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Mark Allen

Brief overview of the use of remote sensing within the Single Farm Payment process in Ireland and Wales

1 Background and context

Agriculture and Rural Development Minister Michelle O'Neill announced on the 15th June 2012 that DARD would be utilising remote sensing data as part of the farm inspection regime required for compliance with the Single Farm Payment regulations.

In basic terms remote sensing is the process of using space based satellite or aerial imagery to examine features such as landuse.

Within the context of the Single Farm Payment (SFP) process, remote sensing is used across various EU member states to determine the eligibility of claims made by landowners. The basis for the use of remote sensing data within this context is Commission Regulation (EC) No 1122/2009¹.

¹ [COMMISSION REGULATION \(EC\) No 1122/2009 of 30th November 2009 laying down detailed rules for the implementation of Council Regulation \(EC\) No 73/2009 as regards cross-compliance, modulation and the integrated administration and](#)

The increasing adoption of remote sensing technology across many EU member states has been motivated by a desire to make farm inspections linked to the Single Payment Scheme both quicker to complete and more cost effective, whilst still ensuring that payments are made to those entitled to them and for the correct amounts.

The Joint Research Centre (JRC), which is effectively the European Commission's in house science service has direct responsibility for the setting of the technical standards for the use of remote sensing data across the EU. The JRC also provides the raw remote sensing data for analysis by the various EU member states across a range of functions.

This paper provides a brief overview of the use of remote sensing as part of the Single Farm Payment systems operating within Ireland and Wales. A key challenge in relation to the completion of this overview was the paucity of any substantive departmental documentation or independent assessment within either Ireland or Wales. As a result the information on which this paper is based is largely anecdotal and drawn from telephone interviews with departmental officials within Ireland and Wales.

2 Ireland

Within Ireland data derived from satellite imagery is utilised for the remote sensing assessment of Single Payment System eligibility.

The analysis of the satellite data is completed by the Dublin based firm, The Icon Group, who were awarded the contract to undertake this work. The Icon Group is also the company that DARD has contracted to undertake the same work in Northern Ireland in 2012.

Along with all other EU member states who operate Single Payment Schemes for farmers, the Irish authorities are required to select 5% of applicants for inspection under all schemes covered by the SPS application form.

Those applicants selected for inspection are subjected to administrative checks, controls by remote sensing using satellite imagery or aerial photography, and on-farm inspections.

At present within Ireland, **of the 5% of SPS applicants selected for inspection, approximately 75% are subjected to a land eligibility check utilising remote sensing. In pure numerical terms this means that the Irish authorities are conducting a total of approximately 5,200 remote sensing land eligibility checks annually. Of these 5,200 checks, around 1,000 lead to the need for an on farm inspection due to the discovery of land eligibility irregularities.**

[control system, under the direct support schemes for farmers provided for that Regulation, as well as for the implementation of Council Regulation \(EC\) No 1234/2007 as regards cross-compliance under the support scheme provided for the wine sector](#)

In terms of the benefits accrued through the use of remote sensing in Ireland there is evidence to show that the adoption of the process has increased the efficiency of the Single Payment Scheme. The basis for this assessment is the fact that Ireland appears able to issue payments earlier than in other EU member states, and this is as a direct result of eligibility checks being completed quickly. By way of example, in July 2012 the Irish Minister for Agriculture, Food and the Marine, Simon Coveney, confirmed that agreement had been reached with the European Commission which enabled his department to make advance payments at a rate of 50% to those applicants whose applications are confirmed fully clear with effect from October 16th, with balancing payments being made with effect from December 1st².

It is also worth noting that the Irish authorities have some idea as to the actual cost of a land eligibility farm inspection visit as opposed to a land eligibility check completed through remote sensing. Data taken from the an Irish Comptroller and Auditor General report published in 2010³, reveals that on average a Technical Agricultural Officer could reasonably expect to complete 3 on farm inspections per week, and **that the average cost of an inspection visit was in the region of €1,800** (taking account of direct salary costs, overheads, imputed pension costs and travel and subsistence). This figure contrasts markedly with an **estimated, but not confirmed, cost of €60-€70 per remote sensing eligibility inspection**.

According to departmental staff, the adoption of remote sensing technology has saved money by effectively reducing the overall number of required on farm inspection visits. Remote sensing has also meant that on farm inspection visits are now effectively focused on the so called “*awkward cases*”.

In spite of these positives however, there is recognition amongst officials that ground inspections will be more accurate and more detailed than a remote sensing completed check.

Looking to the future, the Irish authorities are keen to explore other ways to make use of the increasingly detailed data that is becoming available. A possible example here is the wider use of remote sensing to better identify and measure the scale of ineligible features within SPS applications, but this work is at an early stage.

3 Wales

Wales also utilises remote sensing analysis of satellite imagery data as part of the Single Farm Payment eligibility checks.

The Welsh Government introduced the use of remote sensing in this role as a pilot programme in 2006.

² [Farmers to get EU payment early. Irish Times article, 26th July 2012](#)

³ [Accounts of the Public Services 2009, Report of the Comptroller and Auditor General, Volume 2, September 2010, Page 379](#)

In line with the aforementioned regulations, the Welsh Government are also required to inspect 5% of all applications for funding under the auspices of the Single Payment Scheme.

Similarly to Northern Ireland and Ireland, the actual work is carried out by a private contractor who utilises satellite data provide by the Joint Research Centre. All land eligibility assessment is completed through the means of remote sensing.

Land eligibility irregularities picked up through remote sensing lead to the instigation of an on farm inspection. Within this context, Welsh sources were also keen to stress that whilst remote sensing tools have been invaluable, the fact remains that they will never be able to replace the detail which can be gathered through the use of an on farm inspection.

In quantifiable terms, **the remote sensing land eligibility assessment has processed 842 applications in 2012 (5% of 17,976 applications), of which 54 have been determined as 'red dossiers' i.e. failures that would lead to an immediate on farm inspection. In addition 721 applicants have been written to with very minor failures (grey and green dossiers) – some of which may result in an inspection, but usually these numbers are minimal.**

To date there has been no independent evaluation of the value or otherwise of using remote sensing in the Single Payment Scheme within Wales.

Whilst available data is limited, anecdotal evidence from staff responsible for the process suggests that it has sped the administration of the Single Payment Scheme up. This increased efficiency is a result of the on farm inspection scheme now being focused on those applications which fail eligibility checks, a situation which has seen the number of on farm inspections drop. The reduction in the number of on farm inspections has also reduced costs but there are as yet no available figures for the total amounts saved.

In a similar vein, the impact of the use of remote sensing on the levels of Single Payment Scheme disallowance within Wales is hard to assess.

Looking to the future, the Welsh authorities are keen to explore how the use of remote sensing could be expanded in relation to the area of cross compliance and other Rural Development Programme schemes. This work, which is being done in conjunction with the Joint Research Centre is however at a preliminary stage and will need to take account of and be compliant with the reformed Common Agricultural Policy schemes, which are likely to move towards implementation in 2013.

4 Conclusions

- The use of remote sensing systems within Ireland and Wales has been effective at speeding up the administration of the Single Payment Scheme whilst also appearing to reduce the number of required on farm inspections;

- There is however a paucity of quantifiable data or independent evaluation within each jurisdiction to enable an accurate and complete assessment of the savings and efficiencies achieved as a result;
- Officials within both jurisdictions also acknowledge that land eligibility inspections completed by the means of remote sensing will never be as accurate or detailed as the data provided by an on farm inspection visit. This could theoretically present future disallowance risks if audits of remote sensing inspection regimes discover flaws or errors.