



# Investigating the incidental benefits of Environmental Stewardship schemes in England

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## ABSTRACT

The direct benefits of Environmental Stewardship (ES) schemes are well documented in the academic policy literature and include an increase in the stock and quality of field boundaries and associated wildlife; adaptation to climate change; landscape enhancement; improvements in farm soil and water quality and protection of the historic and natural environment. It is argued that the incidental benefits of ES schemes, which capture those benefits to the wider economy and society beyond the scheme's original remit, are as yet poorly understood and insufficiently recognised in current policy evaluation criteria. This paper describes research which has systematically addressed this evidence gap through the application of sub-regional economic models to capture the direct, indirect and induced effects of a variety of ES schemes beyond the farm gate. Findings reveal the sub-regional income and employment effects of such schemes to be significant, in particular for those schemes rewarding higher standards of environmental management. The implications of the findings for ES policy, its evaluation and rural development are discussed.

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## Introduction

Agri-environment schemes (AES) are a form of payment for environmental services (PES) and have been part of agricultural and rural development policy in England for almost a quarter of a century. These schemes were born out of a recognition that the technical transformation of agriculture in the post war period had resulted in a series of unintended negative consequences for the environment in terms of biodiversity, landscape quality and resource protection. Agri-environment schemes have attempted to arrest the negative impacts of modern agriculture by purchasing environmental goods and services from land managers which would otherwise be put at risk by changes to agricultural practice.

Agri-environment schemes are voluntary agreements running over several years with annual payments, often supported by one-off capital investments, to farmers and land managers to ensure they manage their land in an environmentally sensitive way that goes beyond the minimum required of them by legislation (Natural England, 2010). They are funded by the European Union (EU)

Common Agricultural Policy (CAP), known as the Rural Development Regulation (RDR). Environmental Stewardship (ES) is the current agri-environment scheme operating in England and the funding is co-ordinated through the Rural Development Programme for England (RDPE).

The aims of the RDPE are to improve competitiveness in the agriculture and forestry sector; safeguard and enhance the rural environment; foster competitive and sustainable rural businesses and sustain thriving rural communities (Defra, 2007). The backdrop to the introduction of the RDPE is that since 1996 the total income from farming in England has been in decline, mainly due to low prices at the farm gate, although it rose slightly between 2008 and 2010. The agricultural labour force in England is also in long-term decline and currently contributes to 1.7% of the total UK workforce.

The industry is characterised by an ageing population, particularly in upland areas, partly due to low earnings and barriers to entry, and ongoing difficulties in recruiting young people into farming. The average age of farm holders in 2007 was 59 years old, ranging from 54 to 60 years across the different farm types (Defra, 2010). There is also a continuing increase in part-time workers at the expense of full-time employment, reflecting ongoing restructuring of the industry.

ES was introduced in 2005 and replaced the two previous schemes, although the long-term nature of agri-environment schemes means that many agreements still exist under these closed schemes (Natural England, 2010). In addition to the secondary

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objectives of flood management, genetic resources conservation and an overarching theme addressing climate change mitigation and adaptation, the scheme has five primary objectives:

- to look after wildlife, species and their many habitats;
- to maintain and enhance landscape quality and character;
- to protect the historic environment;
- to protect soils and reduce water pollution (natural resource protection); and
- to provide opportunities for people to visit and learn about the countryside.

The ES scheme comprises four distinct tiers, ELS, OELS, HLS OHLS which are summarised in Table 1.

At the beginning of 2011 there were 56,778 AES agreements operating in England, on farms covering an area of 6.3 million ha, amounting to 68.6% of the utilisable agricultural area. The uptake of Entry Level Schemes (ELS) was 5.6 million ha (41,017 agreements) including 817,634 ha also under Higher Level Schemes (HLS) (6859 agreements) and a further 684,359 ha under closed Environmentally Sensitive Area (ESA) and Countryside Stewardship Scheme (CSS) agreements (Natural England, 2011).

EU rural development programmes are subject to a formal framework of independent evaluations. These take place during the initial programming (ex-ante), part way through the programme (mid-term) and after completion (ex-poste) (Council of the European Communities, 2005). This formal evaluation has been subject to widespread criticism (for examples see Midmore et al., 2008a; Bradley et al., 2010) in terms of the process involved, such as the inability of evaluations to effectively inform programme development because of timing, lack of advice and guidance to evaluators, data availability, a centralised 'one-size fits all' approach, and problems with data aggregation. Criticism has also extended to strategic evaluation issues, such as an undue emphasis on outputs rather than outcomes, encouraging reductionist rather than holistic approaches, and a lack of understanding of causality.

There is an increasing recognition that policy impacts are multiple and require a systematic approach to evaluation. The RDR itself confirms that 'The mid-term and ex-post evaluations shall examine the degree of utilisation of resources, the effectiveness and efficiency of the programming... its socioeconomic impact and its impact on the Community priorities' (Commission of the European Communities, 2006). For AES this translates into a need to understand the holistic implications of policy in terms of the wider social and economic considerations that are important for successful scheme delivery and, conversely, the wider socio-economic impacts of the schemes themselves (Bradley et al., 2010). However, despite this explicit requirement, the increasing appreciation of its significance, and the fact that in most EU Member States a significant proportion of the CAP budget is spent on AES, their socio-economic impacts have rarely been considered as part of programme evaluation. The need for this was supported recently by Hyder Consulting (2009) in their ex-post evaluation of the 2000–2006 RDP in England.

The direct environmental benefits of ES schemes are well documented in the academic policy literature (see Boatman et al., 2007, 2008; Humble and Allen, 2007) and include an increase in the stock and quality of field boundaries and associated wildlife; adoption to climate change; landscape enhancement; improvements in farm soil and water quality and protection of the historic and natural environment. The incidental benefits of ES schemes, which capture those benefits to the wider economy and society beyond the scheme's original remit, are as yet poorly understood and are insufficiently recognised in current policy evaluation criteria. This is a possible weakness as a number of socio economic evaluations

of previous agri-environment schemes suggest that there may be considerable trickle-down effects for the wider economy.

A number of commentators (see for example, Dobbs and Pretty, 2001; Banks and Marsden, 2000; Frost, 2004; Agra CEAS Consulting, 2005) have suggested that AES, a policy designed primarily to support habitat, landscape, biodiversity and conservation can play a key role in fostering and supporting viable rural economies. Banks and Marsden (2000) used the case of Tir Cymen AES in Wales to demonstrate that conservation policies can, if appropriately designed and regionally embedded, positively contribute towards rural development. Tir Cymen was a 10 year whole farm AES which operated a three tier payment system to deliver biodiversity and landscape objectives; an annual whole farm payment; a top-up payment for additional conservation management activities; and a capital works payment for conservation activities, such as hedge laying, dry stone wall repairs and fencing. It was the latter payment, in particular, that created additional work for casual employees and contractors and stimulated new enterprise development across Wales. Similarly, an evaluation of the wider socio-economic impacts of Tir Gofal, another AES in Wales, undertaken by Agra CEAS Consulting (2005) found that the scheme created employment opportunities and concluded that the additional jobs created would be of particular benefit in small rural communities, where other employment opportunities are limited. Focus group discussions also supported this view (Welsh Audit Office, 2007). Several participants emphasised the importance of Tir Gofal in sustaining and increasing the demand for traditional rural businesses, such as walling and hedging. The financial benefits also helped to sustain family farming by encouraging children to take on their parents' farms. It has been suggested that where AES are able to support agriculture they can contribute to and help sustain the positive social externalities of agriculture, which include provision of jobs, contributions to the local economy and opportunities for businesses, and a contribution to the social fabric of rural communities (Dobbs and Pretty, 2001).

Whilst useful, the above research is limited in that it lacks a systematic and rigorous assessment of income and employment impacts across all agri-environment schemes. To understand better the benefits of ES schemes to local economies requires: (i) an evaluation framework that encapsulates the secondary benefits and (ii) collation of empirical evidence at the farm and local economy level, of sufficient scale and quality to facilitate the generation of sub-regional income and employment multipliers.

This paper reports on research into the socio-economic impacts of AES schemes, which was commissioned in order to address this evidence gap. We use the term 'incidental benefits' to describe the benefits that accrue to the wider economy and society from ES activities that go beyond the scheme's original biodiversity and landscape objectives. Whilst this includes both social and economic benefits, the focus of this paper is on the economic benefits and, particularly, the extent of sub-regional income and employment generation resulting from agri-environment related expenditure. The central research question addressed by the paper is: to what extent do ES schemes generate additional income and employment effects in the sub-regional economy?

The paper first sets out a conceptual framework for the research, based on the consideration of potential rural development benefits arising through the growth of net income (Williams, 1997) in the local economy. This emphasises the importance of local expenditure and the generation of direct, indirect and induced effects arising through the containment and circulation of income in the economy, whereby:

- Direct effects are the injection of scheme funds into the economy that can be regarded as being additional;

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