

Case Study of Payments for Environmental Services: the United Kingdom

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United Kingdom (UK) policy background prior to agri-environmental programs

- Agricultural intensification for food security leading up to, and during, World War II
- 1947 Agricultural Act reinforced food production objective
- European Common Market established the Common Agricultural Policy (CAP) in 1958. UK joined European Community in 1973.

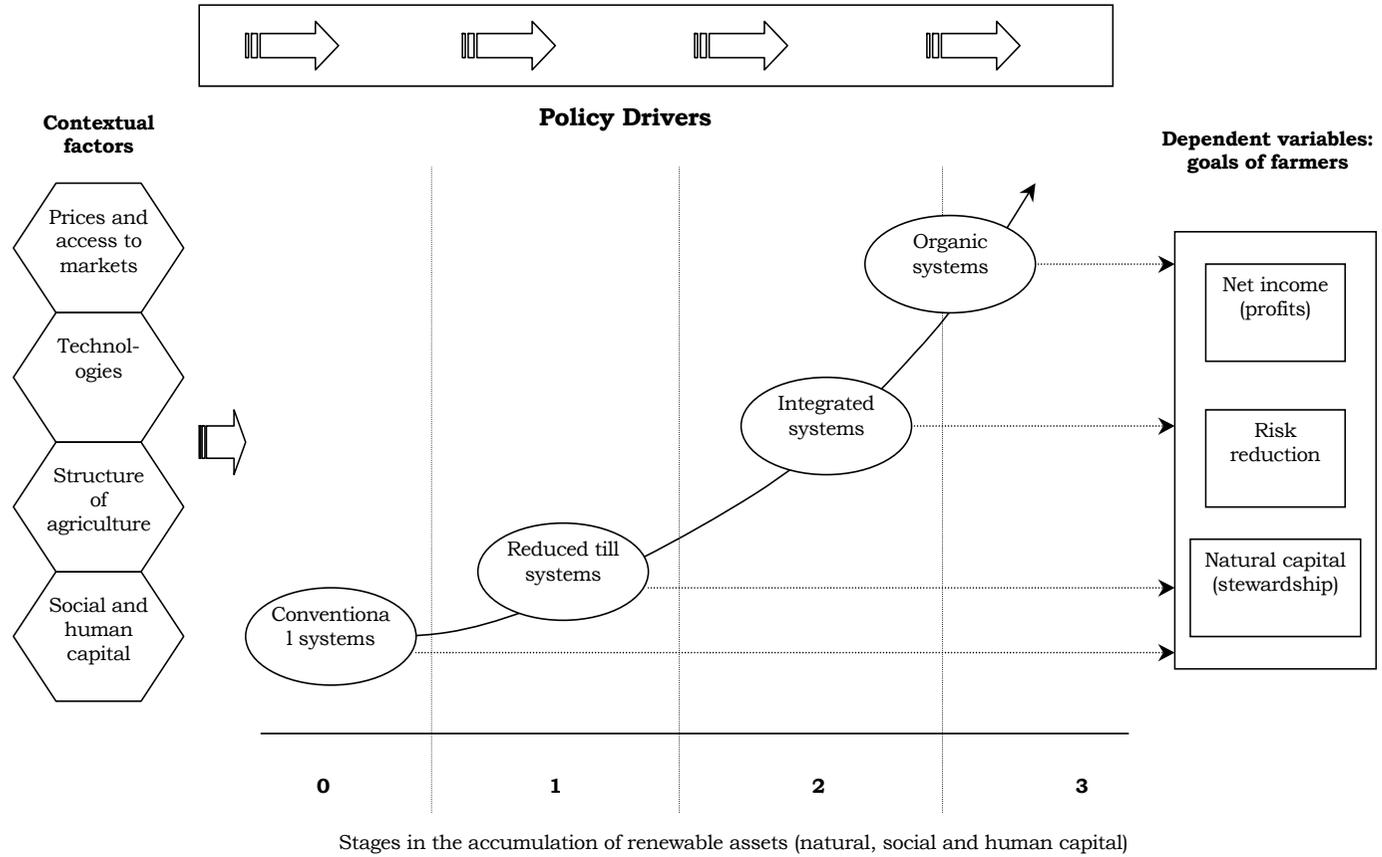
Common Agricultural Policy (CAP) reforms

- 1992 MacSharry reforms—began to weaken links between payments and production of agricultural commodities
- Agenda 2000 reforms—added Pillar II (rural development, including improvement of environment) to Pillar I (food security and farm incomes)
- Mid-term review of CAP in 2003—
Expands ‘decoupling’ of Pillar I payments and places greater emphasis on Pillar II

Emergence of UK agri-environmental programs, with emphasis on 'payments for environmental services' (PES)

- Environmentally Sensitive Areas (ESA) scheme in 1986
- Countryside Steward Scheme added for England in 1991
- PES for organic agriculture began in 1994
- Various other PES schemes in England, Wales, Scotland, and Northern Ireland

Figure 1. Conceptual framework for examining agri-environmental policies



Description of Environmentally Sensitive Areas (ESA) scheme

- 43 areas in UK (of which 22 in England and 10 in Scotland)
- The designated areas covered 14% of total UK agricultural land
- 12,445 ESA agreements in England by 2003, covering 60% of eligible area
- Agreements are for up to 10 years; include annual payments and possible conversion payments for capital projects.
- Primary focus was protection of landscape and wildlife habitat

ESA implementation

- Many ESAs used rather top-down prescriptive approach in early stages, in part a result of desire to protect certain key environmental features in each area
- Scotland's ESA implementation the most participatory
 - Scottish Executive Rural Affairs Department organized delivery
 - Scottish Agricultural College and the Farming and Wildlife Advisory Group had major roles in developing the individual farm plans
 - Partnerships credited with increasing farmer enrollment
 - The conservation management plans developed for each farm allowed flexibility to fit prescriptions to individual sites and circumstances
- Administrative (including environmental monitoring) costs = 18% of government costs of England ESAs in mid-1990s

ESA participation

- High rates of enrollment in grazing areas and areas of less intensive agriculture (e.g., 40-90% in England)
- Lower rates of enrollment in areas of intensive arable production (e.g., only 24% in England's Essex Coast area)
- Most enrollment in England only in the basic entry level tiers (only 22% of England's enrolled area in higher tiers)

Incentives/disincentives to participate

- Payments generally sufficient to induce participation in non-arable areas and in entry-level tiers. Positive effect on farmers' net incomes in many areas.
- ESA payments serve to reduce risk—especially in more marginal production areas—thus encouraging participation. However, CAP payments also reduce risk of conventional farming, thereby reducing incentive for ESA participation, especially in higher tiers.
- Payments help farmers achieve their own stewardship goals.

Environmental additionality

- The ESA was a 'wide and shallow' approach, which often succeeded in protecting key environmental features over a wide landscape.
- Cost-benefit studies generally showed benefits substantially exceeding costs, especially when 'non-use values' included in benefits.
- The ESA not so successful, however, in fundamentally altering crop and livestock production systems and restoring or building new natural capital.
- Success in some cases in enhancing biodiversity, especially with respect to farmland birds.
- Even participation in lower tiers may have helped enhance conditions for positive response by farmers to later PES schemes.

Participation of disadvantaged groups

- One study of an ESA in Wales showed larger farmers benefiting the most. Larger farmers tended to have proportionally more targeted habitat (such as semi-natural rough grazing or woodlands).
- Therefore, larger farmers received more income from the ESA scheme, and some bought smaller family farms, increasing social divisions in rural communities.

Description of Countryside Stewardship Scheme (CSS)

- Was available throughout England outside the ESAs
- 16,101 CSA agreements by 2003, covering 530,620 hectares of land (compared to 640,000 hectares covered by ESA agreements at same time)
- Most agreements are for 10 years; include annual payments and possible capital works payments to facilitate the introduction of new land management practices or to restore and maintain valuable environmental features.
- Concerned with a broad set of environmental objectives that became translated into concerns specific to each 'agreement farm'. In practice, agreements usually covered only part of each farm.

CSS payments in 2003 = £52 million (nearly the same as for England's ESAs that year)

- £38m in annual management payments, including:
 - £10m for arable reversion
 - £8m for establishing and maintaining grass margins
 - £7m for managing lowland pasture and hay meadows
 - nearly £4m managing upland pasture
 - £3m for managing heather moorland
 - over £1m for annual management and maintenance of permissive access routes (foot and cycle paths, etc.) and for 'educational access'
- £14 m for capital works (planting and restoring hedgerows, fencing, restoring dry stone walls and traditional farm buildings, creating ponds and scrapes for wildlife, etc.)

CSS implementation

- Numerous public and private agencies partnered with the Ministry of Agriculture, Fisheries and Food (MAFF) [later Department for Environment, Food and Rural Affairs (DEFRA)].
- Among those were the Farm and Wildlife Advisory Group, English Nature, the Wildlife Trusts, the National Farmers Union, and the Royal Society for Protection of Birds.
- Primary functions of most partners were consultations on targets, promotion, and advice to applicants. Some partners felt that deadlines were tight and that their involvement was weak beyond the consultation phase.

CSS participation

- Agreements included a disproportionately high number of cattle and sheep farms, and a disproportionately low number of crop and dairy farms.
- Like the ESA, the CSS had limited impacts on arable farming practices. Little focus on crop rotations and other measures for building soil health.
- Only 15% of land under CSS agreements in 2003 was in 'arable' or 'arable reversion' categories.
- Pilot Arable Stewardship Scheme introduced in 1998, and portions incorporated nationwide in CSS by 2002. Emphasized managing land in ways to encourage wildlife.

Incentives/disincentives to participate

- Changes in CAP policies during 1991/96 pilot phase decreased attractiveness of CSS participation, necessitating increase in CSS payment rates.
- An evaluation in 2000 showed 2/3 of CSS agreement holders would re-apply (if allowed), implying payment levels adequate for those individuals.
- CSS appeared to at least modestly increase net farm incomes, reduce farmers' overall risk, and help farmers achieve their stewardship goals.
- Incentives not strong in arable areas, except for measures like field margins.

Environmental additionality

- 36% of sample agreements in effect in 1998 had “high” additionality (none of the work would have taken place without the CSS agreements, and agreement sites were predicted to have high environmental improvement and to be visible and accessible).
- 38% had “medium” additionality (some work consistent with the agreements would have taken place anyway, but not to the same scale or standard).
- 26% had “low” additionality.

Permanence of environmental benefits

- Most agreement holders in a 2000 evaluation indicated there would be no change in cropping and livestock intensities in the absence of continued CSS agreements
 - 26% did indicate increases in cropping intensity
 - 32% indicated increases in livestock intensity
- Major decreases in stewardship indicated in following areas, in absence of continued agreements:
 - conservation land management (53%)
 - provision of public access (45%)
 - field margins (70%)
 - maintenance of hedgerows, walls, field boundaries (59%)
 - management of specific environmental features, such as traditional buildings (43%)

Differentiation

- CSS used a 2-stage scoring system
 - Tentative scores (based on historic features, landscape, public access, wildlife, target area, and ‘other priorities’) assigned to determine which applicants warranted site visits
 - Numerical scores assigned to those receiving site visits
- Shortcomings identified in CG/ADAS evaluation
 - points being assigned for ‘means’ (e.g., being in a targeted area), rather than ‘ends’
 - scoring system did not explicitly account for conflicts between objectives
 - weights assigned to each criterion were *de facto* assignments of relative value, rather than the result of explicit priorities
 - scoring conflated quantity and quality, rather than explicitly evaluating them separately
 - little attention given to relating priority scores to agreement costs

Participation of disadvantaged groups

- CSS farms larger, on average, than population of farms in England (however, data problems)
 - 20% of CSS farms over 300 hectares, compared to 3% of all farms
 - 36% of CSS farms less than 50 hectares, compared to 65% of all farms
- Land tenure patterns of CSS farms similar to all farms in England (1/3 of agreement holders' land was rented)

Some general lessons from the ESA scheme and the CSS

- High CAP subsidies make it difficult for PES programs to reduce agricultural intensity and restore biodiversity in arable areas. Efforts should continue to 'decouple' CAP subsidies from specific crop and livestock commodities.
- Whole-farm ecological and economic plans should be used to develop PES agreements.
- Extra costs and effort may be required to achieve proportional participation of smaller farms, if that is an objective.

CAP reforms of 2003

- Starting in 2005, most Pillar I subsidies being moved to a new single payment for each farm; i.e., payments being largely ‘decoupled’.
- More comprehensive environmental cross-compliance provisions being imposed.
- Application deadline for farmers in England to establish eligibility for these single payments was mid-May.

Consolidation of major PES schemes (Pillar II) in England in 2005

- ESA and CSS closed to new applicants.
- Two new entry level PES schemes
 - Entry Level Stewardship (ELS), open to all who farm 'conventionally' (5-year agreements)
 - Intended to deliver environmental benefits in addition to those provided by cross-compliance requirements
 - Farmers select options from a menu of measures rated with points
 - With at least 30 points/hectare, qualify for £30/hectare payments
 - Organic Entry Level Stewardship (OELS), for those certified organic or in conversion to organic
 - Objectives and basic measures under the ELS apply equally to the OELS, but detailed management guidance and points differ
- A new Higher Level Stewardship (HLS) scheme

Whole-farm planning now central to England's PES schemes

- For entry level participation, farmers must complete a Farm Environmental Record (FER).
- FER includes:
 - field boundaries
 - trees and woodland protection
 - historic landscape features
 - buffer strips
 - arable land wild bird measures
 - encouragement of a range of crop types
 - soil protection
 - lowland grassland management
 - nutrient management plans

Features of the HLS scheme

- Applicants must have entered one of the ELS schemes, so all the basic requirements of those apply.
- HLS agreements are for 10 years, though sometimes can be extended up to 20.
- Enrollment is competitive, and based on environmental benefit per unit of expenditure
- Aims include wildlife conservation, maintenance and enhancement of landscape, natural resource protection, historic environment protection, and promotion of public access to and understanding of the countryside.