The RELU Debates 2006

Farming's no place for wildlife?

Over the centuries, traditional farming has produced landscapes which, in the past, supported a wide variety of wild plants, animals and insects. Technological intensification of farming throughout the 20th century has led to devastating declines in wildlife. Large amounts of money have been spent on so-called agri-environmental schemes to encourage farmers to manage in a way that pays more attention to conservation and the environment, but wildlife on farmland continues to decline. In the efficiency-driven economy of today, can agriculture and wildlife realistically be expected to thrive on the same territory?

Together, governments and the European Union spend around 3.5 billion Euros a year on schemes aimed at encouraging less-intensive farming to try and promote gains in biodiversity, landscape preservation, soil quality and water conservation. Whole stretches are "set aside" and grants are given for unprofitable field margins and corners to be left uncultivated to allow soil to re-generate, nests to be built and seed to ripen for the birds. The wholesale uprooting of ancient hedges may not have stopped but it is regarded with disapproval.

Europe's agri-environmental schemes (AES) represent one of the world's biggest ecological experiments, or they would do, says Nature (23 Feb. 2006) if anyone had bothered to formulate hypotheses or collect data. Given the enormous budget, one would assume that specific targets would be set and the base-lines from which any progress would need to be measured would be defined. This does not appear to have happened, and in a report issued in 2005 the European Court of Auditors pointedly said "If a measure cannot be adequately checked it should not be the subject of public payment."

Meanwhile a Dutch AES project intended to help ground-nesting meadow birds by delaying the mowing of fields has been shown to have no effect. Birds actually seemed to prefer intensively farmed habitats. Schemes that allowed river margins to flood periodically to encourage certain birds resulted in drowning the very larvae the birds were supposed to feed on. The Dutch ecologist who pursued these investigations has since worked with the University of East Anglia to evaluate a wide range of AES schemes across Europe. He has discovered depressingly minimal success rates.

Under these circumstances, what incentive is there for governments to continue to invest in schemes aimed at preserving wildlife on agricultural land? And why should farmers risk putting an eco-friendly brake on their efforts to produce more economically in an already cut-throat market? The third RELU debate brought together Professor William Sutherland, Populations and Conservation, University of East Anglia, Professor Nicholas Hanley, Environmental Economics, Stirling University and Dr. Richard Bradbury, senior research biologist, RSPB to discuss the situation and ask whether and on what terms it is realistic to expect farmers to pay attention to the needs of wildlife.

Professor Sutherland is Principal Investigator in an RELU research project "Evaluating the options for combining economically, socially and ecologically sustainable agriculture". This project knits together research on social change, agricultural science, economics and ecology to predict how economic, regulatory, technological and social changes will impact on farming practice, farm livelihoods and biodiversity.

Professor Sutherland compares the way in which we manage conservation in the UK with parallel procedures in the USA. On the one hand our agri-environmental schemes reduce the intensity of farming over the areas to which they are applied, but partly because we have a long history of seeing England as a green, pleasant and relatively tidy land, farmers like to ensure that AES areas do not simply revert naturally to scrub. Americans, by contrast, cannot believe it when they see areas of our national parks being put to the plough to keep them under control. They are used to and like the idea of wilderness, of which there are vast tracts in the States. As a result they can afford to be relaxed in the face of other areas being farmed very intensively, even to the point of accepting GM crops. From an economic point of view, Sutherland says, it makes sense to devote minimal management effort to areas that are not going to show much return anyway and concentrate our efforts on potentially high-yield farmland.

This philosophy leads Sutherland to suggest that rather than paint agri-environmental schemes across the countryside with a broad brush, there should be a greater emphasis on focussing on areas where they will be of tangible and rapid benefit to the environment and wildlife. One of many examples would be actively to restore the wild down-land above Brighton, which would at a stroke provide a massive improvement to the water supply and boost bio-diversity.

This patchwork approach would generate a more segregated countryside with some farmers making money from competitive agriculture and others becoming specialists in farming for the public good and receiving AES grants to do so. This chimes in with Sutherland's suspicion that in cases (in his view) where agri-environmental schemes have been successful, a contributing factor was the dedication of the individual farmers

Environmental economist Professor Hanley takes the bull by the horns and asks whether it makes any economic sense at all to persuade farmers to heed the needs of wildlife, and if so, whether it makes sense for the tax-payer to reimburse farmers for the cost of doing so. Do people really care about and value the positive effects that farming in a particular way can have on wildlife, the quality of their habitat and the resulting landscape?

Even if these values were perceived to be worth the extra cost of producing them, Hanley says, it only makes sense to use tax-payers' money to encourage wild-life friendly farming when market forces alone fail to provide enough incentive (which is almost always the case) bearing in mind that again, the ultimate benefits to the farmers have to exceed their costs. The only other circumstances in which the tax-payers' money can be used in this way is when there is simply no other means of providing the sought-after environmental outputs more effectively. This could be the

case when the output concerned was the preservation of certain wild birds, for example.

The whole point of AES schemes is to produce “environmental goods”. AES has received a bad press but what is the hard economic evidence? Studies in the last decade before the new millennium showed the AES policy gave benefits that were bigger, sometimes much bigger than the costs, Hanley said. Confusion could arise because some AES might not always seem to generate more environmental pay-back than would have been produced anyway. One scheme, for example, might not have made much difference to the number of birds. But if it nevertheless produced a greater protection of habitat, a more attractive landscape, better recreational facilities and a higher quality of water, it has more than paid its way.

People interviewed say they are willing to pay for improvements in wildlife, the quality of their habitat and the landscape, and water quality but policy needs to be changed to improve the tax-payers’ value for money. Willingness to pay for habitat improvements, for example, varies across the UK and across habitats, and a more differentiated agri-environmental scheme is needed to reflect this. We also need to be sure about who benefits from any one scheme and who does not. Take the thorny problems associated with geese conservation in Islay. Although the overall consensus is that the migrating geese should be welcomed and preserved, they wreak havoc on many of the farmers’ crops.

Finally from the economic standpoint, AES pays for changes in managerial practices. Hanley suggests it would be far more effective to pay instead for any resulting environmental outputs. This drew a question from the floor as to how this would be monitored. Would we have to employ legions of civil servants to crawl around the fields counting butterflies and corn-buntings? If the farmer was going to be asked to do it, we needed to be sure he was one of the growing number (already large, according to a delegate from LEAF, Linking Environment and Farming) who empathise with the need to make farming more wild-life friendly.

The RSPB’s Dr. Bradbury is not afraid to ask whether it is sensible in any case to expect wildlife to thrive on farms. Growing food and biomass for an increasing population is surely the priority. After all, we are good at protecting wildlife in special places such as the beautiful Insh Marshes reserves, although this strategy fails to benefit many species like the corn bunting, which has specialised in life on the farm. Also, for most people, farmland is the only countryside to which they have regular access. That is where they want to see wildlife – on their doorstep, not in a national park or reserve miles away. Neither should we forget the importance of some wildlife to the ecosystem, including crop pollination!

Nevertheless, Bradbury says, farmland is certainly no place for wildlife at the moment. One of the key indicators of sustainability of UK lifestyles is the population index of farmland birds, and here there have been huge declines not only in the UK but also right across Europe. Spain, Italy and the Balkans do show smaller declines and even in France the effect is not as pronounced as in Britain. This variation reflects the differing degrees of intensification of farming.

Although many agri-environmental schemes across Europe are not delivering, the principle itself is not bad, Bradbury says. The key requirements are to set targets and collect evidence and in England especially we are having some success with common and rare arable weed margin plants, bumble bees (especially rare species) and birds. By using geographic targeting and farmer liaison, the population of the rare cirl bunting has increased from 118 pairs in 1989 to nearly 700 in 2002. Compared to the regional trend, the RSPB's Grange Farm has seen a great increase in the farmland bird index by using basic agri-environmental entry level scheme prescriptions, and crop yields are still good. The farm has deliberately targeted its options, such as wildlife seed mixtures, at low yield areas like the edges and corners of fields.

Wildlife conservation is not the only virtue of AES schemes. Properly applied they can protect our soil and in doing so protect our water resources. In a world where to grow enough beef to make a quarter pound hamburger takes 11,000 litres the water question is becoming increasingly prominent. Conservation tillage, buffers, detention ponds – resource protection can also be good for wildlife, a win-win situation!

There is no room for complacency, however. In the lively debate that followed the story was told of a farmer whose heart was in the right place. He reported half a dozen active skylark nests with eggs in a silage field he wanted to cut. "How much do you think I could be paid to delay my operation?" he asked the RSPB. The Society said he would need to hold up proceedings by six weeks, and he might be able to find recompense of around ten pounds per site. The farmer rang off. Six weeks delay in cutting would cost him £6,000.

Just one real-life example of the need to integrate practical considerations with a growing sense of environmental responsibility; a living microcosm of the complex web of interactions in the rural community that the RELU is designed to elucidate and care for.

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