



## WPLA WORKSHOP Budapest

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# THE USE OF THE SPANISH CADASTRE FOR THE CONTROL AND MONITORING OF EU-CAP SUBSIDIES

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## INTRODUCTION

The distribution of EU Agricultural Policy (CAP) subsidies has recently undergone important changes, in relation both to their structure and the requirements of the Integrated Administration and Control System (IACS). The scheme has evolved from a simple alphanumerical identification of parcels to a new land parcel identification system (LPIS) based on a GIS, compulsory since the 1<sup>st</sup> of January of 2005.

The new LPIS is a sort of “cadastre” focussed to agriculture management purposes. As there is a sure overlapping between a modern multi-purpose cadastre (existing in several European countries) and LPIS, is it important to find paths for co-ordination between both systems, in order to avoid expenditure duplication. Countries with cadastres and LPIS under construction (some accession countries) have the chance to build an integrated system, a multi-purpose cadastre fulfilling LPIS requirements.

Spain has been a peculiar case. Being the Spanish Rural Cadastre firmly based on agricultural uses, its information was suitable to be one of the pillars of the new LPIS for IACS. In this paper, we shall briefly explain how that process was carried out and the role our cadastre plays in the system today.

## BACKGROUND

The first direct aids to crops to be regulated and controlled by the EU authorities using cartography were the ones in relation to the olive trees (Council Regulation 154/75 and Commission Regulations 2276/79 and 2366/98). Since the 1998 Regulation, a complete GIS and orthophotos are compulsory for the olive trees registers.

The most important subsidies are the ones to arable lands. They are extended to all member states, including 3.2 million farmers, 50 million agricultural parcels and they reach a yearly amount of 20,000 million EUR. The former arable land subsidies (Council Regulation 3508/92) established IACS for the management and control of those subsidies and it requires the register of all agricultural parcels. That Regulation obliged only to the implementation of alphanumerical identification, without any obligation to digital maps.

A new Regulation (Council 1593/00) made compulsory the implementation of digital land parcel identification system (LPIS) in all member states. It became an integral part of the *acquis communautaire* for accession countries. The national LPIS must integrate graphical and alphanumerical data, the use of orthophotos is strongly recommended and they had to be fully operational in January 2005.



Finally, the Council Regulation 1782/2003 establishes common rules for direct aids in the frame of CAP and abolishes Regulation 3508/92, keeping the obligations in relation to the identification of land parcels. The rules for the application of the new mentioned Regulation, in relation to IACS, are contained in the Commission Regulation 796/2004.

## IACS/LPIS REQUIREMENTS

The Land Parcel Identification System (LPIS) is a key component of the Integrated Administration and Control System (IACS) for area based subsidies. Every year, the farmers have to declare all their agricultural parcels, although the Commission allows the usage of “production blocks” or “îlots”. Administrative cross-checking is performed on 100% of declarations to verify that all of them are included in the LPIS and 5% are inspected on the spot to verify the crops.

The objective of cross-checking is to make sure that:

- The declared land parcel exists and does not exceed the area of the reference one.
- A piece of land receives one area based subsidy and only one.
- The land use is declared “eligible” (has the right to the subsidy).

To achieve the IACS objectives, the LPIS has to fulfil some technical conditions, being the reference parcels known by the IACS as geographical objects with a number of attributes. A summary of those conditions:

- Unique reference number.
- Reference area of parcels.
- Type of land use of parcels (eligibility).
- Regular and complete nation-wide coverage.
- Object: polygons (agricultural parcels or blocks).
- Mapping accuracy at least 1:10 000.
- Access to graphical and alphanumerical data.
- Regular updating.

## CADASTRAL INFORMATION (SPAIN)

The modern Spanish Land (Rural) Cadastre has been built using orthophotos as basic cartography. Conventional ones were at scales 1:2 000 and 1:5 000, depending on the land division in each area, and digital ones pixel 0.5 or 1 m. The land parcels are drawn on the orthophotos and checked on the spot, taking field information on owners and crops. The lines are vectorized and parcel areas are calculated as a result of the digital process.

The Spanish Land (Rural and Urban) Cadastre was primarily designed for taxation purposes. However, other uses became more and more important, especially for the Rural Cadastre. When it was time to renew our cadastres, the use of cadastral information by the Agrarian Administration for the control and monitoring of EU CAP subsidies had become very important, so it was taken into account in the design of the new cadastral system.



Now, the Spanish Rural Cadastre is a modern GIS currently available in more than 80% of territory, being the remains in conventional maps. Some features of the system are:

- Objects: land parcels.
- Unique reference number.
- Areas of the parcels.
- Actual type of parcel land use.
- Information on owners.
- Access to alphanumeric and graphical data.
- Regular coverage.
- Orthophoto pixel 0.5 or 1m.
- Map scales 1:2 000 to 1:5 000.
- Regular updating.
- Complete GIS (digital vectorial).

It is easy to notice that the features of our Rural Cadastre are quite similar to the ones demanded for a LPIS, though some concepts are different:

1. For the LPIS, “agricultural parcel” is a continuous piece of land with a single crop cultivated by a single farmer. For the Cadastre, “parcel” is a continuous piece of land belonging to a single owner. Cadastral parcels are divided in “sub-parcels”, according to the different types of land uses in the same parcel. So, the concepts “agricultural parcel” and “cadastral sub-parcel” are physically similar.
2. The LPIS deals with “farmers” and the Cadastre deals with “owners”. They may be not the same person. However, that is not really a problem, as the IACS simply must check that every piece of land receives only one subsidy, never mind the owner.

## **CO-OPERATION BETWEEN IACS AND CADASTRE IN SPAIN**

In Spain, the Regional Governments carry out the control and monitoring foreseen by the IACS, while the Ministry of Agriculture holds the responsibility for co-ordination of the process and for the implementation of EU regulations.

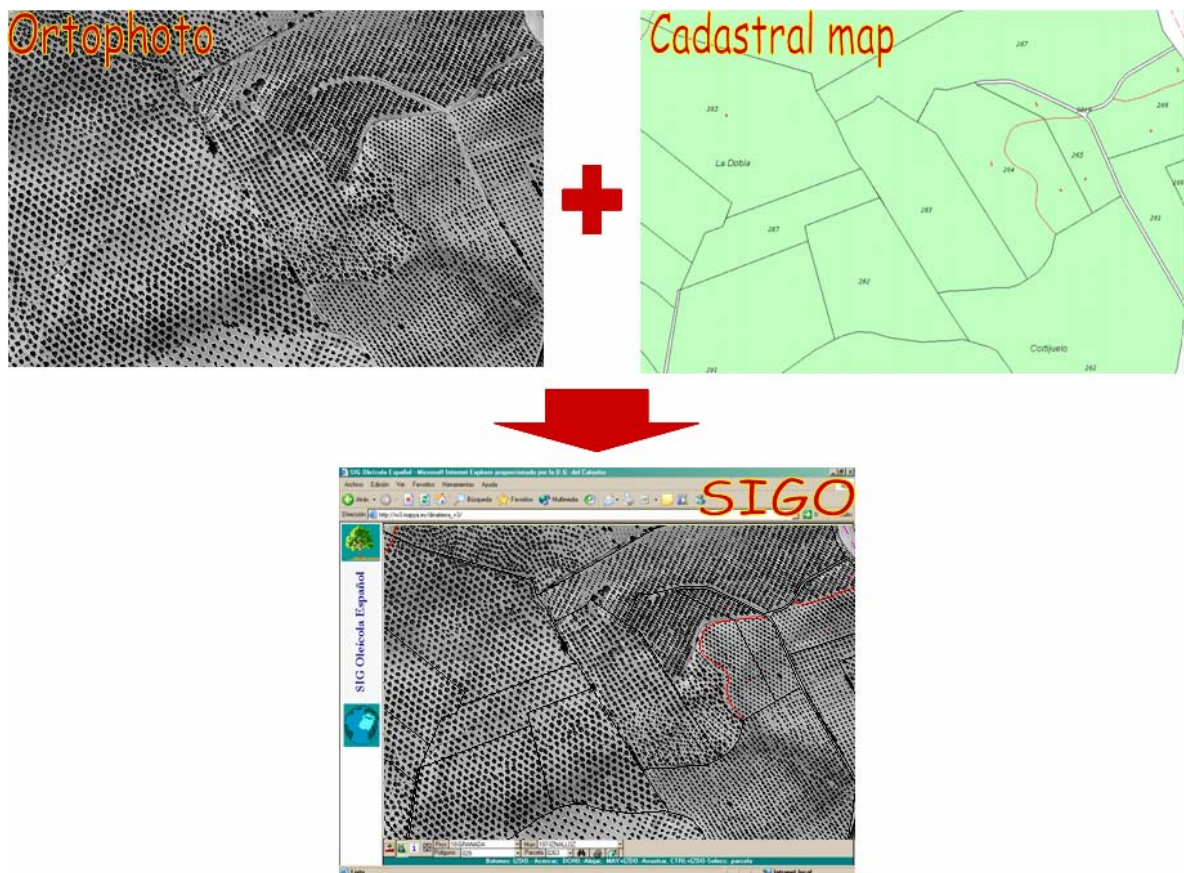
Since 1993, just after the CAP reform and the establishment of the IACS by Regulation (EC) 3508/92, the Spanish Cadastre has been supporting the Ministry of Agriculture and the Regional Governments in their control and monitoring activities in relation to agricultural subsidies. The cadastral alphanumeric information began to be used by the regional governments as a basis for the IACS, being the land parcels identified by the cadastral reference. At first, many problems appeared, due to the fact that some information was still outdated. An important effort was made in order to update the database with the information directly coming from farmers.

In 1996, an Operative Programme, partially co-funded by FEDER and FEOGA, started. The Spanish Rural Cadastre evolved quickly and, by 2000, several Regional Governments begun to use not only the alphanumeric cadastral database but also



the new digital maps. The Cadastre was also used by the Ministry of Agriculture as a basis for the Olive Trees GIS (SIGO).

The SIGO was built on two pillars: a new orthophoto performed by the Ministry of Agriculture in 1998 covering all the territory and the cadastral maps. Digital cadastral maps were directly incorporated to the SIGO and conventional cadastral maps were scanned.



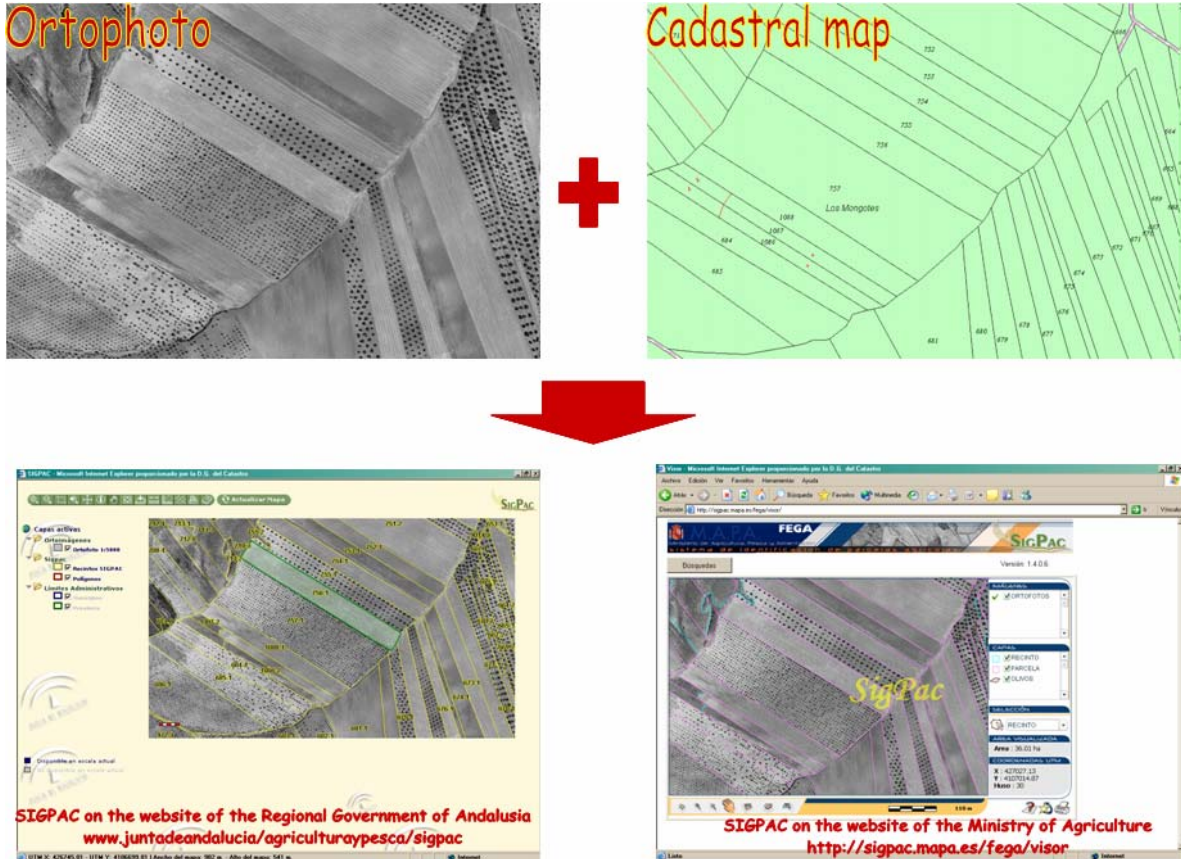
The system automatically counted the number of olive trees contained in every parcel, and a fiche with the information regarding every olive tree parcel was sent by the Ministry of Agriculture to farmers for checking.

In 2002, taking into account the Council Regulation 1593/00 which made compulsory the implementation of digital land parcel identification system (LPIS) in all member states, a global agreement was signed with the Ministry of Agriculture in order to use the Cadastre as a basis for the setting up of the Spanish LPIS. It is called SIGPAC (Common Agricultural Policy Geographical Identification System). SIGPAC is the LPIS that the IACS Administration (Ministry of Agriculture and Regional Governments) use since the 1<sup>st</sup> of January of 2005 for the control and monitoring of all area based subsidies.

The SIGPAC has been built in a similar way than SIGO, being it directly incorporated as a part of SIGPAC. This new process has been performed in better technical



conditions, with newer orthophotos and more than 80% of cadastral maps in digital (vector) format. The SIGPAC comprises not only the parcels eligible for PAC subsidies, but also all the Spanish territory



FEQA is the organisation under the Ministry of Agriculture in charge of SIGPAC and co-ordination of Regional Governments activities in relation to the control and monitoring of EU CAP subsidies.

In addition to FEQA, whose website contains SIGPAC information of all Spain, several Regional Governments show in their websites the information concerning their territories.

Spain (FEQA, Ministry of Agriculture) <http://sigpac.mapa.es/feqa/visor>

- Andalucía <http://www.juntadeandalucia.es/agriculturaypesca/>
- Aragón <http://sigpac1.aragob.es/visor/>
- Castilla – La Mancha <http://sigpac.jccm.es/visorsigpac/>
- Castilla y León <http://www.sigpac.jcyl.es/>
- Extremadura <http://62.175.245.26/visor/>
- Galicia <http://www.xunta.es/conselle/ag/fogga/sixpac/visor/>
- Murcia <http://147.84.21.0.4/visor14/>
- Navarra <http://sigpac.tracasa.es/>
- País Vasco <http://arc.ikt.es/sigpac/>
- La Rioja <http://sigpac.larioja.org/visor/>



The information the farmer can obtain from SIGPAC, both graphical and textual, is condensed in an easily retrievable and printable document.

		<p>Datos Identificativos SIGPAC</p> <p>Provincia: 4 - Almería Municipio: 37 - Chirivel Poligono: 16 Parcela:41</p>	
<p>Coordenadas UTM del centro</p>	<p>x:89800.55 y:419872.84 M:30 30</p>	<p>Fecha de vuelo de la foto del centroide de la parcela: 2001</p> <p>Año de renovación Catastral: 2000</p> <p>Fecha de impresión: 23/02/2005</p> <p>Escala aproximada de impresión: 1:4000</p>	

<p>Información Alfanumérica SIGPAC asociada a la parcela: 41</p>				
Recinto	Uso	Superficie (ha)	Incidencias (I)	Coef. Regadíos
1	FRUTAL	2.5176		
<p>(1) La descripción de las incidencias SIGPAC e en el menú de Ayuda del Visor SIGPAC</p>				
Sup. Total parcela (ha)	2.5176	Nº Olivos parcela		
USO		Superficie (Ha)		
FRUTAL		2.5176		
<p>Observaciones:</p>				
<p>DNI / CIF / NIF:</p>				
<p>Nombre y Apellidos / Razón Social:</p>				

PÁGINA 1 DE 1

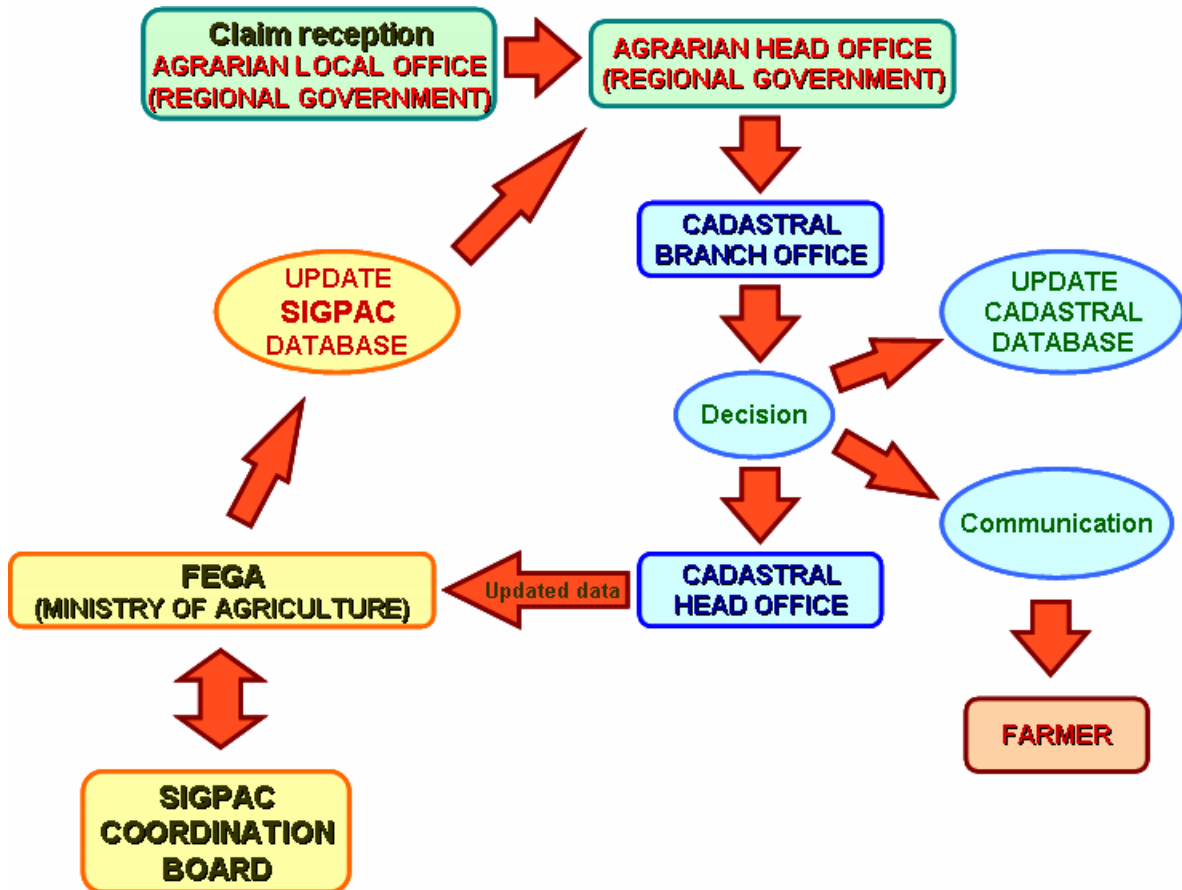
Since its establishment, for several months, the SIGPAC is submitted to check out by farmers. They can access to the system freely via Internet or they can go to local offices of the Agrarian Administration for assistance. In any case, there is an application form where he/she can describe his/her claims, always on the SIGPAC image.

In SIGPAC, the land parcels are the ones defined by the Cadastre and they are identified by the cadastral reference, the same identification that links the Cadastre to the Land Registry. That means land parcels can only be created, deleted or modified by the Cadastre.

On the other hand, the Agrarian Administration holds the responsibility to define de pieces of land (“agricultural parcels” en EU legislation, “recintos” in Spain) eligible for subsidies. Those “recintos” are defined by the land use and they can comprise a complete cadastral parcel or a part of it. Actually, the concept of “recinto” is equivalent to “cadastral sub-parcel”, defined by the Cadastre taking into account the land use into every parcel. Summing up, only the agricultural parcels (“recintos”) defined by the Agrarian Administration are eligible for CAP subsidies, never mind how similar they may be to cadastral sub-parcels.



In that situation, a co-ordination system between the Cadastre and the Agrarian Administration is absolutely necessary. It has been developed by the SIGPAC Coordination Board, where the Spanish Cadastre is represented. The procedure for claims to SIGPAC concerning the geometry of cadastral parcels is shown in the following scheme:



Finally, we can compare the information supplied by the SIGPAC with the one supplied by the Cadastre Virtual Office (OVC), equally free concerning physical information on land parcels ([www.ovc.catastro.minhac.es](http://www.ovc.catastro.minhac.es)).

In the example shown below, the same one shown above in the SIGPAC fiche, information on identification and surface are identical. There is a difference in the identification of land use: for SIGPAC, it is "Fruit trees" while for Cadastre it is "Almond trees, not irrigated". The cadastral classification needs to be more specific, for valuation and taxation purposes.



The screenshot displays the 'Oficina Virtual del Catastro' web application. The interface includes a navigation menu with 'Inicio' and 'Consulta de Datos Catastrales'. A map on the left shows several land parcels, with parcel 41 highlighted in blue. On the right, a data table provides details for parcel 41.

Datos del Bien Inmueble			
Referencia catastral	04027A0140004100007L		
Provincia	ALMERÍA		
Municipio	CHÉRVEL		
Paraje	CAMITAL		
Polígono	14		
Parcela	41		
Superficie	2.5176 Ha		
Subdivisiones			
Subparcela	Cultivo	Intensidad	Superficie (Ha)
0	Almendra secano	01	2.5176

March 2005