 66 per cent of the SSSIs were in a 'favourable' condition, while over 78 per cent were in a 'favourable' or 'unfavourable recovering' condition'.

	Biodiversity problems and trends (continued)
Yorkshire and Humberside	• Some habitats have special significance in the region because of their extensive nature (upland heathland, limestone pavement) or of national priority (raised bog, fen and reedbed). • In 2002, just over one in 5 of all SSSIs were in 'favourable' condition, the lowest proportion for any region, while just over 50% were in a 'favourable' or 'unfavourable recovering' condition; • Significant variation in condition of SSSI broad BAP habitats: 95% of lowland heath recorded as 'favourable' or 'unfavourable recovering' while only 30% of upland heath classified in this condition. • The population index for woodland species for the West Midlands has increased by 37% since 1970. 12 species have increased in number and 7 species have decreased. • Estimates for farmland species for this region are not reliable, due to relatively small numbers of sampling sites and low numbers of species included in the indicator.
North East	• In 2002, just over a quarter of all SSSIs were in a favourable condition, the second lowest proportion for any English region. • In 2000, there was significant variation in the condition of broad BAP habitats. For example, all lowland heathland was recorded as 'favourable' or 'unfavourable recovering' while only 15% of upland heathland was classified in this condition. • The population index for woodland species has increased by 48% since 1970. 15 species have increased in number and 7 have decreased. • Estimates for farmland species for this region are not reliable, due to relatively small numbers of sampling sites and low number of species included in the indicator.
North West	• In 2002, over half of all SSSIs were in 'favourable' condition, one of the highest proportions for any region; • Significant variation in condition of SSSI broad BAP habitats: 87% of upland neutral grassland recorded as 'favourable' or 'unfavourable recovering' while only 9% of upland calcareous grassland classified in this condition. • The population index for woodland species for the North West has increased by 97% since 1970. 19 species have increased in number and 7 species have decreased. • The population index for farmland species has declined by 23% since 1970. 8 species have decreased in number and 7 species have increased.

Region	Landscape problems and trends
South West	• Rich diversity of landscapes. Predominantly pastoral with higher density of field boundaries than any other region. Relatively high proportion of woodland (12.5%) and grassland and lower proportion of arable and semi-natural areas than England as a whole. New woodland is increasing at a rate of approximately 1,000 ha per year. • The South West contains 41 of the Countryside Agency's 159 Countryside Character areas. Large parts of the Region are designated with 2 National Parks, 12 AONBs and parts of 2 others and 638 km of Heritage Coast (61% of the total Heritage Coast in England). • See http://www.countryside-quality-counts.org.uk/cap/southwest/index_sw.htm for detailed information on landscape change in the character areas of the south-west region.
South East	• Diverse, farming landscape including the open, rolling South Downs, heaths and woodlands of eastern Berkshire and New Forest, wooded uplands, limestone country and ironstone plateaux, valleys of the Thames and its tributaries and the coastal marshlands of Kent, Sussex and Hampshire. • 62% of the land area is used for agriculture, 15% is woodland and 23% urban areas – the south east is the most developed region of the UK outside London. • The South East contains 25 of 159 Countryside Character Areas. Large parts of the region are designated with 1 National Park, 9 AONBs and parts of 3 others. See http://www.countryside-quality-counts.org.uk/cap/southeast/index_se.htm for detailed information on landscape change in the character areas of the south-east region. • Region contains 20% of England's linear features. • Important elements of the historic landscape such as parks, gardens and orchards survive but are under threat.
West Midlands	• Despite not having a coastline, the landscape of the West Midlands is characterised by its diversity and the contrasts between densely populated urban areas and very rural shires. The great variety of natural features (hills, rivers, meres, etc), agricultural landscapes, naturalised features (e.g. parklands and commons), historic and man-made features (e.g. canals) interact to provide a large number of distinctive landscapes. • Compared with England as a whole, the Region has a higher proportion of improved grassland and woodland and a lower proportion of semi-natural habitat. The breakdown of land cover is as follows: arable and horticulture 34.6%; improved grassland 35.4%; broadleaved and coniferous woodland 10.5%; semi-natural habitat 8.8% and urban areas 10.7%. • The region has 26 Countryside Character Areas, parts of 2 National Parks and 4 AONBs. See http://www.countryside-quality-counts.org.uk/cap/westmids/index_wm.htm for detailed information on landscape change in the character areas of the west midlands region.

	Landscape problems and trends (continued)
East Midlands	• From the upland moors of the Peak District to the flat cultivated Fens, the landscape is both varied and distinctive. Field boundaries are walls in North Derbyshire, ditches in the Fens and hedges in Leicestershire. • More than half (52.6%) of the Region's land is arable or horticultural land – the highest proportion of all English regions. Improved grassland covers 22.9% of land, broadleaved and coniferous woodland 7.9%, semi-natural habitats 7.5% and urban areas 9.1%. • Despite recognition of the value and importance of the distinctive landscapes of the East Midlands the overall trend is towards an erosion of individual character across the Region, and so a loss of distinctiveness. • There are 15 Countryside Character Areas, 1 National Park and 1 AONB covering 3% of the Region. See http://www.countryside-quality-counts.org.uk/cap/eastmids/index_em.htm for detailed information on landscape change in the character areas of the east midlands region.
East	• Hedgerows and trees, shallow river valleys, marsh and heath and fenlands and coast all contribute to the Region's distinctiveness. The Region has 723 km of coastline, most of which is undeveloped • The Region has a high proportion of arable and horticultural land (61.8%) and low proportions of managed grassland (19%), woodland (5.3%), semi-natural vegetation (7.2%) and urban areas (6.7%), compared to England as whole. Thetford Forest is the largest lowland plantation forest in the UK at nearly 20,000 hectares. • There are 22 Countryside Character areas, 1 National Park, 3 AONBs and part of 1 other and 121 km of Heritage Coast; some 7.5% of the land area is designated. See http://www.countryside-quality-counts.org.uk/cap/east/index_ee.htm for detailed information on landscape change in the character areas of the east region.
Yorkshire and Humberside	• The region has a dramatic and often contrasting landscape character encompassing the high Pennine moors in the west and the lowlands of Holderness or Lincolnshire coast in the east. • Compared with England as a whole, the Region has a lower proportion of arable and horticultural land and a higher proportion of semi-natural habitat. Arable and horticulture cover 30% of Region; improved grassland 30%; broadleaved and coniferous woodland 9.2%; semi-natural habitat 19.9%; urban 10.8%. • There are 30 Countryside Character Areas, parts of 3 National Parks, 2 AONBs and parts of 2 others and 82 km of Heritage Coast. The region contains the highest proportion of land designated for its national landscape value (27%). See http://www.countryside-quality-counts.org.uk/cap/yorkhumb/index_yh.htm for detailed information on landscape change in the character areas of the Yorkshire and Humberside region.

	Landscape problems and trends (continued)
North East	• The North East is a diverse region ranging from the wild, open moorlands and hills of the Cheviots and North Pennines, and the wide sandy beaches of the Northumberland coast, through the rural coalfields areas of Northumberland and Durham, to the Rees Valley and estuary with its industrial areas • The Region has a low proportion of arable and horticultural land (16.1%) and high proportions of improved grassland (32.3%) and semi-natural habitat (34.6%). Broadleaved and coniferous woodland (11.2%) is above the England average (9.5%) while urban areas (5.8%) are below (10.7%). In some parts of the region, forestry is a particularly significant land use, for example approximately 20% of Tynedale district is afforested. • There are 15 CC Areas, 1 National Park (13% of region), 2 AONBs (17% of region) and 122 km of Heritage Coast. See http://www.countryside-quality-counts.org.uk/cap/northeast/index_ne.htm for detailed information on landscape change in the character areas of the north east region.
North West	• The North West is diverse in character, from the rolling plains of Cheshire and Lancashire to the Bowland Fells and the rugged Cumbria High Fells. The North West has the largest length of drystone walling (24,000 km) in the country, predominantly in the Less Favoured Areas, constructed from local stone. Hedgerows are also important. Upland and lowland river systems are prominent landscape features and several canals cross the Region. Natural Lakes are a very important part of the landscape of the Cumbria Fells and Dales. • The dominant rural land use in the Region is improved grassland covering 40% of land area, with arable and horticulture accounting for 15%. Some 17.8% of land is semi-natural habitat, 17.8% is urban and 8.3% woodland. • There are 29 Countryside Character Areas, 3 National Parks (including the largest, the Lake District) and 3 AONBs. See http://www.countryside-quality-counts.org.uk/cap/northwest/index_nw.htm for detailed information on landscape change in the character areas of the north west region.

Region	Historic environment problems and trends
South West	• 149,877 known archaeological and historical sites in the region of which 6,000 SAMs in 1995 and 2 World Heritage Sites (Stonehenge/Avebury and the City of Bath). • Landscape boundaries such as hedges, banks and fences more prevalent than in rest of England; traditional and characteristic hedges, banks and walls are in decline. • In 1995, there were 32,880 sites recorded in the 'Monuments at Risk' Survey (29.5% of England's total). Of these field monuments, 15.6% were assessed as being at 'high' or 'medium' risk.
South East	• 2,500 SAMs and 4 World Heritage Sites (buildings) • Mixed hedgerows were the most common field boundary, higher than in any other region than the West Midlands. Thorn/elm hedges are also regionally significant. • Above national average in terms of monuments at high and medium risk from damage by agriculture
West Midlands	• 1,270 Scheduled Ancient Monuments • 34,000 listed buildings (23,000 located in rural districts) • 122 sites included in English Register of Historic Parks and Gardens. • Mixed hedgerows are the most common field boundary in the West Midlands, proportionally higher than any other region. • No figures for threats to archaeological sites.
East Midlands	• 1000+ Scheduled Ancient Monuments; 30,000 buildings of Historic or Architectural Interest (943 listed as Grade 1, 1,789 Grade II* and 26,425 Grad II); 1,000 Conservation Areas; 114 entries in the English Register of Historic Parks and Gardens • Less than 15% of the estimated 9420km of dry stone walls are in a satisfactory stock-proof condition. • Thorn/elm hedges are the most common field boundary in the East Midlands, proportionally higher than any other region. Mixed hedgerows are also regionally significant, reflecting the predominantly enclosed agricultural character of the region. • Some 9,360 field monuments were recorded in 1995 – 8.3% of total number in England: 64.5% were surviving as earthworks and 51.5% were under arable cultivation; 2% were assessed as being at high risk and a further 63.5% at medium risk.

	Historic environment problems and trends (continued)
East	• 1,500 SAMs. 16,460 archaeological field monuments. • The East of England is particularly rich in vernacular buildings, historic landscape features and archaeological remains, a reflection of largely continuous settlement since the last Ice Age. Many prehistoric archaeological remains can be found in and around the Fens and some are of international importance • Region has 16,640 archaeological field monuments located in rural districts, recorded in Sites and Monuments records – 70% of these were considered to be at medium or high risk in 1995; • Arable cultivation presents a particular threat to field monuments.
Yorkshire and Humberside	• A total of 2,251 Scheduled Ancient Monuments are widely distributed throughout the region, representing 12% of the national total. • Of the estimated 56, 000 kms of stone walls within the region, (50% of England's total) approximately 60% require some active management. Of these, an estimated 5% are being either restored or maintained within environmental schemes. • A total of 16,6880 rural archaeological field monuments were recorded in 1995, representing 15% of the national total. Of this, 75% were at high or medium risk and 31% were under arable cultivation. Of the regional total of all rural monuments, 49.8% survive only as earthworks.
North East	• 1,200 SAMs • The Region's archaeology includes earthworks, buildings, structures and buried deposits. A high proportion of monuments survive as earthworks mainly outside areas of arable cultivation, for example as hill forts. Along with Yorkshire and Humberside, the Region has one of the highest levels of monuments at risk.
North West	• 1,209 archaeological sites included in SAMs records. • Stone walls are the most common field boundary in the NW, proportionally higher than any other region; • Of 1,192 Scheduled Ancient Monuments in the Region, 62% were assessed as at high or medium risk in 1995.