Environmental Studies
FACT SHEET
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Environmental Stewardship Scheme in action

This Factsheet:
- Summarises the major aims and approaches of the ESS
- Illustrates exam questions on this topic

The ESS is replacing older agri-environment agreements such as Countryside Stewardship and Environmentally |Sensitive Areas.

The aim of the ESS:
- Maintain and increase biodiversity
- Maintain and enhance landscapes
- Protect historic landscape and features
- Encourage public access and understanding of farming and the environment
- Protect natural resources

The ESS effectively pays farmers and landowners to adopt environmentally-friendly methods of food production. Payments to farmers are linked to EU standards on public health, animal and plant health and environmental targets –not crop/milk etc yield (payments are said to be **decoupled** from production).

Environmentally-friendly farming practices are awarded points. Payments are made once points targets set by Natural England's scientists have been met.

Farmers will be paid per hectare for 3 categories of land

- Entry Level Stewardship (ELS)
- Organic Entry Level Stewardship (OELS)
- Higher Level Stewardship (HLS)

Entry Level Stewardship (ELS)
- Covers the whole farm, not just bits of it
- 5 year agreement
- Tackles problems such as diffuse pollution, loss of biodiversity and landscape character and damage to the historic environment
- Uplands ELS will be launched early in 2010

ES has replaced earlier forms of agri-environment schemes such as Environmentally Sensitive Areas (ESA) and Countryside Stewardship (CSS).

By 2014 all of these earlier agreements will come to an end, and as they do so the farmers are being strongly encouraged to transfer into ESS. Thus far, more than 80% have done so. However, over the next 5 years, thousands more ESA and CSS agreements will expire (Fig.1) and the government faces a major challenge persuading these thousands of farmers of the benefits of ESS.

Fig. 1 Expiring CSS & ESA agreements

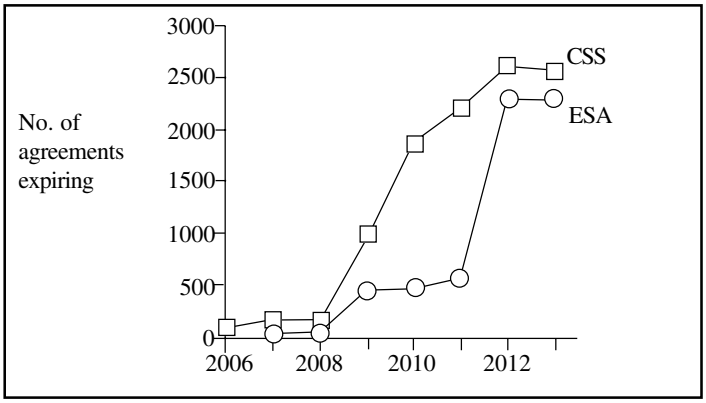


Table 1 summarises the uptake of various agri-environment schemes on Aug 31 2009.

Table 1. Agri-environment schemes

Scheme	Area (ha)	No. of agreements	Payments to farmers /landowners /£million
CSS	426,208	11,749	88.0
ESA	479,868	7,369	40.4
ELS	4,769,125	36,282	131.6
OELS	373,478	2,611	39.8
HLS combined with ELS/OELS	309,936	3,240	59.8
Stand alone HLS	64,525	429	11.0
Total HLS	374,461	3,669	69.9
Overall Total	6,113,204	58,440	369.7

ELS Renewals
In 2010, almost 14,000 existing Entry Level Stewardship (ELS) agreements will come to an end and Natural England will be encouraging farmers to re-apply for their next 5-year agreement. Farmers and landowners will have more options to choose from and will need to submit detailed applications and maps.

Organic Entry Level Stewardship (OELS)
- Voluntary, non-competitive scheme
- Five-year agreements
- £60 per hectare per year
- Extra payments for farmers who convert conventionally farmed improved land and established orchards into organic production
- Farmers can have a a mix of organic and conventional land and apply for OELS on their OELS eligible land and ELS on the remainder.

Typical Exam Question

The table summarises changes to linear landscape features in England 1998-2007.

Feature	Length in 2007/ 000km	Change in length 1998-2007 000km	%
Hedge	408.0	- 20.0	- 4.70
Wall	82.0	-	-
Line of trees/hedge /shrubs/relict hedge and fence	72.0	12.0	20.0
Line of trees/hedge /shrubs/relict hedge	82.0	6.0	7.9
Bank/grass strip	42.0	2.0	5.0
Fence	363.0	16.0	4.6

Outline two possible implications for conservation of the change in length of:
(i) hedges (2)
(ii) fence (3)

Markscheme

(i) Loss of habitat/ breeding ground / nesting sites;
Loss of windbreak/more exposed conditions/ more soil erosion;
(ii) Better control of livestock;
Less overgrazing/less damage to woodlands etc.

Higher Level Scheme (HLS)

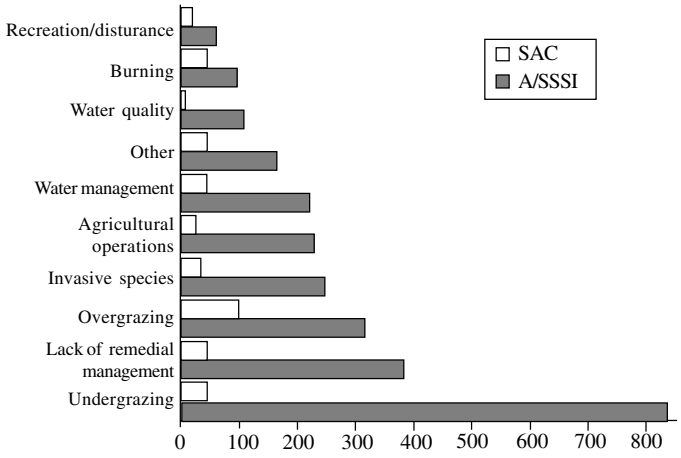
- Primary objective: resource protection
- Secondary objectives: flood protection and genetic conservation
- Competitive scheme – Natural England chooses only the best schemes submitted by farmers
- 10 year agreements
- Requires a Farm Environment Plan (FEP) to identify important environmental features
- Natural England has identified 110 target areas covering about a third of England that it would like to see managed under HLS. The targeting map has been produced by combining information on biodiversity, landscape, natural resource protection, public access and historic interests.
- Target areas will be managed for multiple objectives - protection of important habitats and species, maintaining landscape character, natural resource protection, protection of the historic environment and additional educational or public access.
- Outside target areas HLS agreements will focus on key, regionally-specific themes

Table 2. ESS Management options and benefits

Scheme	Example	Benefit
ELS/ OELS	Maintain stubble over winter on arable land	Reduces the chance of run-off, soil erosion and pollution of nearby streams
	Maintain beetle banks	Provide habitat for natural predators (biological control) thus reducing the need to use pesticides
	Manage hedgerows and stone walls	Provide important habitats
	Maintain e.g. 6m buffer strips on cultivated land	Maintains habitat for pollinating insects/ insects that provide biological control
	Sow wild bird seed mix on grassland	Provide food source to increase bird biodiversity and reverse decline of farmland species
	Implement nutrient management plan	Avoid e.g. eutrophication / contamination of aquifers
	Implement management plans on steep slopes	Reduce soil erosion
		Maintain habitats/attractive visual features
HLS	Restore traditional water meadows by flooding the pasture for an agreed period annually	Valuable historical and landscape features and habitat
	Maintain sand dune systems and restore coastal saltmarsh	Provide habitat and reduce risk of flooding
	Maintain and restore species-rich, semi-natural grassland	Maintain and recreate valuable habitat
	Restore wet grasslands	Create habitat for breeding waders and wildfowl
	Maintain bare plots on arable land	Provide habitat for ground-nesting birds such as lapwings
	Leave unharvested conservation headlands	Provide winter food for birds
	Restore and maintain heathland	Provides valuable habitat for birds, insects and reptiles
	Arrange visits by schoolchildren to the farm	Improve children's understanding of food production and the environment
	Management of both sides of hedgerows e.g. by laying, coppicing, planting up gaps	Maintain target species of farmland birds, insects or mammals e.g. tree sparrow, brown hairstreak and dormouse.
	Protect ancient trees in fields by maintaining a grass buffer and not applying e.g. pesticides on land adjacent to buffer	Maintains historic landscape feature and valuable habitat
	Sow crops by direct drilling and avoiding ploughing	Protect archaeological features that are just below the soil surface

Typical Exam Question

The graph shows the causes of damage to Special Areas of Conservation (SACs) and Areas of Special Scientific Interest/ Sites of Special Scientific Interest in 2008.



Explain how each of the following can damage designations such as SACs and SSSIs.

(i) Invasive species (2)

(ii) Undergrazing (2)

Markscheme

(i) Plants can out-compete native plants;
Plants can be toxic to wildlife;
Animals can compete with native species for habitat/nesting sites/ breeding grounds/food;
Animals can be predators;

(ii) Allows single dominant species to take over;
Alters community of plant species;
Allows succession to occur;

Campaign for the Farmed Environment

In November 2009 the Campaign for the Farmed Environment (CFE) was launched. The CFE is a partnership involving the National Farmers Union, the Country Landowners Association, Natural England and a range of other leading farming and landowning bodies. These organisations intend to work together to ensure that the ESS successfully maintains the benefits of old schemes such as set-aside which closed in 2008.

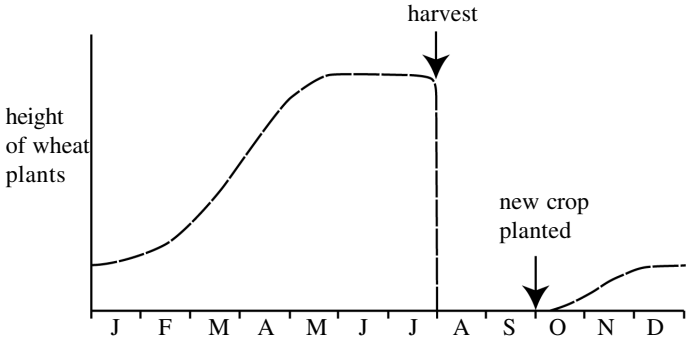
CFE will focus on three aspects:

1. Farmland birds – enhancing feeding grounds, particularly in winter, and breeding sites
2. Resource protection – reducing soil erosion and water pollution
3. Wildlife conservation – promoting a diverse, open landscape for a wider range of species

It aims to help Natural England persuade more farmers to enter ELS or to renew when their original agrements run out.

Practice Questions

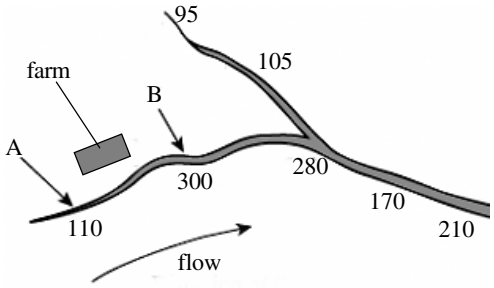
1. The diagram shows the growth of wheat crops on a farm that is entering into Environmental Stewardship agreements.



(a) Explain why the farmer will not be allowed to add fertilizer during the autumn. (3)

(b) Following harvest, the farmer decides to plant mustard. The mustard absorbs nitrates from the soil and is ploughed back into the soil just before sowing of the new crop. Outline two advantages of this approach. (2)

2. The diagram shows a river system in an area of farmland. The numbers show the nitrate concentration in parts per million (ppm) in water samples taken at various locations along theriver. Concentrations above 250 ppm encourage eutrophication in the river.



Explain the practices that could be adopted to try to prevent the problem shown in the diagram (2)

Markscheme

1. (a) Soil bare/no plants to absorb the fertiliser;
Rainfall higher than summer;
Likelihood of leaching/erosion;
Eutrophication/nitrates in aquifer

(b) Mustard provides soil cover/reduces erosion;
Adds organic matter;
Reduces leaching of nitrates;

2. Reduce use of nitrogen fertilisers;
Reduce storage of manure etc in adjacent fields;
Reduce overgrazing/any other practice that might lead to soil erosion;

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