

THE ROLE OF CADASTRE IN THE APPLICATION OF THE FUTURE DIRECTIVE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL ESTABLISHING A FRAMEWORK FOR THE PROTECTION OF THE SOIL AND AMENDING DIRECTIVE 2004/35/EC

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INTRODUCTION

Protection of the environment is, without a doubt, one of the major challenges facing Europe. The European Community has been strongly criticised for putting trade and economic development before environmental considerations. It is now recognised that the European model of development cannot be based on the depletion of natural resources and the deterioration of our environment.

The pollution of soils, seas, rivers and the atmosphere recognises no frontiers and the stakes involved in environmental protection go way beyond national or regional considerations. According to the Treaty on European Union, one of the objectives of Community policy on the environment is to promote

measures at international level to deal with regional and worldwide environmental problems.

The Community institutions are now obliged to take account of environmental considerations in all their other policies.

The Sixth Action Programme for the Environment, adopted in July 2002, that take account of this across-the-board approach to environmental policy, sets out the priorities for the European Community up to 2010. Four areas are highlighted for urgent action: climate change, nature and biodiversity, environment and health and the management of natural resources and waste. Measures to achieve these priorities are outlined: improving the application of environmental legislation, working together with the market and citizens and ensuring that other Community policies take greater account of environmental considerations.

THE THEMATIC STRATEGY AND THE PROPOSED DIRECTIVE

Soil is a non-renewable resource and a system which performs functions and delivers services essential to human needs and ecosystems survival. Soil is in a degradation process that will further increase if no action is taken.

Human activity, such as inappropriate agricultural and forestry practices, industrial activities, tourism or urban development, are damaging the capacity of soil to continue to perform in full its crucial functions.

Soil is a resource of common interest for the Community, but it has not, to date, been subject to a specific protection policy at Community level. Hence, soil degradation still continues.

The thematic strategy and the proposed Directive were presented against this background, to face the need to reverse the tendency.

Already in its 2002 Communication, the Commission identified eight threats to soils: erosion, organic matter decline, contamination, salinisation, compaction, soil biodiversity loss, sealing, landslides and flooding. (Fig 1).

Now, the strategy is intended to be partly implemented through the proposed Directive, which contains the following elements:

- integration into sectoral policies;
- precautionary measures;
- prevention of contamination;
- measures to limit or mitigate sealing;

Fig. 1
The impact of human activities on soil

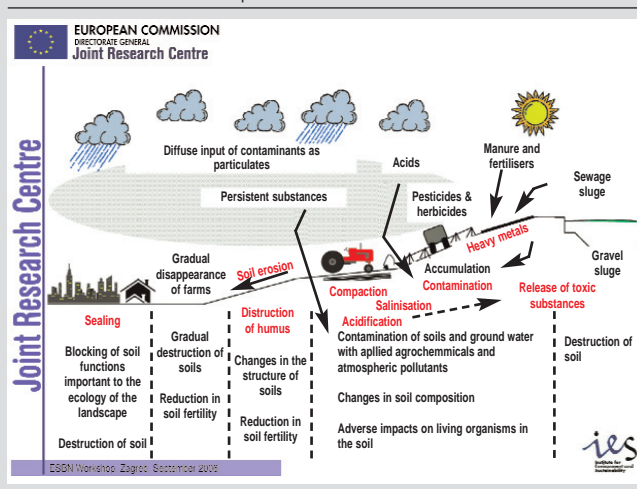
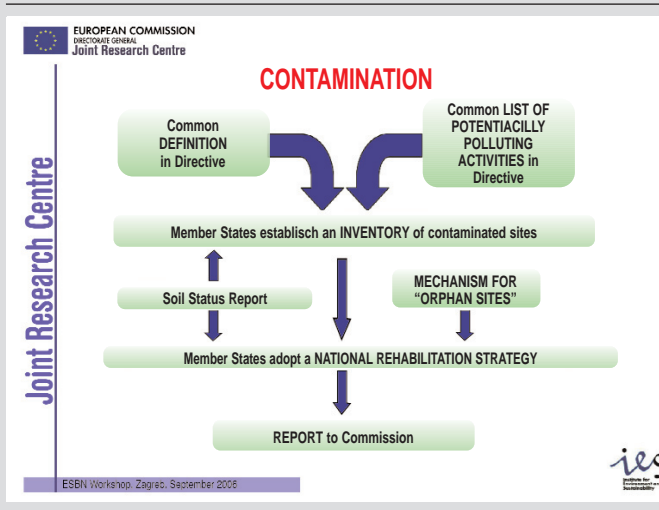


Fig. 2
Contamination



- identification of risk areas for erosion, organic matter decline, compaction, salinisation, landslides;
- identification of contaminated sites;
- programmes of measures;
- national remediation strategy;
- awareness raising, reporting and exchange of information.

CONTENTS OF THE PROPOSED DIRECTIVE

The Directive Proposal aims at guaranteeing the land protection, having as governing principles the preservation of its functions, prevention and mitigation of the degradation effects, by means of integrating such initiatives in other sectorial policies, for which several actions and a common acting framework are established.

The Directive understands that the Parliament and the European Commission have competence over this subject, since through it a common framework for soil protection is established. This initiative is based on the article 175, section 1, of the EC Treaty. Reason why, it is understood that the Proposal's objectives cannot be satisfactorily reached with the sole action of the member States, since the soil degradation may have cross-border consequences.

From a material point of view, the Directive Proposal focuses on the need of establishing a system that allows the identification of precise risk zones, with the purpose of easily intervening over the same with prevention and mitigation actions, and if necessary, restoration of the soils that have been contaminated. In accordance with it, the member States will have at their disposal, applying this Directive, an "inventory of contaminated soils" that will be established by means of the procedure explained in the Directive itself. (Fig 2).

The information contained in this inventory will give place to several public actions, according to what is established in the Proposal. Therefore, the States will advertise this information to the Commission and citizens, while at the same time elaborating a "National Rehabilitation Strategy" that includes diverse priorities, established in the normative itself.

But with no doubt, the most significant effect that will derive from this Directive is, that when there is an intention of selling a parcel of land where one of the potentially contaminating activities described in the annexes is taking or has taken place, the member States will ensure that the possible buyer receives a report regarding the situation of the soil, issued by an authorised person or public organisation that will define the situation regarding its alleged contamination.

The relation between this Directive and the Cadastre is established in the Consideration 25 of the Proposal by which "In order to assist in the rapid identification of contaminated sites, the owner of a site where, according to official records such as national registers or cadastres, a soil polluting activity has taken or is taking place, or the prospective buyer should, prior to completing the land transaction, provide relevant information on the status of the soil to the competent authority and to the other party in the transaction". The importance of the effects this Directive will have over the real-estate market acting in this type of soils is evident.

COMMITTEE OF REGIONS OPINION

The committee of regions, in his meeting of 13th and 14th February 2007, debated this proposal of directive.

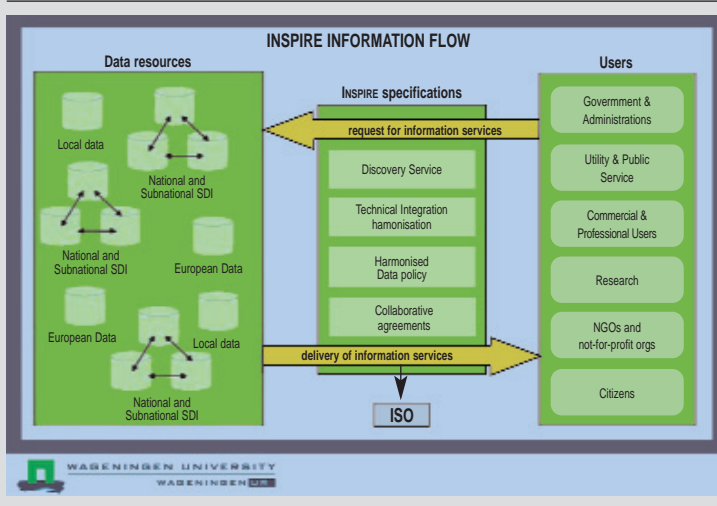
The committee declares his concern about the administrative charge that can represented for the local and regional public bodies to identify the areas where there is decisive evidence of soil degradation (Article 6), to can made public this list of risk areas and with the revision of it at least every ten years.

And also over the articles 10 and 11: Member States shall establish a national inventory of contaminated sites, hereinafter "the inventory". The inventory shall be made public and reviewed at least every five years. And 12: Member States shall ensure that the owner of that site or the prospective buyer makes a soil status report available to the competent authority and to the other party in the transaction.

DEBATE WITHIN THE EUROPEAN COUNCIL

On 20 february 2007, the Council held a policy debate on the thematic strategy for soil protection

Fig. 3
Inspire Information Flow



mation, are common in a great number of policies and themes, and are manifested in the different levels of public authority. The solution to these problems require measures that incorporate the exchange, sharing, access and use of spatial interoperable data and of spatial data services, measures that deal with all the different levels and sectors of public authority. Therefore, a spatial information infrastructure must be created in the Community.

This infrastructure will be established based on the information exchange between the already existent information systems that manage data of interest for the environment, avoiding in any case, the creation of already available information.

Within this framework, the Directive INSPIRE wishes all environmental information already existent or that may be available in the future, to operate within this model. For the latter case, this new land protection directive proposes the creation of a *territorial information inventory of potentially contaminated soils*.

In the annex 1 of the Directive INSPIRE, the cadastral parcels are concretely established as spatial data that must be necessarily incorporated into the system. *These cadastral parcels* will be defined by the respective managing institutions of the field in each one of the Member States. This means that the cadastral parcel is part of the basic information over which the environmental information infrastructure will be generated, and therefore, it should be used for creating the inventory referred by the Directive Proposal for soil protection. (Fig 3)

and on the corresponding proposal for a Framework Directive.

Some main items were specially covered during the discussion:

1. the main added value of the proposed thematic strategy;
2. how efficiently does the proposed draft Framework Directive manage to fulfil the objective of creating a consolidated and more sustainable use of soils across the EU;
3. areas of potential concern in terms of scope, requirements and implementation of the proposed Directive;
4. how the thematic strategy and draft Framework Directive on soil protection fit in with and contribute to Community action in relation to other environmental policies and sectoral areas.

Therefore, these are the items that would be discussed in the next months of negotiation.

RELATION WITH OTHER COMMON POLICIES

In relation with point 4 of the previous section, it is necessary to mention other environmental policies developed by the European Union such as the recent approval of the Directive of the European Parliament and the Council, through which a spatial information infrastructure is established in the European Union (INSPIRE).

Summarised, the object of this Directive consists in establishing a spatial information infrastructure within the entire Community that should be helpful for adopting relative measures towards policies and actions that may directly or indirectly affect the environment. Problems regarding availability, quality, organisation, accessibility and share of spatial infor-

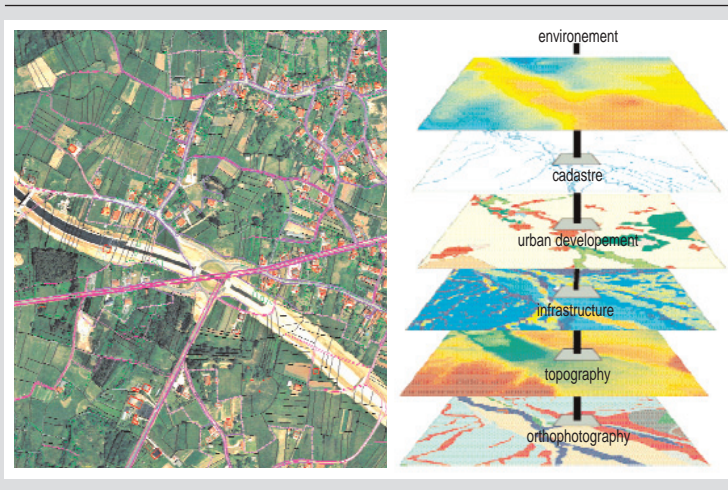
JOINT PROPOSAL BY EUROGEOGRAPHICS AND PCC

The "Permanent Committee on Cadastre in the European Union" PCC (www.eurocadastre.org) is the association that gather together the Body Institutions responsible for Cadastre in the Member States of the European Union.

EuroGeographics (www.eurogeographics.org) represents nearly all European National Mapping and Cadastral Agencies (NMCAs). They are 49 organisations from 42 countries members of this association.

Working together, members of this organizations, with partners, customers and the European Commission we are building the *European Spatial Data Infrastructure (ESDI)*. Our vision is therefore to achieve interoperability of European mapping and other GI data and so help the public and private sectors develop good governance, sustainable growth and benefit future generations.

Fig. 4
INSPIRE: Spatial Data Infrastructure.
Interoperability



In the practice of their competence, the Body Institutions responsible for Cadastre in the Member States of the European Union place all cadastral information at the reach of all the public administrations, directly accessible through the Internet. This information is permanently used for a great number of public tasks, such as the establishment of the taxes that needs land information, urban planning, territorial organisation, the management of large public structures and the common agriculture policies, and many other tasks that require proper territorial information.

Therefore, the General Administration of the State is responsible of establishing the opportune criterion and procedures in order for the Ministry of Environment to create the inventory of potentially contaminated soils defined by the Directive proposal, using for this and together with the environmental data that is defined, the cadastral information that is esteemed necessary. (Fig 4)

Therefore the public bodies Institutions responsible for cadastre in the Member States of the European Union brought together in EuroGeographics and PCC, suggest two amendments in the text of the Directive Proposal:

- It would be appropriate that during the elaboration process of the Directive Proposal of the European Parliament and Council by which a soil protection framework is established and the Directive 2004/35/CE modified, to carry out the opportune modifications to incorporate express references to the Directive INSPIRE in the text, with the purpose of granting coherence to the purpose of the rule.
- Likewise, it considers appropriate, continuing this same line of argument, that the reference of the role that must be developed by the cadastre, currently defined in the Consideration 25,

should be included in the norm, being integrated in any of the Articles included in section 1, Chapter III, which determines the criterion for identifying contaminated soils and the creation of the corresponding inventory:

Article 10 Inventory of contaminated sites

Member States shall, identify the sites in their national territory where there is a confirmed presence, caused by man, of dangerous substances of such a level that Member States consider they pose a significant risk to human health or the environment, hereinafter “contaminated sites”.

Member States shall establish a national inventory of contaminated sites, hereinafter “the inventory”. The inventory shall be made public and reviewed at least every five years.

Article 11 Identification procedure

Each Member State shall designate a competent authority to be responsible for the identification of contaminated sites.

Within five years from [transposition date], the competent authorities shall have identified the location of at least the sites where the potentially soil-polluting activities referred to in Annex II are taking place or have taken place in the past.

The identification shall be reviewed at regular intervals.

Article 12 Soil status report

Where a site is to be sold on which a potentially polluting activity is taking place, or for which the official records, such as national registers, show that it has taken place, Member States shall ensure that the owner of that site or the prospective buyer makes a soil status report available to the competent authority and to the other party in the transaction.

The information contained in the soil status report shall be used by the competent authorities for the purposes of identifying contaminated.

NEGOTIATION PROCESS AND FUTURE STEPS

Starting February 2003, the Commission organised an open stakeholder consultation and established a very wide platform of more than 400 members divided in five Working Groups and an Advisory Forum with a steering role.

Subsequently the Commission carried out an Internet public consultation on possible elements to be included in the Thematic Strategy for Soil Protection for a period of eight weeks. The consultation gathered the replies of 1,206 citizens, 377 soil experts and 287 organisations coming from 25 countries. (Fig.5)

And therefore the Committee of the Regions as well as the EU Council already have issued their statements, as we have seen.

For the future the Commission is working with the following schedule:

- 21/03/2007 European Eco. & Soc. Committee meeting and will offer his dictamen on 22th april 2007.
- 17/07/2007 EP: rept scheduled for adoption in committee, 1st or single reading
- 04/09/2007 EP: probable part-session scheduled by the DG of the Presidency, 1st reading

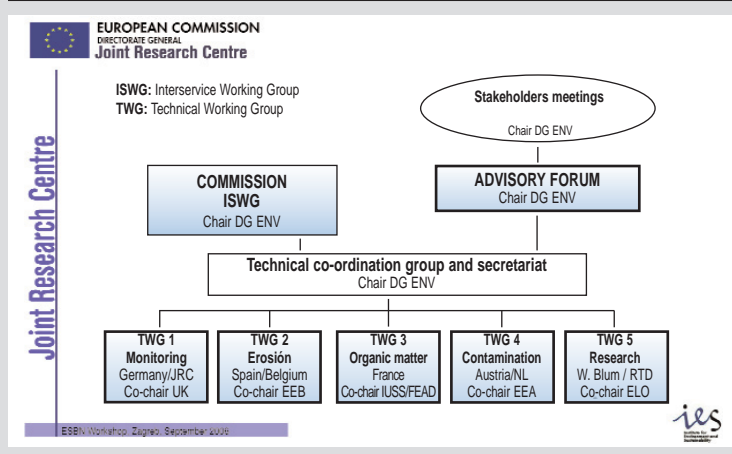
Therefore, this two suggestions of amendments in the text, must be presenting as soon as possible to the Community Bodies that manage the proposal for this Directive.

LINKS

EU website:
<http://ec.europa.eu/environment/soil/index.htm>

Comunicacion (COM(2006) 231):
http://ec.europa.eu/environment/soil/pdf/com_2006_0231_en.pdf

Fig. 5
 The consultation Process



Directiva (COM(2006) 232):
http://ec.europa.eu/environment/soil/pdf/com_2006_0232_en.pdf

(SEC (2006) 1165 and SEC(2006) 620):
http://ec.europa.eu/environment/soil/pdf/sec_2006_1165_en.pdf

EEB soil workshop, “Towards a Soil Framework Directive”:
<http://www.eeb.org/activities/Soil/EEB-soil-workshop-proceedings.pdf>

European Soil Bureau Network (JRC):
http://eussoils.jrc.it/esbn/Esbn_overview.html

INSPIRE.
<http://www.ec-gis.org/inspire>. ■

DIGITALIZATION BY MASSIVE SCANNING OF THE ARCHIVE OF ORTHOPHOTOGRAPHS. DIRECTORATE GENERAL FOR CADASTRE

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ABSTRACT

This paper describes the method utilized by spanish cadaster to convert its analogic ortophoto archive to digital format. A last generation, big format, high resolution and high speed scanner has been employed. The total document numbers are 70,000 and the contractor firm has employed four months for it. Every ortho has been georefered by authomatic way and have been delivered into a GIS that permits their total manage.