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Integrated Tools to design and implement Agro Environmental Schemes

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Revised version

This paper provides a summary report of attendance, topics and debates of the Brussels workshop. The list of participants is in Annex 1, the workshop programme in Annex 2 and all presentations are in Annex 3. This revised version integrates feed-backs from some participants.

"This document presents results obtained within the EU project SSPE-CT-2003-502070 on Integrated tools to design and implement Agro Environmental Schemes (http://merlin.lusignan.inra.fr/ITAES). It does not necessary reflect the view of the European Union and in no way anticipates the commission's future policy in this area."

1 - Introduction

Agricultural production affects the environment in many ways, generating negative and positive effects. Neither reduction of negative externalities nor simulation of positive ones can be achieved at a satisfactory level on the basis of market activities, there is therefore a need for agri-environmental programmes. They are often considered as a means to both support farm income and comply with WTO provisions. Indeed, there is a shift from price support towards agri-environmental programmes.

A number of countries have experienced agri-environmental programmes targeting the reduction of negative externalities. In contrast there is a few programmes whose goals are related to the provision of benefits. Most of them are the Agro-Environmental Schemes (AESs) applied in Europe under the umbrella of multifunctionality. This concept stems from the fact that agriculture generates many beneficial effects which are not easily measurable and are not valued in the market place. Since they have a social value, it is justified on economic grounds to compensate farmers for providing these non-commodity outputs. Multifunctionality therefore allows the integration of agricultural, environmental and rural policies.

AESs are policy schemes based on a voluntary approach. Contracts are offered to farmers to change their practices or improve their environmental impacts. The eligibility of farms and farmland may be restricted according to farm characteristics, land use or location. According to EU regulations (2078/92 and then 1257/99) the payment is based on the forgone profit or the additional costs of compliance with contract terms. Different territorial levels are involved according to the different tasks of design and implementation. This is obvious for AESs which are co-financed by the EU. Different types of organisations interact: governments, associations and farms. Therefore institutional arrangements and transaction costs are key issues in the success of AESs.

"Integrated Tools to design and implement Agro Environmental Schemes", or ITAES, is a Research Project of the EU Sixth Framework Programme. It mobilises 600 person-months over three full years (2004-2006). The team of partners from nine countries has been assembled to develop an integrated framework for the assessment of AESs, integrating biophysical and socio-economic indicators to support and justify the actions of policy-makers. Farmers' behaviour and institutional arrangements are scrutinised to identify cost-effective schemes. Further information on the full scope of the project, its detail and some forthcoming papers, can be browsed on the dedicated website: http://merlin.lusignan.inra.fr/ITAES/website.

ITAES identifies the following key-factors of the "reliability and predictability of AESs":
– Technological factors relating farming practices and environmental impacts: Importance of the targeting, reaching a critical mass, and the use of knowledge about them.
– Behavioural factors relating incentives to farmers' participation and compliance levels.
– Institutional factors expressing the social demand and the way in which they are tuned to adjust the provision of environmental services.

The project aims two entangled objectives:
–Build an integrated tool to analyse the interaction between the institutional process and the environmental outcome,
–Build an integrated tool to analyse and simulate farmers' environmental supply, which depends on a range of different governance mechanisms.

2 - Objectives, justifications and expected outcomes of the workshop

Planned while designing the Project, this workshop aims at targeting high level policy makers and stakeholders, with a specific emphasis on EU institution officials involved in the preparation of the new rural development programme (2007-2013). The ITAES consortium thank Andreas Lillig (EC) for his very clear and valuable presentation of this new rural development programme.

Within the current EC rural policy context, the ITAES project could feed the discussions with independent data and analysis on hot-topics (e.g. monitoring and evaluation issue, transaction costs, simplification of AESs, AESs *vs.* cross compliance).

The ITAES team introduces the Project (scope, aims, etc…) to the policy makers and external experts and presents the first main outcomes after a year and a half of implementation.
Different topic-oriented sessions give the attendees an opportunity to exchange, to comment and/or to influence the further orientation of the research work (see the programme of the day in Annex 2). The debates have been regulated by David Baldock (IEEP).

The workshop sessions were held at the premises of the "Chambre Française de Commerce et d'Industrie de Belgique" (*i.e.* CFCIB), located 8 Avenue des Arts in Brussels.

Therefore, in addition to ITAES team members[1], invited participants were:

- ◊ Officials from the European Commission (DG research, DG agriculture and DG environment) involved in AES issues;
- ◊ Members of the European Environment Agency;
- ◊ Members of the European Parliament;
- ◊ Stakeholders and policy makers (involved in AES issues) from ITAES Member States;
- ◊ OECD representatives.

Most of the contacted invitees answered positively or proposed colleagues to represent them.
Nonetheless, contacted representatives of the European Parliament, all belonging to the rural development committee, did not reply. Indeed, workshop topics or key-issues might have been presented in a too technical way. A list of attendance is available in Annex 1.

From a formal point of view the present document represents project deliverable n°13[2].
Although this deliverable was initially meant to support the organisation of the workshop, the issue to have one single document (*i.e*. mid term review report and workshop outputs paper) was discussed and agreed with Mr Martin Greimel[3], given the contents and objectives of the working sessions considered.

Section 3 presents the research structure of ITAES and introduces the workshop presentations accordingly. Section 4, introduced by the main features of the new rural development regulation, presents the debates related to the current AES implementation across countries, with a special emphasis on Czech Republic. Section 5 focuses on the appraisal of AES environmental impacts and Section 6 on the AES institutional aspects and transaction costs.

[1] Indeed, all ITAES Participants were represented by one person at least, except for UNEW (*i.e.* P4) from which no-one could attend this workshop.
[2] Mid-term review report (*cf.* Part 7.5 of the Description of Work).
[3] ITAES EC scientific officer.

3 - Overview of ITAES research structure

Apart from the work package WP1 devoted to coordination, ITAES is organised with nine work packages in order to tackle the key-factors of the "reliability and predictability of AESs". A synthetic presentation is summarised in table 2. The overview of ITAES has been presented by Pierre Dupraz.

Table 1: synthetic presentation of ITAES

	Horizontal tasks		Analysis of specific issues Evaluation of methods		
			Regional level	*Scheme level*	*Farm level*
Institutional settings and outcomes of AESs in case-studies	State of the art and methods – 9 country reports on AESs and relevant literature **[WP 2, INRA-ESR, Rennes, France, each partner]**		Complete description of the case studies **[WP 3, INRA-ESR, Rennes, France, each partner]** Analysis of institutional arrangements of AESs **[WP 4, Humboldt University of Berlin, Germany]** Assessment of environmental impacts of AESs **[WP 5, TEAGASC, Dublin, Ireland]**		
Governance structures and farmers' behaviour		Survey of eligible farmers through standardised questionnaires **[WP 8, INRA-ESR, Rennes, France, each partner]**		Analysis of private transaction costs through follow-up of farmers, and surveys **[WP 6, Ghent University, Belgium]** Farmers' preferences about the governance attributes of AESs **[WP 7, University of Newcastle-upon-Tyne, UK]** The design of agro environmental contracts and farmers' strategic behaviour **[WP 9, Wageningen University, Netherlands]**	
Integrated analysis of institutions, farmers' behaviour and environmental impacts			Multi-Criteria analysis and recommendations **[WP 10, UNIPADU-CONTRAGAF, Padua and Bologna, Italy]**		

This project began with a review of literature. The material provided by previous relevant publications and the RDR mid-term review are used, in the different participant countries (WP2), in order to provide the state of knowledge and key issues regarding AES design and implementation. Policy objectives, past responses and future issues have been presented by François Bonnieux. The presentation of Tomas Zidek focuses on the situation in Czech Republic where the AES introduction is quite recent.

In-depth investigations are based on a comparison of nine case-study regions among which success stories and failures are identified and analysed (WP3). Starting with this material, WP4, WP5 and WP10 study the interactions between the institutional and political process of design and both the participation and environmental outcomes of AESs. The way in which social demand is expressed within the design of AESs also determines certain characteristics of their implementation and evaluation.

Implementation and evaluation of AESs depends on the knowledge of the agri-environmental technology. Compared to food and fibre whose production functions are rather streamlined and well known, the production functions of environmental benefits are often uncertain and site specific. In many cases, farmers fail to master the joint production of environmental benefits any more successfully than the regulation agencies responsible for the implementation of AESs. The distribution of information among institutions, farmers and other stakeholders deeply affects the governance structures of AESs, the related transaction costs and outcomes. The dynamics of information improvement and distribution depends on the design of agri-environmental contracts and the technical support farmers are offered. For instance, farmers' innovation and learning by doing processes are expected to be more intensive when the contracts reward the actual provision of environmental benefits rather than adherence to agricultural practice restrictions. The *ex ante* and *ex post* evaluations of the environmental impact of AESs are often incomplete or they are carried out with different disciplinary frameworks and are not comparable with each other.

WP5 aims to construct and test an innovative assessment method, based on a set of selected indicators. This will enable the comparison of AESs targeting similar environmental objectives across the case-study regions. The method developed for the appraisal of AES environmental impacts is presented by John Finn. The multi-criteria analysis (WP10) is the framework chosen to aggregate and compare environmental and other performance indicators of alternative AESs. Davide Viaggi presented this method with an applied example.

The measurement of public and private transaction costs is another common weakness of AES design and evaluation. The lack of *ex ante* evaluation of administrative costs may jeopardize the success of a scheme, beginning with the farmers' uptake, if the allocated administrative resources are revealed to be inadequate. In France the low and slow uptake of the "*contrats territoriaux d'exploitation*" (CTEs) is partly due to observed administrative bottlenecks related to the design and administration of these individualised contracts. CTEs are multipurpose farming territorial contracts based on a whole-farm approach. They encompass agri-environmental payments and investment aids within a single contract between the farmer and the state. This example illustrates the classical trade-off between precision and transaction costs, and contrasts with the grassland premium. Moreover the average size of the farms that have taken up a CTE is significantly higher than the French average, while the size of the farms involved in previous AESs was lower. This suggests that CTEs are characterised by fixed private transaction costs which are high at the farm level and build entry barriers (Dupraz & Rainelli, 2004). This project pays considerable attention to the transaction cost issue since it does not only influence economic efficiency but also uptake and environmental effectiveness.

In fact, it is often the case that several institutions and stakeholders are involved in designing and implementing AESs, resulting in multiple partnerships. These interactions between public and private transaction costs are particularly under-researched. This issue is also interesting for policy makers and farmers' associations. It deals with the design of contractual arrangements, institutional settings and the implementation procedures of AESs. This is why several work packages attempt to fill this gap. The sources of administrative costs are analysed within WP4 which compares how the tasks of designing and implementing AESs are allocated and carried out by different institutions. In WP6, the farmer behaviour is studied by using existing research results concerning farmers' participation in AESs. Here microeconomic and econometric models integrating private transaction costs will be developed and tested. Empirical evidence will be extracted from a survey of farmers in case-study regions (WP8). In addition ITAES carries out the follow-up of AES contractors over one full year in order to measure AES related transaction cost on a weekly basis. This task was not included in the ITAES description of work but appeared necessary, given the lack of information in that field. The transaction cost issue is introduced by Guido Van Huylenbroeck who insists on the private side while Volker Beckmann details the trade-offs between public transaction costs and institutional quality of AES implementation.

The WP8 survey questionnaire also aims to elicit farmers' preferences about the attributes of AES governance structures. These attributes include contract specification, institutional settings and enforcement procedures. In different scenarios, alternative contracts targeting the same environmental outcomes as existing contracts will be offered to farmers. These contingent contracts may differ in length and in recording practices, and may be more or less individualised. Payments may be calculated on the basis of observed environmental outcomes rather than of restrictions of agricultural practices. The institutional settings may differ in the nature and number of the implementation agencies (environmental organisation or agricultural institution). Enforcement procedures may differ in the balance between technical support and control, with different levels of sanctions. WP7 develops elicitation methods and the analysis of farmers' preferences. In close collaboration with preceding WPs, WP9 develops theoretical and empirical simulation models

taking into account the strategic behaviour of farmers regarding different contractual arrangements, different scheme management attributes and eligibility rules. For instance eligibility may require some minimum level of participation in a designated area, in order to reach a critical mass of environmentally friendly practices. Strategic behaviours, based on asymmetric information and cartel building may deeply affect the uptake and the costs of AESs. The likelihood of such behaviour depends on agri-environmental technology aspects as well as institutional context and contract design.

The final objective of the ITAES is the integration of the three main tools which are presented above: institutional analysis, environmental appraisal and microeconomic analysis. Technically this is the challenge of WP10.

Due to some changes within some ITAES participant teams since the beginning of the project, the following table is a reminder of those with project responsibilities:

Table 2: ITAES consortium and work package responsibilities

	Responsible for	Responsible persons
INRA-ESR, Rennes France IEEP UK FEEM Italy	WPs 1, 2, 3, 8	Pierre Dupraz, François Bonnieux David Baldock Carlo Giupponi
Wageningen University The Netherlands	WP 9	Louis Slangen
Gent University Belgium	WP 6	Guido Van Huylenbroeck
Newcastle University UK	WP 7	Guy Garrod
Humbolt University Germany FAL Germany	WP 4	Konrad Hagedorn, Volker Beckmann Bernhard Osterburg
Unipadu-Contagraf Italy	WP 10	Vasco Boato, Davide Viaggi, Paola Gatto
Teagasc Ireland	WP 5	Liam Dunne
MTT Finland	-	Anni Huhtala, Laura Kröger
Vuže Czech Republic	-	Tomas Zidek

4 - New rural development policy

The new rural development policy (2007-2013), finalised as EC Reg. 1698/2005, is announced as simplified and broadened in comparison to the current programme. Andreas Lillig gave us a comprehensive presentation summarised below.

Basically the next policy presents 4 main features and 4 main objectives.

Features:
- One single funding and programming instrument, the EARFD;
- A new strategic approach with clear focus on EU priorities;
- A single set of rules and procedures;
- A strengthened bottom-up approach.

Objectives:

The policy focuses on 3 main objectives (namely Axis 1 to 3) but each one should be finally articulated with a fourth one (Axis 4).

- Axis 1: Improving competitiveness of farming and forestry.

  Under this axis, a range of measures will target human and physical capital in the agriculture, food and forestry sectors through support for restructuring.
  A minimum of 10% of the national envelope has to be spent on axis 1. The EU co-financing rate is maximum 50% (75% in convergence regions).

- Axis 2: Improving the environment and countryside.

  Agro-environment (along with Less Favoured Areas) falls under this axis aiming at protecting and enhancing the EU's natural resources and landscapes in rural areas. Resources devoted to axis 2 should contribute to three EU level priority fields: *(i)* biodiversity; *(ii)* preservation of high nature value farming and forestry systems; *(iii)* climate change.
  A minimum of 25% of the national envelope has to be spent on axis 2. The EU co-financing rate is maximum 55% (80% in convergence regions).

- Axis 3: Improving the quality of life in rural areas and encouraging diversification.

  This axis aims at supporting the development of local infrastructures and human capital in rural areas, in order to improve the conditions for growth in all sectors and the diversification of economic activities.
  A minimum of 10% of the national envelope has to be spent on axis 3. The EU co-financing rate is maximum 50% (75% in convergence regions).

- Axis 4: The LEADER approach.

  Each proposed programme must have a LEADER element for the implementation of bottom-up local development strategies.
  A minimum of 5% of national programme funding is reserved for Axis 4.

5 - The present implementation of Agro-Environmental Policies

The presentations prepared by F.Bonnieux&P.Dupraz and by Tomas Zidek provide facts and raise questions about the present implementation of AESs.

5.1 Policy objectives

There is evidence that policy primarily targets objectives, which are consistent with the most significant environmental pressures in the concerned areas. However landscapes and biodiversity protection are often viewed as a secondary objective, which should be achieved either through the maintenance of farming or the protection of water resources.

In the Czech republic the 1990's transition has been associated with a diminution of the environmental pressure because of an extensification process, and problems occurring because of land abandonment. In central Moravia land abandonment is a crucial issue to deal with in mountainous areas, which benefit a valuable environment whose richness is threatened by a risk of loss in biodiversity and landscapes. A global deterioration of soils also occurred from water and wind erosion, due to the destruction of hedgerows and small woodlands, as well as soil compaction because of improper mechanisation. Northern and Eastern Finland face a similar challenge, a dramatic land abandonment increase leading to a degradation of biodiversity and landscape. In other places, located in the south and west of the country water eutrophication because of an increasing use of nitrogen and phosphorus is the most challenging objective. Policies applied in Emilia Romagna primarily address water pollution due to an over-use of nitrates and pesticides, and land abandonment.

Otherwise the protection of water resources is the leading policy objective. For instance, the Irish Environmental Protection agency held agriculture responsible for the majority of fresh water eutrophication. However, in addition the decline of the species and habitat diversity has also been attributed to agriculture. In Veneto, the water issue is particularly challenging because of pollution of highly valuable tourist spots such as the Venice Lagoon where there are catchment basin specific problems. Being a rather close lagoon with a limited water recharge, pollutants (nitrates phosphates, heavy metals) accumulate on the sea bottom. This leads to very severe pollution and eutrophication problems. Hence this area is specifically monitored. Water pollution is also a main priority for Brandenburg, North East England and Flanders.

The protection of historical landscapes such as hedgerows in Basse-Normandie, Emilia Romagna and Veneto, and walls in North East England is also targeted. The protection of meadow birds may be also a first policy objective as illustrated by Friesland.

5.2 The diversity of schemes

In former members of the UE, eligibility to AESs was primarily based on the designation of specific areas (zoning). According to holding location, farmers can apply to one or several schemes or measures. This situation concerns all schemes in a region or a mix is available with basic measures proposed to all farmers and specific ones reserved to farmers in specific areas. For example, environmental characteristics are used to target sensitive areas where farmers are eligible to specific schemes, other schemes being proposed to farmers who have no parcel in these areas. Zoning is established according to different criteria: mainly environmental criteria as in Friesland or mainly geographic criteria as in Emilia-Romagna.

In Friesland, ten regional plans have been developed. These plans deal with sub-plans among which there are: landscape area, management area and problem area plans. Each area is meant for AESs focusing respectively on landscape, wildlife management, and less favoured areas. Schemes are offered to farmers who wish to contract according to the belonging of his land and to the regional plan. In 1993 a new policy instrument was proposed in order to favour meadow bird protection,

which is a great concern in Frisian culture for a long time. Free contracts, i.e. contracts not attached to a specific area, were designed.
In Emilia-romagna, the rural Development Programme comprises eleven measures focusing especially the abatement of polluting substances and the provision of positive environmental services. Eligibility rules are based on a topographical zoning that distinguishes land in plains, hills or mountains. In addition "agri-environmental agreements" target areas where relevant environmental problems exist. Priority is given to farmers whose parcels belong to areas involved in agri-environmental agreements.
Several objectives can be integrated in a single scheme, while eligibility rules may be relaxed in order to increase the possible number of entrants in AESs. This policy orientation is likely to result into very complex mechanisms as illustrated in France by the shift from regulation 2078/92 to regulation 1257/99 and the design and implementation of the CTE (Farming Territorial Contract). This multiple objective policy instrument resulted into intractable cases. In Basse-Normandie, a hundred measures were initially proposed to farmers. To apply for CTE farmers had to draw up a farm diagnosis and to design a global farming project. According to the CTE approach, farmers could opt either for an individual strategy integrating the economic and environmental farming, or a territorial strategy aiming at global objectives.

5.3 Heterogeneous implementation and uptake

Implementing the Common Agricultural Policy given the *acquis communautaire*, leads to institutional innovation. This is particularly true for AESs where the subsidiary principle applies widely. Regarding this issue, the stories of Finland and of the Czech republic are similar to a certain extend. In both countries, a dramatic change in the policy mix applied to the farm sector imposes the AESs as an important tool to support farm income. Horizontal schemes with basic measures and relatively high incentives benefit most farmers. Their design and implementation involve new collaboration between the ministries of agriculture and environment, and the introduction of new tools to monitor and enforce the schemes.

Since AESs offers farmers a means to get additional money in countries that have joined the EU in the 1990s as well as in new entrants, the highest rates of adoption are observed in Finland and the Czech Republic.
In Finland, basic measures included in the General Protection Scheme are mandatory, which leads to an additional farm support through AESs. In 2002, basic measures covered about 92% of active farms and 93% of arable land. Environmental support amounts for a significant share of farmers' income since it equals about 17% of all agricultural support. The mandatory aspect of basic measures is of course an important key in the success of AESs, but it has to be emphasized that lots of actors have been involved in the design step of such a policy.
First the 2000-06 Finnish Agri-environmental programme has been prepared by a working group in which people had been working together since preparing the first rural development programme (1992) and the following (95-99) nearly a decade earlier. This interaction, plus 10 years of policy experience and accumulation of information concerning agri-environmental issues affected significantly the policy formation. As a result, the preparing process of the new programme occurred without any major disagreements. Moreover, the draft version of the agri-environmental programme was circulated to and commented on by nearly one hundred actors from regional and local level administration, different organizations and business. Furthermore, their comments were actually taken into account in the final version of the programme. This point appears as a key factor for a good understanding between farmers and government leading to a good acceptation of AESs.

In former member states, original ways of implementation can be noticed, even if the adoption rate of AESs remains relatively modest. In Friesland, as in Finland, local actors take a great part to the

implementation of AESs. The leading role of environmental cooperatives in tailoring measures to the local context has to be emphasized. In cooperatives, many groups of farmer volunteers to test measures before implementation are also active in protecting wildlife and landscapes influencing agricultural wildlife and landscape management. Before 2004, environmental cooperatives could receive the financial compensation of contracts directly. Farmers were then paid by cooperatives on the base of their wildlife and landscape management and results of the management. Since 2004, in order to comply with EU legislation, farmers receive compensation directly. But as a contracting partner in a collective contract, farmers pay a part of their subsidies to cooperatives. Farmers can have their money back depending on their management and results. EU legislation appears in this case as a restrictive factor in AESs implementation possibilities. In comparison, the French strategy failed since it resulted into a low rate of adoption (lower than expected) and high public administrative costs. This is partly due to the complexity of procedures related to CTEs. Otherwise, too many measures whose efficiency is questionable were proposed to farmers In addition of the number of eligibility conditions led to schemes whose monitoring and enforcement were very difficult and expensive for the exchequer.

Two aspects of AES implementation are not clear and would need further investigations. The compliance of farmers with their contractual commitments is not appreciated in the same way in the different countries. Comprehensive and documented data regarding controls and compliance rates are not available. Out of our partial information there is no clear evidence between the control rate and the compliance rate. However it seems that compliance rates are better for simple schemes and simple contracts. Simple schemes offer a reduced number of measures or a reduced number of contract types. Simple contracts are made of a reduced number of prescriptions clearly specified. Another factor of better compliance is the participation of farmers in the design of schemes. The other questionable aspect concerns environmental effectiveness. Although the general objective of AES measures are usually stated in scheme design documents, measurable expected impacts and the necessary conditions to reach them are poorly documented if even mentioned. In many cases, this lack of environmental diagnosis, like the absence of a reference situation described by relevant environmental indicators, makes the environmental effectiveness of AESs difficult to investigate.

5.4 AESs in New Member States: the Czech situation

The implementation of AE policies under EC regulations is quite recent within new Member States. Most experience consists of pilot schemes with the SAPARD funding.
The Czech case is quite interesting and points out some unexpected deviations from the initial framework. Some identified results, after a few years of AES implementation, even show trends that are totally going against initial AESs strategic goals.

Basically the newly introduced scheme in the Czech Republic is facing different challenges and problematic situations, some of them being closely interconnected.

- **Substantial administrative problems**
- **High AES participation rate.** However, the introduction of AESs in the Czech Republic was considered by some farmers as an opportunity to receive some money from the Government. Therefore many farmers decided to take up an AES but a relatively low proportion of them seemed to realise that "contracting into an AES", means significant "commitments" and "duties".
- **Strong controls and heavy political pressures.** This point directly derives from the previous one as a cause-effect relation.
- **Lack of money for co-financing.** Indeed, facing a high participation rate for some specific measures the Government quickly lacked money for co-financing the scheme. The measure

"conversion of arable land into grassland" is a clear example. Although the Government was initially expecting to have some 5% of arable land engaged in the scheme, 20% was proposed. The Czech Government had therefore no other choice than stopping the measure due to a lack of money for co-funding.

¤ **Inappropriate rules.** Indeed, it came out that the application and eligibility rules might not be adapted to large farms. For these it is most of the time impossible to uptake "landscape measures" (e.g. hedgerows, stone walls, …), because there is a relationship to land owners and it is administratively complicated for the big farm management.
It is not easy to design measures which fit the conditions in the Czech Republic, or to set rules for eligibility. Large farms and holdings rented from large numbers of small scale owners can cause particular problems e.g. in relation to measures concerned with landscapes.
In addition, it is rare reported that some big farms (10,000 ha and more), receiving sizable AES support along with CAP-premia, re-invest the money in a non-agricultural sector of the national economy. There was discussion about whether one of the effects of AESs in such big farms is that the income generated by payments may lead to a reduction of agricultural employment.

AES-premium calculation rules are probably not yet properly matched to conditions in to the Czech Republic, or more generally not adapted to large agricultural estates.
This brings up the fact that an AES should be perceived by a farmer as a Scheme and not merely as an additional source of income. It is part of the duties of national politics and driving forces to act in this way.

Nonetheless, it would be interesting to get additional developed analysis of AES implementation in other new Member States such as Poland, Slovenia or Hungary for instance.

5.5 Debated issues

During the first round table discussion various key-points about the implementation of AE measures and policies were debated. Especially the relationship between imperfect compliance and scheme complexity has been discussed.

It is often reported that the implementation at the farm level is not always fully compliant with the administrative rules and prescriptions.

Different issues can be pointed out to explain such a fact.

- Good Farming Practices (GFPs)

Although AESs should only be designed so that incentives are available only for design actions that go beyond the usual GFPs, it came out from various experiences and statements that GFPs were not always properly defined in a clear and comprehensive way within Member States. However, the 1257/99 regulation brought improvements compared to the 2078/92 regulation as contract prescriptions and payment calculation of AESs must refer to GFPs. This means that GFPs have been locally adapted in certain cases, when AES prescriptions were much more specific than existing GFPs. As a result it is difficult for farmers to be fully aware of all GFPs, their farm must comply with, in order to be eligible to AESs. In addition the control of compliance with GFPs requires a big administrative capacity which is not always available. The recent introduction of cross compliance requires the same administrative efforts and will probably clarify a number of situations.

- Complexity

From the first presentations, the notion of complexity does not appear very clearly defined. A workshop participant explains that an AES measure which is well tailored to a particular environmental objective will appear complex, while this complexity is commanded by the environmental effectiveness.
The complexity of a scheme or a policy may have an important impact on its implementation. Member States are given a wide flexibility to design AESs. Some Member States decided to go very deep in details to adapt AESs to the situation of farmers and/or to the environmental conditions, at the local level. ITAES case studies suggest that the uptake and compliance are lower for more complex schemes.
However we can not simply oppose schemes which are simple, hence correctly and widely applied but poorly efficient, with complex schemes which would be potentially efficient but incorrectly and narrowly applied.

To go further, complexity must be disaggregated according to different levels:

- At the level of the institutional and administrative process, complexity depends on the number of organisations and territorial administrative levels involved. It also depends on how prescribed farming practices and eligibility rules are combined into measures and contracts, because it will determine the needed administrative capacity to advertise, negotiate, monitor and control contracts.
- At the farm level, complexity mainly depends on the contract design: number of included measures, number of farming practices affected by each measure, related recordings, monitoring and contractual documents. It also depends on the number of different administrative contacts which are needed to conclude and manage the contract.

At these different levels, the sources of complexity are rooted in the environmental problems which are addressed, with their geographical interconnections, and in the institutional context of AES implementation.

Complex measures are definitely needed to address some specific problems and objectives but it is often the organisation of the measures that is complex rather than the measures themselves (given that there is not a single measure that addresses a single objective).
Trade-offs between the simplicity and environmental performance should be carefully considered and detailed before defining the contract prescriptions and the scheme organisation.

One the one hand, it is acknowledged that the simplicity of a contract or a measure strongly influences the uptake and the compliance rate, all other things being equal. One the other hand, the more a contract will be adapted to farmer's situation the more easily it will be implemented. From an institutional point of view also, the more decentralised the system is, the more local problems can be easily addressed. This means that contract payments and scheme management costs should be adapted when higher complexity is required.

6 - Evaluation of environmental effectiveness of Agro-Environmental Policies

One of the project aims is to develop tools to assess and improve the environmental effectiveness of AESs. Within the ITAES project, TEAGASC is responsible for these issues about AES environmental impact, supported by UNIPADU-CONTAGRAF and FEEM.
The presentations prepared by John Finn and Davide Viaggi explain the ITAES methodology for environmental appraisal and its integration in the multi-criteria analysis for the global assessment of AESs.

A general practical framework that should assist the achievement of environmental effectiveness is proposed as follows:

- An AES should have clearly stated environmental objectives, for which there are specific, measurable environmental targets to be achieved.
- The relative priority of the environmental objectives of the scheme should be clearly stated to adapt the deployment of resources such as funding, information, etc.
- There should be a clearly identified cause-and-effect relationship between a management practice and the achievement of an environmental target, which should be justified from research and/or practice-based knowledge. It is often difficult to find scheme documentation that establishes proper cause-effect relation (between objective and measure).
- Assuming that management practices are correctly implemented, the minimal participation rate to achieve the scheme-scale environmental objectives must be specified if necessary.
- The evaluation of environmental effectiveness can finally be conducted by collecting information on the actual environmental performance (via monitoring), which can then be compared with the original, environmental targets. With greater clarity about the objectives of a scheme, monitoring should also become more targeted and efficient.

Within this context, 9 Mid Term Evaluation (MTE) reports from Participants' countries, as well as their national Rural Development Plans, are being analysed in detail for evidence on environmental effectiveness. In general, information is incomplete, insufficient or too heterogeneous to satisfactorily draw any conclusion on environmental effectiveness and efficiency of specific schemes. Reading through 9 MTE reports, information is generally given on *(i)* the area covered by a measure, *(ii)* the area to which the measure is applicable and/or *(iii)* the actual participation rates.
This analysis of a sample of MTEs was of little help in gauging the environmental performance of AESs in ITAES case-study areas, but at least it helped to identify potential improvements to the evaluation of AES environmental impacts.

In the absence of readily available and consistent information on the environmental performance of schemes, ITAES will use a structured approach in each case study area to collect expert opinion on environmental effectiveness of AESs. The information from this quality of evaluation process will be analysed through multi-criteria analysis (MCA). MCA allows the aggregated analysis of multiple effects and hence allows an explicit consideration of trade offs among objectives and efficiency at scheme level.
For instance, as a pilot application, MCA was applied to selected mid-term evaluations:
http://www.eaae2005.dk/contributed_papers/S16_410_Samoggia_etal.pdf
Such an approach would help to improve future scheme design and effectiveness. Although in this project a structured approach as a form of *ex post* evaluation is used, an improvement would be to use this MCA approach to analyse different proposed scheme options in an *ex ante* evaluation (WP10+WP5).
The exercise emphasises the need and the difficulties to measure effectiveness at an aggregated scale, to combine in a consistent way *ex-ante* and *ex-post* analysis, and to devise cross-country comparison tools in order to learn from other's experience.

The role of evaluation processes in supporting the design of the new generation policy has always faced a timing problem; e*x-post* evaluations usually provide results when it is too late to feed into the policy making process. Therefore an emphasis should be placed on *ex-ante* evaluations, as well as on *ex-post* evaluations.

A key-issue for ITAES would be to set up a methodological framework that could serve as a tool that is able to provide a quick elaboration of data (from environmental monitoring or expert opinion) and supports a continuous evaluation of policy progress over time.

7 - Institutional settings and transaction costs

The environmental effectiveness of the measures is affected by contextual and institutional factors, such as the quality of the scientific basis chosen for the measures, the extent to which a measure is suited to a given area, the professional support a farmer receives to implement an AES contract, the organisation of professional networks and of extension services.
Similarly, perceived private transaction costs arising from AESs have a strong impact on farmers' decision to contract or not.
The transaction cost (TC) issue is introduced by Guido Van Huylenbroeck who insists on the private side while Volker Beckmann details the trade-offs between public transaction costs and better institutional quality of AES implementation.

By comparing different AESs, designed according to different institutional arrangements, the ITAES consortium is addressing this issue, with the final goal of explaining:

- How transaction costs influence the contract terms and uptake.
- Which contracts prove to be more effective and more cost-efficient in aligning ecological and socio-economic incentives.
- What AES components are meant to be changed while redesigning the schemes.

7.1 Private and public transaction costs

Within the scope of the analysis of private transaction costs inherent in AESs implementation, different papers have been prepared so far by ITAES. One of the assumptions is that private TCs are most of the time highly underestimated, by the farmers or the policy makers. If validated this assumption may explain some difficulties the farmers face to carry out their contract properly, or unexpected low uptake when transaction costs are barriers for contracting. For the time being, there is a lack of scientific evidence about the determinants and the shape of the transaction cost function. Therefore, taking into account these private transaction costs in contract payment can not be envisaged on robust roots.

Uptake of AES measures is highly variable. Some measures have a high uptake, others a very low one. One of the hypotheses is that private transaction costs may play important role in these differences. We hereby argue that the contracts in the AES are transactions between the farmers and the government whereby the farmer are sellers and the government buyers of agri-environmental goods and services. Along with the transaction cost economics, contracts are shaped in such a way that the transaction costs are reduced. A way of looking at contracts is that due to bounded rationality and differentials in bargaining power, government is the major agent in the AES contracts so that the contract terms will in first instance reduce public transaction costs and only to a lesser extent the private transaction costs of the farmers.

By comparing different AES-contracts in the countries participating in the ITAES-project we try to explain:

- How transaction costs influence the contract terms
- How contract terms can influence the success of the AES cross-country, including the way high transaction and administration costs are discouraging farmers to participate in AES
- How fixed contracts are the most effective and cost-efficient governance structure for farmers and governments to align ecological and socio-economic incentives
- What elements should be taken into account when redesigning AES

Importance of private transaction costs for participation

We focus on the farmers and hypothesize that farmers seek to maximize utility, and will then decide to participate in a AES when the benefits are larger than the costs. The benefits are a combination of the compensation payments accordingly the contract and the payments of the use of the farm amenities (farm tourism), sales at farm gate, farmers markets, premiums for organic agriculture… Costs then include the direct costs of implementing the AES, and the transaction costs (Figure 1). The latter can be *ex-ante* to contracting such as search costs, information gathering and negotiation costs; running costs or *ex-post* such as control. The above reasoning also implies that the farmers, once decided to uptake the AES contract, will seek to maximize the extra profits to be generated by the environmental measures described in the contract (Figure 2).

$$\text{Max } \Delta\pi_{farmer} = \Delta R_{farmer} - \Delta I_{farmer} - \Delta TC \text{ (Private TC)}$$

The extra profit ($\Delta\pi_{farmer}$) is equal to the extra revenue (ΔR_{farmer}) minus the extra direct input costs (ΔI_{farmer}) and the extra private transaction costs involved (ΔTC).

The transaction costs involved in AES are therefore linked to the contracts between the three actors mentioned above. Table 3 shows that the net compensation from participating in the AES is the remainder of the compensation payments and the transaction costs incurred. The difference between these public transaction costs and the private transaction costs are given in the following section. The transaction costs incurred by the farmer, or private transaction costs, can result to be a barrier for farmers to participate in voluntary agro-environmental schemes, for example related to making initial inquiries about scheme participation (Falconer & Whitby, 1999).

The organisation and administration of the programme also brings along high transaction costs. The public transaction costs will be important when evaluating the effectiveness of a AES policies. In this case, a transactional costs analysis can be useful to identify the scheme or combination and sequencing of schemes that minimize the total cost for the community, namely the scheme compliance costs (production costs or opportunity costs of producing agri-environmental goods) and transaction costs (Falconer & Whitby, 1999; OECD, 2003). The main focus in this study is to analyse the contracts between government and farmer and to describe and measure the private transaction costs involved.

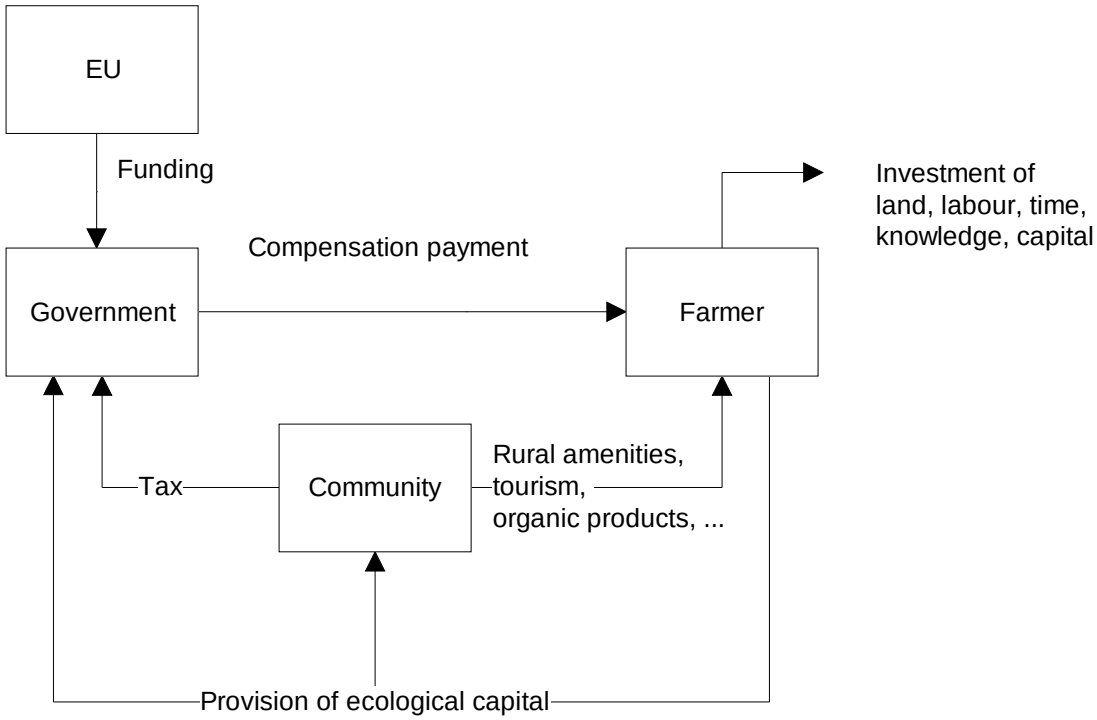

Figure 1: Extra revenues and extra costs

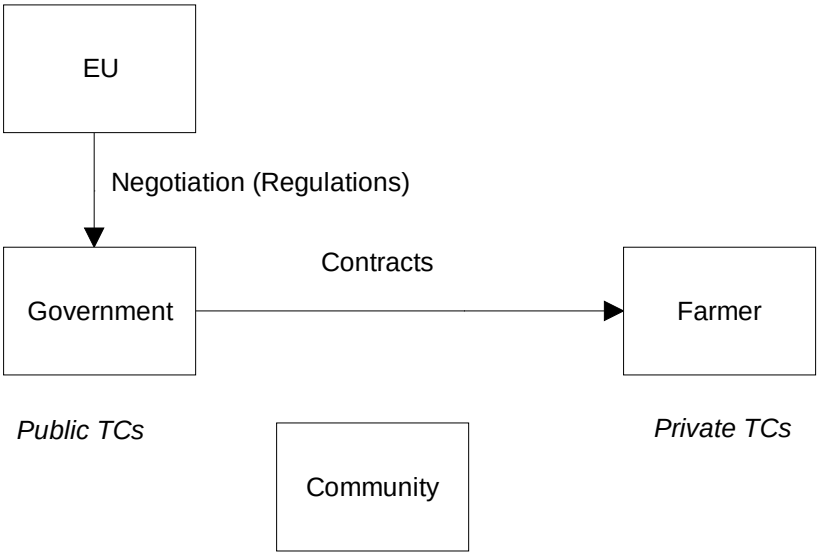

Figure 2: New transaction costs involved

Table 3: Private and public policy transaction costs (Falconer & Whitby, 1999)

PRIVATE		Private transaction costs of participation in the scheme	Net compensation from participation in the scheme (i.e. notional profit foregone by the farmer
PUBLIC	Public transaction costs (administrative costs of operating the scheme)	Compensation payments to participants	

Hypothesis and methodology

With regard to the contract theory, it is argued that contracts are shaped in such a way that the transaction costs are reduced. Yet farmers are often "cost-takers" when its comes to transaction costs. The farmer should therefore decide on whether or not to engage in a AES and, if yes, in which contract.

The first hypothesis is then:

The farmer's decision to uptake an agro-environmental contract and his choice in type of contract depends on farm characteristics, the implementation costs involved, the level of ex-ante transaction costs and the perceived importance of compensation payment and transaction costs.

Sub-hypotheses are that:

1. *The transaction costs involved should not be underestimated and are directly related to the institutional arrangements and the institutional environment.*

2. *The level of transaction costs are higher with*
    a. *Information costs – these are ex-ante costs including the time and money spent to collect information on the contract terms, and its implementation, also including acquiring specific knowledge. It also concerns the assessment of the opportunity costs of time spent to implement the contract and foregone benefits of crops and livestock;*
    b. *Negotiation costs – these are costs to conclude the contract, including the time and money spent on administration of the contract and the waiting time before the approval of the contract.*
    c. *Control costs – these costs include time and money spent to daily monitor the implementation of the contract, the administration to fulfil for the control, and the burden of control.*

3. *The level of transaction costs are also influenced by perceived importance of:*
    a. *Specific investment – this includes the investment in people, infrastructure, knowledge specific to the implementation of the agro-environmental scheme.*
    b. *Frequency of contracts – it is argued that the transaction costs for a new contract will be lower compared to the initial contract because the less specific investments are needed.*
    c. *Uncertainty and the level of trust in the government*

The second hypothesis becomes:

A cost-benefit analysis of the current agro-environmental contract [in which the farmer evaluates the net benefits as the compensation payment minus the net benefits foregone, the costs of implementation of the agro-environmental contract and the transaction costs involved] reveals the importance of transactions costs (asset specificity, uncertainty and frequency) relative to the operational costs.

Empirical analyses on private transaction costs in voluntary schemes as agro-environmental contracts are rather scarce. Falconer (2000) reports that a number of studies analysed the farmer's attitude towards conservation, but that only a few have looked into the mechanisms of scheme implementation and the transactions and transaction costs that are involved. To our knowledge, Falconer (2000); Falconer and Whitby (1999), Falconer and Saunders (2002) and Vatn (2002) are

the only studies with an attempt to measure the transaction costs involved in agro-environmental contracts

Therefore, we proposed to organise a follow up of a small group of farmers in the nine participating countries for having detailed information. A group of about twenty to thirty farmers engaged in agri-environmental contracts are asked to keep regularly records of time and costs invested in all activities related to the implementation of the agro-environmental contracts. This will allow a more accurate quantification of the transaction costs involved.

Thus, in each case study area, 20 to 30 farmers are asked to fill in record sheets provided. Records are collected on

- investments:
    a. buildings, machinery, computer, perennial plants …
    b. costs of funding the investment: e.g. loan
- labour hours:
    a. extra working hours of farmers, partner, children, family, paid/non paid labour to implement and monitor the AESs
    b. extra courses
    c. extra time for administration
- income and costs:
    a. compensation payments
    b. small investments, operational costs …
    c. increased costs for accountant
- decreased production of crops and livestock
- costs for control

The advantage of having a follow-up of farmers is that detailed information is collected on benefits, operational costs and transaction cost. The detailed information is needed to analyse the differences among countries (institutional situations), farmers and farms and agro-environmental measures. This information will be supplemented by a number of questions in a larger questionnaire. This set-up will be the first attempt to have reliable information on the link between AES and operational and private transaction costs. Because of the wide variety of AES measures applied throughout the EU this will make it possible to assess the real level of transaction cost and the link with the institutional setting in which these AES are implemented. In the presentation the first results are presented.

7.2 Transaction costs and institutional quality

Due to their implicit nature, transaction costs can not be easily defined. However, many authors recognise the significance of private transaction costs for the uptake of agro-environmental contracts. But it is difficult to provide a quantitative assessment of the level of transaction costs. The costs incurred by the farmers mainly include time and resources invested in the search of information (on contract terms, area design, trustworthiness of the government's implementation, required changes in the production system, repercussion on the farming system…), in contracting, and in monitoring and control.

We argue that the transaction costs depend on the institutional setting and could be reduced when farmers would have more influence on the contract terms. We therefore analyse the characteristics of the transaction between farmers and government to assess what factors influence the level of the transaction costs, so that the lacunas and problem areas can be better identified. A better alignment of the interests of farmer and government is believed to positively influence the uptake of agri-

environmental contracts. We believe that the research actually conducted in ITAES will reveal deeper information on the level of real transaction cost.

Public and administrative TCs are also taken into consideration within the project. Former research showed they are decreasing with time due to learning and streamlining and characterised by scale economies (Falconer et al., 2001).
Nonetheless, for several reasons (most public bodies are reluctant to deliver the appropriate information) the quantitative measurement of administrative TCs through the implementation of a questionnaire has been given up by the ITAES consortium.
Instead of that an institutional analysis based on experts and stakeholders interviews will be conducted within the ITAES selected countries in order to determine how and in which way, TCs and institutional quality are correlated with the degree of stakeholder participation, the decentralisation of decision making/administration and the environmental precision of AESs.
It is acknowledged that the administrative structures of the Member States, the final design of AES and EU co-financing rules, largely determine public TC. Reducing public transaction costs is, therefore, often associated with more central and less precise AESs. Interviews of experts and stakeholders will help to evaluate the role of public transactions costs for the current AESs. Furthermore it will enable a TC assessment of institutional alternatives like auctions, environmental co-operatives or local action groups that may enhance the environmental effectiveness of AES.
The institutional analysis will illuminate the impact of the EU regulations and Europe's diverse institutional settings on public TC and on the design and effectiveness of AESs. If will further contribute to answer the question if the new rural development regulation (EC) No. 1698/2005 will increase or reduce public TCs, while increasing the institutional quality of AESs: transparency, accountability and other attributes of better governance.

7.3 Outcome of the second round table discussion

There is indeed a real need for the Member-States to design and set-up efficient tools enabling them to assess transaction costs related to AES implementation, as this element had been poorly addressed in previous agro-environmental policies. Such tools and mechanisms are lacking and this issue is a real preoccupation at the EC level.
The same questions are also raised in Non-EU Countries, and OECD has commissioned different studies on specific transaction costs in Switzerland, USA, and Mexico.

Such experiences conducted in other countries may be a quite valuable input for ITAES.
Payments under the forthcoming regulation will most probably take into account all the different elements presented above. Given this context, it might be suitable to present a payment rate orientated analysis, linked to uptake rates, of the present situation across ITAES involved countries.

So far, and from the EC side, the new RDR implementation rules are drafted out as well as the transition rules to be followed while shifting from one period of implementation to another one. These rules, and the whole regulation will then have to be audited, checked and adopted by all EU Members.
It might be suitable to have another workshop arranged when the EC proposal on new rural development policy will be finalised in order to be informed about TC calculation rules and integration, along with the way Members States will have to deal with these. This would be an opportunity for ITAES to feed into debate about calculation of TCs.

8 - Concluding remarks

Although the topic has not been much debated, the scope and importance of AESs at national level are highly dependent on national constraints and strategies concerning farm income support. They also depend on the mandatory policy tools, which are implemented when environmental impacts of agriculture are very serious, such as in the Netherlands. Nevertheless the AESs introduce new actors, like the Ministry of the Environment and NGOs, in the design process of agricultural policy schemes. EU regulations also introduce better governance principles, such as control, scheme monitoring & evaluation in former and new Member States. The compliance with better governance principles may increase both public and private transaction costs. Such costs could lead Member States to design large scale and simple schemes, in contradiction with an increasing role of local initiative, which is promoted by the proposal of the next rural development regulation, based on the "Leader" approach.

The debate over complexity emphasised the different layers of this issue; complexity of schemes, of different measures or menus within a single scheme, of specific prescriptions, of administrative procedures, etc… There might therefore be a need for more detailed discussion of this analysis.
It might be worth defining in greater details concepts such as "complexity" and "non-compliance" in order to strengthen further ITAES work and investigations on the topics. Research achievements on TCs and the way they might be measured should also not be considered in a too scientific way but explained separately in order to be more operational.

For many AESs, the environmental effectiveness remains questionable. Even in Finland where 93% of farmland is under contract, it is difficult to say if the actual decrease in nitrate and phosphorus runoffs is due to AESs or to the simultaneous decline of agricultural prices. In addition little impact on lake eutrophication has been measured yet. The situation is probably worse for schemes with numerous different measures, low uptake rate and geographic dispersal of contracted land. In most cases the cause-and-effect relationships between prescribed farming practices and stated environmental objectives are not documented. This is certainly a field where exchange of experiences and knowledge accumulation should be enhanced. This is a big challenge in a framework where bottom-up approach and decentralisation prevail.

Is there any way in which the timing problem between the ex-post evaluation results and the design of the next policy could be avoided? The need of an ex-ante evaluation of institutional settings and environmental consistency of the national implementations of the new rural development regulation is certainly a major policy recommendation of this workshop.

At its modest level, the Brussels workshop contributes to exchange of experiences and networking. The invited stakeholders and policy makers (involved in AES issues) from ITAES Member States were particularly keen in developing contacts between each other.

9 - References

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Annex 1: workshop participants

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Annex 2: workshop programme

As agreed between all ITAES Participants, the programme of this one-day workshop was the following:

9.30 am: Welcome, round table presentation and overview of the ITAES project
David Baldock, IEEP & Pierre Dupraz, INRA-ESR Rennes

10.00 am: Agro Environment Schemes and the new Rural Development Regulation (2007-2013)
Andreas Lillig, EC-DG Agri

10.30 am: Coffee Break

11.00 am: Policy objectives, past responses and future issues
François Bonnieux, INRA-ESR Rennes

11.30 am: AESs within New Member-States; the Czech case
Tomas Zidek, VUZE

12.00 pm: Round table discussion

12.30 pm: Lunch

14.00 pm: Environmental effectiveness: indicators and evaluation methods
John Finn & Isabelle Kurz, TEAGASC & Davide Viaggi, UNIPADU-CONTAGRAF

14.45 pm: Governance, transaction costs and institutional quality
Guido Van Huylenbroeck, UGENT & Volker Beckmann, HUB

15.30 pm: Conclusions and Policy orientations
David Baldock & François Bonnieux

16.00 pm: Final round table discussion & closure.

16.30 pm: End

N.B.: Slides of these contributions are available in Annex 3.

Annex 3: slides of the presentations

Workshop on European Agro Environmental policies
Brussels: 13 September 2005

Overview of the ITAES programme

Integrated Tools to design and implement Agro Environmental Schemes

Pierre Dupraz
INRA-ESR, Rennes

Agro Environmental Schemes (AESs)

- Policy schemes based on a voluntary approach
  - Contracts are offered to (selected) farmers to change their practices or improve their environmental impacts
  - The payment compensates the forgone profit or additional costs of compliance
- Different territorial levels are involved according to the different tasks of design and implementation
  - Obviously for those co-financed by the EU
  - Different types of organisations interact: governments, associations, farmers

Origin and main objectives

- ITAES identifies the following key-factors of the "reliability and predictability of AESs" (FP6 Call)
  - Technological factors relating farming practices and environmental impacts: Importance of the targeting, reaching a critical mass, and the (use of) knowledge about them.
  - Behavioural factors relating incentives to farmers' participation and compliance levels.
  - Institutional factors expressing the social demand and the way in which they are tuned to adjust the provision of environmental services.
- Resulting in two entangled objectives
  - Build an integrated tool to analyse the interaction between the institutional process and the environmental outcome,
  - Build an integrated tool to analyse and simulate farmers' environmental supply, which depends on a range of different governance mechanisms.

Background: Previous results

- High diversity of AESs across Europe in term of
  - Objectives: pure/local public goods, equity of CAP payments, support of organic/labelled products, maintenance/introduction of practices
  - Institutional settings: administrative levels, eligibility rules, …
  - Compensation rates mostly depends on input limitations
- Uptake of AES contracts
  - Modelling of farmers' behaviour and estimation
  - Higher participation of low intensive farms
  - Importance of farmers' attitude, education and networks
  - Economies of scope between environmental expected outcomes
- Public transaction costs are not negligible
  - High set-up (fixed) costs of schemes imply scale economies
  - Administrative costs decrease with experience

Key issues (scheme & regional levels)

- (*Ex-ante*) Efficiency and (*ex-post*) effectiveness
  - Costs of AESs are rather well known and the consumer willingness to pay elicited for such schemes proved to be much higher…
  - But actual environmental impacts are difficult to measure and highly questionable. Often, costs cannot be compared to anything tangible.
- Policy design
  - How is the social demand taken into account and translated into AES objectives?
  - Are AESs the best policy tool for these objectives?
  - What are the technical&institutional settings to ensure and monitor the environmental effectiveness of AESs?
  - Strategy to optimise public transaction costs & payments ?

Key issues (scheme & farm levels)

- Policy implementation: scheme design&management
  - AES design&implementation: dealing with local natural conditions in the national institutional environment.
  - Administrative coordination between the different territorial levels?
  - Trade-offs between precision benefits and decentralisation costs?
  - Accumulation and use of relevant knowledge (farmers' behaviour and factors of environmental effectiveness) ?
- Scheme implementation and farmers' behaviour
  - Factors of environmental effectiveness: participation rate, compliance level, change of practices
  - Private transaction costs are entry barriers. How high ?
  - Potential improvement of offered contracts (costs and benefits)?

Investigations

- Review of international literature
- Ten case studies (National/NUTS1 or NUTS2 level)
  - Farmers face same AESs and/or institutional relevance
  - Basic data to develop both the institutional analysis and the environmental assessment of AESs.
  - Additional interviews of administrators, experts and stakeholders
- Survey of 2000 farmers and one year follow-up of 200
  - Scheme governance attributes and private TCs, and
  - data for simulations of alternative schemes/contracts
- Multi-Criteria Analysis
  - Combining socio-economic and environmental indicators
  - Ex-post and Ex-ante analysis within (&between?) regions

Research structure

- 12 partners associated for three years (2004-2006)
- Methods and analysis at the regional level
  - Environmental appraisal (TEAGASC, FEEM)
  - Institutional approach (Humboldt U. Berlin, FAL)
- Methods and analysis at the farm level
  - Private TCs and scheme governance attributes (Ghent U. & Newcastle U.)
  - Farm modelling and simulations of alternatives (Wageningen U.)
- Integration of methods&results
  - coordination, literature survey, case studies and survey (INRA, IEEP)
  - Multi-criteria analysis (Padua U. & Bologna U.)

EU rural development policy 2007-2013

Agri-environment

Andreas Lillig
DG AGRI - F.3
ITAES workshop, Brussels, 13.9.2005

Two legislative texts:

- **Council Regulation (EC) No 1290/2005 on the financing of the CAP => creates a new financing framework for the CAP** ("new 1258") with
  - The European Agricultural Fund for Guarantee => **EAFG**
  - The European Agricultural Fund for Rural Development => **EAFRD**
- **Proposal for a Council Regulation on support for Rural Development from the European Agricultural Fund for Rural Development (EAFRD)** => the new rural development regulation Political agreement reached; final legal text currently under preparation; adoption foreseen in September

Simplification

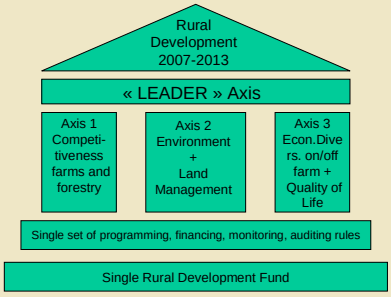
CURRENT
5 types of programming
Guarantee
Guarantee Objective 2
Guarantee new MS
Guidance Objective 1
Guidance LEADER+
3 financial management and control systems
Guarantee
Guarantee new MS
Guidance

→ **One single**
- programming system
- set of financial rules
- rural development fund
- control system
→Make it simple
→For all rural areas in the EU

Policy focus on 3 main objectives:

- **Improving the competitiveness of the agricultural sector through support for restructuring**
- **Enhancing the environment and the countryside through support for land management**
- **Enhancing the quality of life in rural areas and promoting diversification of economic activities**

Rural Development Policy 2007-2013: Foundations



Programming Steps

1) EU strategy document setting out the EU priorities for the three thematic axes
2) National strategy plans translation the EU priorities to the national situation and ensuring complementarity with other policies (Cohesion policy – ESF/ERDF)
3) National or regional rural development programmes articulating the four axes

Support for implementation

- **Technical assistance** at programme level for preparation, management, monitoring, evaluation, information and control activities
- **A national rural network** supporting and bringing together the organisations and administrations active in rural development
- **A European rural development network** to interface with the national networks and administrations

Reporting based on a common framework for monitoring and evaluation

- Annual progress reports at programme level
- National summary reports on progress in implementation of the national strategy
- Annual Commission summary report to the Council and the EP on the progress in implementation of the EU strategy and priorities

Financial management and control:

Similar to the Structural Funds:

- Differentiated appropriations, automatic decommitment (n+2)
- Managing Authority and Monitoring Committee

Using Guarantee bodies and procedures:

- A Paying Agency and a Certifying Body
- Annual financial clearance of accounts and conformity clearance decisions

Overall objectives

- Single and simpler coherent framework for rural development
- Focus on commonly agreed EU priorities,
- while leaving sufficient programming flexibility for the MS
- Increased accountability at EU, national and regional level for results obtained

Axis 2: Environment/Land Management

Measures targeting the sustainable use of

- **Agricultural land:**
  mountain areas; other areas with handicaps; Natura 2000 areas; agri-environment and animal welfare; support for non-productive investments
- **Forestry land:**
  first afforestation; first establishment of agro-forestry systems, Natura 2000 areas; forest-environment; restoring forestry production potential and introducing prevention actions; support for non-productive investments

Experience with AE in Member States

- **Transparency for the farmer: A too complicated programme structure deters from participation.**
- **Obligations to be respected: The farmer must see clearly, what comprises his commitment.**
- **Measures have to be designed to reach quantifiable environmental objectives. The resulting obligations in certain cases may require changes in the agricultural techniques that go too far for farmers; the result is a limited uptake.**
- **Wrong premium calculation on levels: If the compensation covers only parts of the losses, farmers decide not to participate; an unexpected high uptake may be due to overcompensation.**
- **Lack of sufficient differentiation of assumptions for the calculation according to the site conditions**

Axis 2: Agri-environment: What's new? (1)

- **Beneficiaries other than farmers:**
  Possible, if necessary to achieve environmental objectives of the measure
- **Calls for tenders:**
  Where appropriate, beneficiaries may be selected on that basis, applying criteria of economic and environmental efficiency.

Axis 2: Agri-environment: What's new? (2)

- **Transaction cost:**
  No more lump calculation of incentives (up to 20 % of cost incurred/income foregone).
  Transaction costs are costs not directly attributable to a A/E commitment, but the actions creating transaction cost are necessary to live up to the commitment.
  Where not quantifiable, there should be other appropriate evidence.
- **Costs for non-remunerative investments:**
  No more covered by agri-environment payments (separate measure "non-productive investments" without any ceiling).

Axis 2: Agri-environment: What's new? (3)

- **Co-financible ceilings:**
  Unchanged (200/450/600/900 €), but now for all ceilings (not only 200 €/LU) possibility to be increased in exceptional cases taking account of specific circumstances
- **Co-financing rate:**
  Instead of 60/85 % maximum aligned with maximum rate for all axis 2 measures:
  80 % in Convergence Objective regions
  55 % outside Convergence Objective regions
  85 % in the Outermost Regions and the smaller Aegean islands
  20 % minimum EAFRD contribution

Axis 2: Agri-environment: What's new? (4)

- **Baseline:**
  Instead of usual good farming practice:
  - Relevant mandatory standards established pursuant to Articles and 5 and annexes III and IV of Regulation (EC) No 1782/2003
  + minimum requirements for fertiliser and plant protection produ use
  + relevant mandatory requirements established by national legislation
- **Sanction approach:**
  Instead of eligibility criterion: Reduction or exclusion from payments (alignment with first pillar Cross Compliance)
  Derogation 1: Not standards with grace period for implementatio
  Derogation 2 SAPS: Only art. 5 and annex IV of R.1782/03

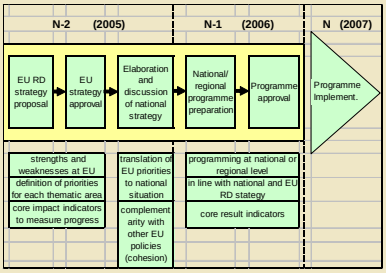
Axis 2: Agri-environment: What's new? (5)

- **Genetic resources:**
  Support possible for the conservation of (plant and animal) genetic resources in agriculture for operations not covered by the remainder of article 39.
  Broadens up the scope of support possibilities (beneficiaries, actions, length of commitment,…)
- **Sanction approach:**
  Instead of eligibility criterion: Reduction or exclusion from payments (alignement with first pillar – Cross Compliance)
  Derogation 1: Not standards with grace period for implementation
  Derogation 2 - SAPS: Only art. 5 and annex IV of R.1782/03

Funding for EAFRD (proposal)

Guarantee	**€ 56.0 bn**
• EU-15 + EU-10 unchanged at 2006 level	
• Bulgaria + Romania phased in	
Guidance	**€ 32.8 bn**
• Transfer from Cohesion heading, including statistical phasing-out Convergence regions	
• Bulgaria + Romania (EU-10 average)	
• Leader+	
Sub-total	**€ 88.75 bn**
Modulation - Transfer 1st to 2nd pillar	**€ 7.0 bn**
Cotton (2007)/tobacco transfers (2011) bn	**€ 1.4**
Total funding 2007-13 (2004 prices)	**€ 97.2 bn**

Timetable:



Workshop on European Agro Environmental policies
Brussels: 13 September 2005

Policy objectives, past responses and future issues

François Bonnieux, Pierre Dupraz
INRA-ESR, Rennes

Important issues for AESs

- What are the policy objectives?
- What are the policy responses?
  - Where are we standing now?
  - What are the different measures included in AESs?
  - What are the different menus of AESs?
- What are the main drawbacks?
  - Uptake
  - Involvement of all relevant parties
  - Control & compliance
  - Environmental effectiveness is questionable

Env^{al} pressures/ Policy objectives

- Policies target environmental objectives that are consistent with the most significant pressures
- Improvement of water resources
- Extensification & grassland management

  Are the leading policy objectives
- Landscape & biodiversity protection are often viewed as a secondary objective

  But there is a series of counterexamples

Comparison & evaluation challenge

- Schemes are very diverse
  - A single measure vs. many measures
  - Geographical scope
- Measures are also very diverse
  - A single objective vs. several objectives
- Measures are mostly practice-oriented
  - A single practice vs. several practices
- Data comparability
  - Within & between countries

Where are we standing now?

- Water degradation
  - Diversity of instruments for similar problems
  - Seriousness of the threat on water
- Extensification & grassland management
  - Compensation to keep on farming
  - Geo & agro-targeting
- Landscape & biodiversity
  - AESs
  - Regulation

What are the different measures?

- Maintenance measures
  - Favouring existing practices
  - Grass margins, grassland maintenance
- Externality reduction measures
  - Compensating to reduce adverse effects
  - Fertiliser application, plant protectors
- Public good provision measures
  - Shifting farming practises
  - ESAs, set-aside on sensitive areas

What are the different menus?

- Shift from 2078/92 to 1257/99
  - Zoning: farmers can apply to one or several schemes or measures
  - Eligibility rules: habitat, landscape, water, altitude
- Finland & Ireland
  - Compulsory basic prescriptions (cross compliance)
  - Supplementary measures
- Contrasted shifts
  - Simplification (England, Brandenburg) vs. more complexity (France)
  - Innovative initiatives (Netherlands, Veneto)

Uptake

- Very large menus are offered but
- A limited number of measures are selected
- Reduced application of fertiliser for water protection
- Grassland management
  - Extensification
  - Biodiversity & landscape protection
- Some country specificities
  - Land abandonment
  - Integrated fruit protection

Who is involved in the process?

- How to achieve a mutually beneficial compromise?
- Agricultural actors are always involved along the all process (design, implementation, control)
- Rural & environmental interests are mainly involved through public authorities (e.g. Flanders, Finland)
- But there are some exceptions (Emilia Romagna)
- Is there a shift from existing practices?
- There is evidence that farmers may twist scheme requirements
- Maintaining the current situation by subsidising existing practices
- Abating pollution & harmful effects (acknowledgment of presumptive rights)
- A number of AESs have strengthened the application of already applied practices

Control & compliance

- Is there a positive relationship between control & compliance rates?
- Simplicity of contracts and farmers' involvement positively influence compliance rate
- Non-compliance increases with complexity
- Non-compliance is an unclear concept

Environmental effectiveness

- Output measurability
  - Performance indicators
  - Practice indicators
  - Subjective objectives
- Large scale projects (Finland, Ireland)
- Comparing agreement and non-agreement land (UK)
- Monitoring of specific topics such as birds (Friesland, Flanders)
- Links between objectives, prescriptions & participation

Issues to be discussed

- Trade-off between TC & precision
  - Standard contracts/ Tailored contracts
  - Do collective organisations save money?
  - Transferring the TC burden
- Social demand
  - Who are the relevant parties?
  - Efficient AESs
- Consistency between the two pillars

AE schemes and new Members

Challenges for new Members

T.Zidek, S. Sobotova
ITAES project,
data from EU-CEE-OFP

Strategic goals of AES

- To increase agricultural producers´ interest in sustainable use of environment, including introduction of more environmentally friendly technologies and techniques, maintaining biological and natural landscapes.
- To slow down decreasing agricultural employment rate.
- To maintain land use in less favored areas and areas with environmental restrictions at least on the level prior to accession and decrease the area of abandoned agricultural land.
- To raise farmers awareness in the field of economy and environmental protection.

5.10.2005 ITAES

Table of new Members AES

CzechR.	Poland	Slovenia	Hungary	Estonia
Organic support	Organic support	Organic support	Organic support	Organic support
Grassland maintanance	Maintenance of extensive meadows	Protection against erosion in orchards and vineyards.	Arable stewardship scheme	Breeding of endangered livestock breed
Conversion of arable land into grassland	Sustainable farming	Greening of arable land	Long term environmental set-aside.	Management of semi-natural habitats.
Establishment of grass belts on sloping parcels	Soil erosion and water protection	Permanent green cover in underground water protected areas.	Grassland development in HNVA.	Environmentally friendly production (EFP).

5.10.2005 ITAES

AES comparison

CZ	PL	SLO	HU	E	LT	SK	LV	
11	6	20	19	4	4	7	4	measures
×	×	×	×	×	×	×	×	organic
×		×	×					integrated
×	×	×	×		×	×		grassland
×	×				×	×	×	erosion

5.10.2005 ITAES

Problems

- Administration
- Too many farmers participation
- Strong control – political pressures
- Extensification in rural areas
- Decreasing of agricultural employment rate
- Farmers do not apply for some schemes

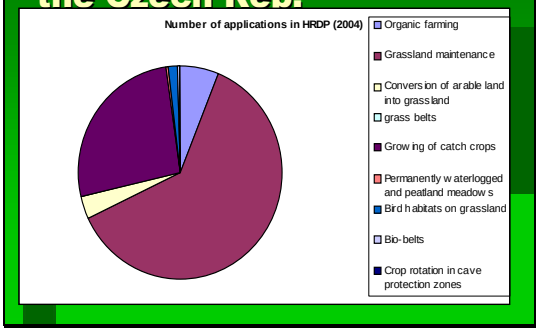
5.10.2005 ITAES

Czech first experience?

- farmers positively react for area paid AES, like grassland maintenance or growing of catch crops. 800 thousand ha of permanent grassland from 950 thousand potential have been applied in to this schemes – practically all national grassland in under AES now.
- they have basic problems to apply for landscape diversification schemes, because there is a relationship to land owners and it is administratively complicated for the big farm management.
- we do not study the problem that some really big farm holders (10 – 20 thousand hectares) are receiving so heavy subsidies, that it is not relevant to re-invest them to agriculture, but they are willing to invest this money to other parts of national economy.

7.10.2005 ITAES

Number of applications in the Czech Rep.



Environmental Effectiveness in EU Agri-Environment Schemes

Dr John Finn
Dr Isabelle Kurz

Environment Research Centre,
Teagasc, Ireland
(Agriculture and Food Development Authority)

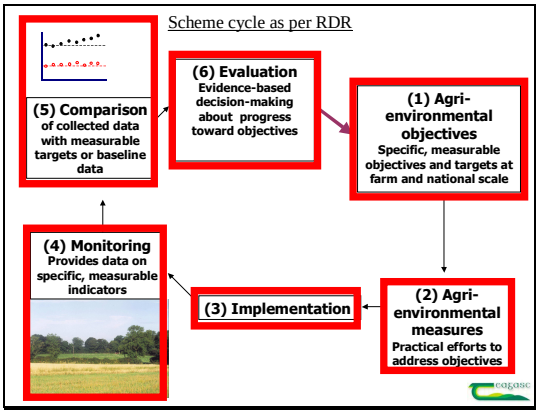
Overview

- Clarify 'environmental effectiveness'
- Framework for design of scheme effectiveness
- Suggestions to improve achievement of environmental effectiveness

Clarify 'environmental effectiveness'

- **Efficiency**: Are schemes doing the job correctly?
- **Effectiveness**: Are schemes doing the correct job?

Scheme cycle as per RDR

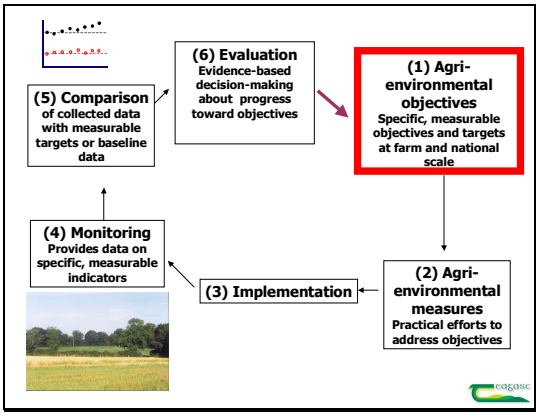


What is the current status of environmental effectiveness?

- Inspection of subset of Mid Term Evaluations (and national RDPs…):
  Overall, insufficient information for any meaningful assessment of env. effectiveness.
- Research studies: equivocal

? very difficult to judge if schemes are effective.

- **Limited information ? use of expert opinion by ITAES**



Setting of Objectives

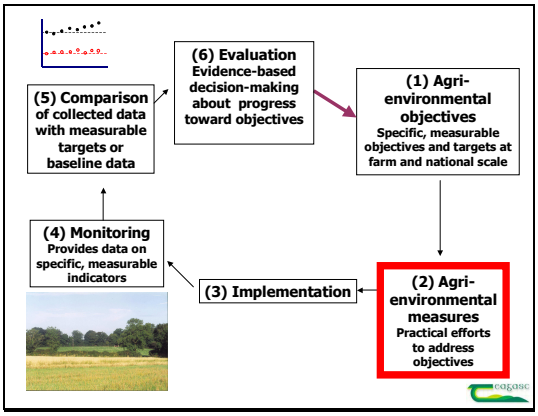
Should be willing to question whether current objectives are the best ones.

- How are agri-environmental problems and issues identified?
- Spatial extent and distribution of areas with AE problem/issue?

Clarity about relative priority of environmental objectives

- Clarity about the priority associated with different environmental objectives
  - Across major categories (water, soil, biodiv. …)
  - Within major categories

(Does mismatch occur between allocation of resources and level of priority?)



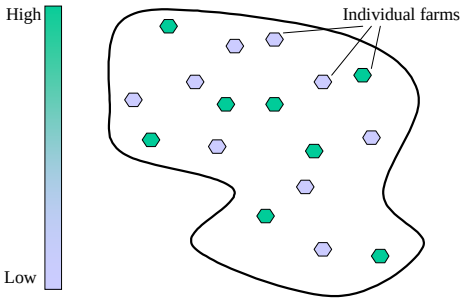
Insufficient information on cause-and-effect in documentation of many schemes.

Would benefit from more info on:

- How are agri-environmental measures (management practices) selected that will address the selected objectives and targets?
- To what degree have cause-and-effect relationships between objectives and measures been provided?
- What evidence suggests that the proposed management prescriptions are capable of achieving the objectives?

(Rationalises and justifies decision-making)

Farm-scale to scheme-scale effectiveness: role of cause-and-effect



Cause-and-effect relationships- contd.

Farm-scale factors ? effectiveness

- *Appropriate objectives*. Scheme-level objectives should be relevant and applied locally in a sensible manner.
- *Appropriate management prescriptions*. Should be capable of achieving the desired environmental effects and addressing the objectives. (Require cause-effect relationship)
- *Implementation*. Degree to which prescribed management practices are implemented. Deviations may be intentional or unintentional.
- *Time lags*.

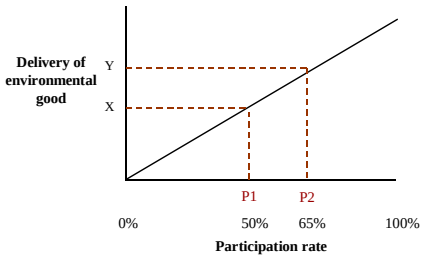
Cause-and-effect relationships- contd.

Scheme-scale factors ? effectiveness

- *Farm-scale environmental effects.*
- *Participation rate*. What participation rate is required to achieve a particular level of environmental effect?
- *Non-linear effects*. May be non-linear relationships between participation rates and the delivery of the environmental effects expected of an AES.
- *Geographical targeting*. e.g. Match between spatial distribution of issues and participation. [Objectives should distinguish between low-level environmental effects over wide area (broad and shallow), and high-level effects over small area (narrow and deep)]

Cause-and-effect relationships- contd.

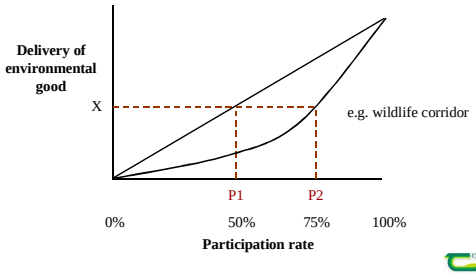
Scheme-scale effectiveness: *participation targets*



Cause-and-effect relationships- contd.

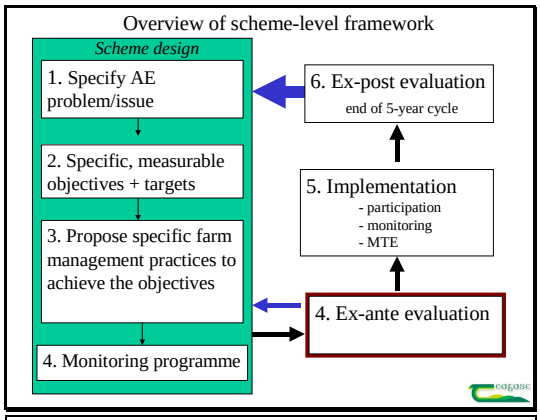
Scheme-scale effectiveness:
non-linear, cumulative effects ? affects participation targets

Use of specialist expertise



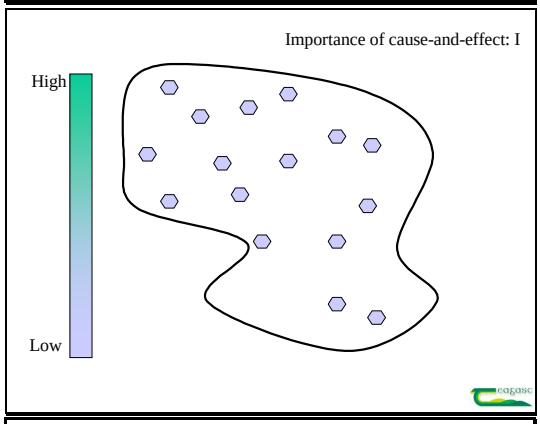
Suggested improvements to scheme design

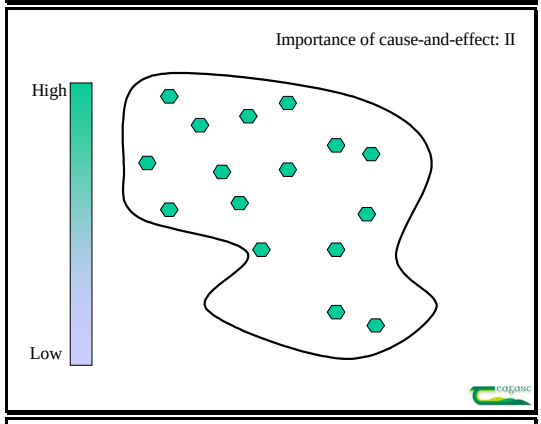
1. Specific environmental targets for objectives that are evidence-based
2. Clarity about the priority associated with different environmental objectives.
3. Clarity and detail about cause-and-effect relationships (a.k.a. intervention logic)
4. Clear objectives of monitoring programme, and design recommendations

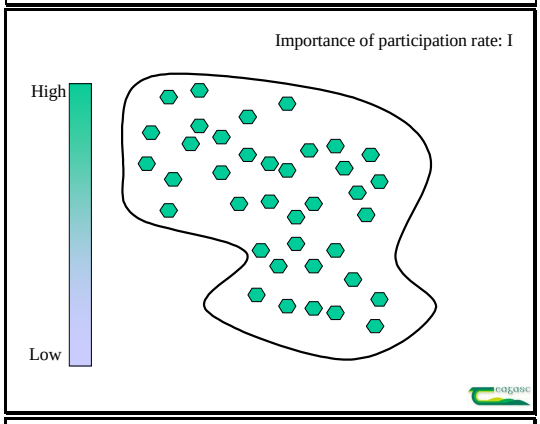


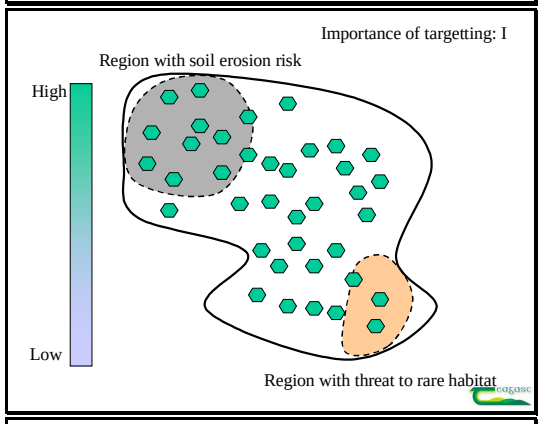
Improving effectiveness: recommendations

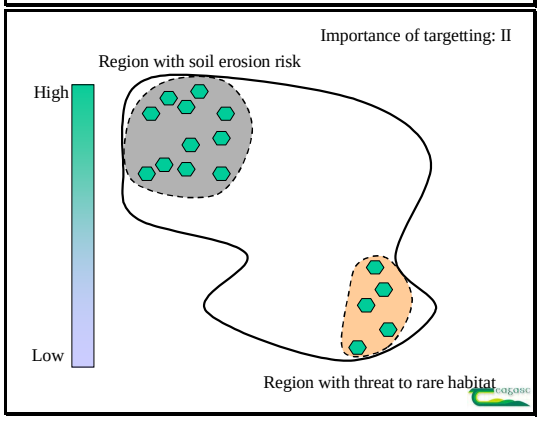
- **Emphasise practical framework that integrates scheme design, monitoring & evaluation – benefits of joined-up thinking**
- **Improve incorporation of ecological/environmental expertise**
- **Improve requirements at design stage of scheme**
  1. Specific environmental targets and objectives
  2. Clarity about the priority of objectives.
  3. Detail about cause-and-effect relationships
  4. Design and cost of monitoring programme
- **Enhance the role of ex-ante evaluation**
- **Best Practice Guidelines for Scheme Design**
- **Best Practice Guidelines for AE measures**

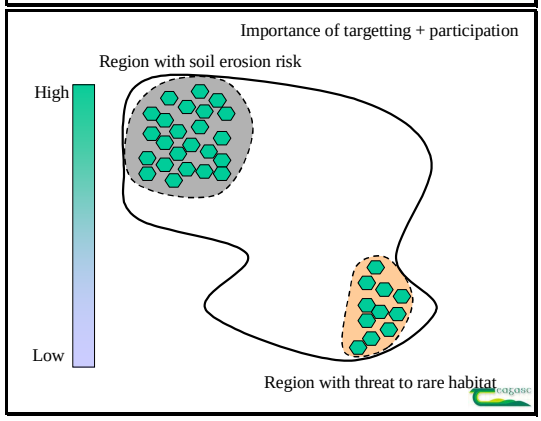












ITAES Workshop

Environmental effectiveness: indicators and evaluation methods

Contribution from Multicriteria analysis

Davide Viaggi

University of Bologna

DEIAGRA (Department of Agricultural Economics and Engineering)

DEIAGRA University of Bologna

P6 - Contagraf

- University of Padova
- University of Bologna

Role in ITAES (WP10)

- Multicriteria analysis of AESs
- Develop final guidelines

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Outline

- Multicriteria analysis what & why
- MCA in ITAES
- Examples of results
- Problems, needs and recommendations
- Final remarks

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What is Multicriteria Analysis?

- Is a **set of techniques** aimed at providing **comparative judgements** among **alternative actions** based on the **aggregation** of different **criteria**
- What is MCA for:
  - Compare/evaluate/choose alternatives ex ante
  - Classify/compare/evaluate ex post
  - Produce MC optimal solutions

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Why adopting MCA approach in AES?

- Multiple effects of policy
- Issue of Efficiency: trade off among environmental objectives given a budget constraint
- Potential support to (participatory) decision making (info to DM, connection to incentives)

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MCA in ITAES

- **Evaluate ex post selected case studies**
  - **Features:**
    - **Characterise/compare/(judge) AESs implementation in different areas**
    - **Build on MTE**
- **Evaluate ex ante alternative policy options**
  - **Features:**
    - **Compare policy alternatives**
    - **Build on modelling**
- **Support definition of final guidelines of AES implementation**

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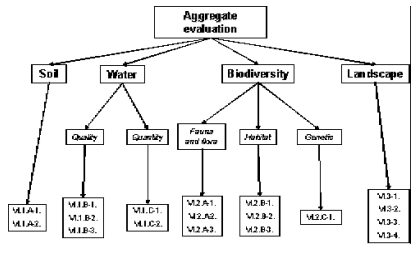
Ex post - Hierarchical Aggregation



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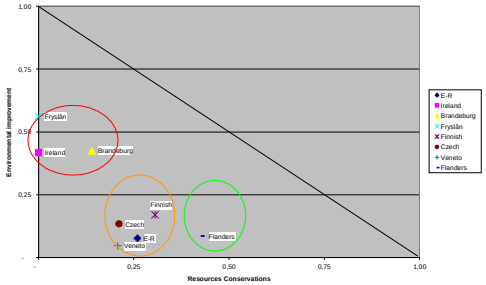
Ex post - Example of results



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At this stage…

- MCA exercise provides a consistent framework to get insights about MTE results:
  - general issues
  - ex-ante
  - intermediate
  - ex post
  - data requirements
- Focus on the quality of the evaluation process, not on AES impact

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Some general problems of MTE

- lack of quantitative targets, physical realisations and expenditure by action and/or objective
- lack of sufficient and consistent monitoring data
- unclear connection between the analysis of local needs and policy design
- difficulties in interpreting the connection between different indicators
- difficulties in connecting costs and effects of single measures

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Issues & strategies

Ex-ante evaluation

- Issue
  - Design effective and efficient policies
- Strategies:
  - better connection between context information and measures proposed
  - definition of physical and economic quantitative targets at all programming levels
  - definition of alternative measures/implementation strategies
  - consistent evaluation of trade-offs among objectives and alternatives
  - support to participatory decision-making

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Issues & strategies

Intermediate evaluation

- Issue
  - Have timely information about how things are going
- Strategies
  - Timely elaboration of programme performance information
  - Simplified timely aggregation of monitoring information
  - Elicit selected relevant information to be used during (participatory) decision-making process

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Issues & strategies

Ex-post evaluation

- Issue
  - Evaluate effectiveness and efficiency achieved (in order to improve further policies)
- Strategies
  - Increase support from improved ex-ante evaluation and programming (setting clear objectives, setting quantitative targets, etc.)
  - Stress on comparative approaches:
    - Target
    - Trends
    - Cross sections
    - Benchmarking
  - Attention to true impacts (adverse selection, non compliance)
  - Transferability of monitoring results
  - Aggregation and synthesis judgement
  - Premiality indicators on which future budget distribution could be tuned

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Issues & strategies

Indicators and Information collection

- Issue
  - Have effective ad efficient indicators
- Strategies
  - Enlarging the scope of AES indicators (including disaggregated economic and social indicators)
  - Reducing the total number
  - Connecting financial and environmental information
  - Higher attention to avoiding overlapping of indicators
  - Higher attention to elicit additional effects
  - Choosing more cost-effective indicators
  - Exploiting the informatics procedure as much as possible
  - Connect to existing environmental monitoring networks

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Final remarks (1)

Need for:

- Awareness of the content of information available (uptake in->uptake out)
- Stronger attention to cost-effectiveness of information collection/elaboration (incentives to PA, effective evaluation)
- Importance to explicit context information (importance of env. objectives, targets,…)
- Better connection of different evaluation stages
- Ex-ante organisation of comparisons (trends, context information, time consistency, benchmarking clubs?)
- Better connection between evaluation and policy design/implementation ->premiality (incentives)

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Final remarks

Some (still unanswered) questions:

- What can we realistically say about AESs effectiveness/efficiency?
- What are the consequences (benefits) of evaluation results (if any)?
- Is MCA approach useful for practical AES policy design and implementation?

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Thank you

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Faculty of Bioscience Engineering

Governance, transaction costs and institutional quality:

The private transaction cost side

Guido Van Huylenbroeck
Ghent University, Department of Agricultural Economics

Governance and private transaction costs

- The institutional organisation of AES will influence the private transaction cost of farmers
  - Provision of information depends on institutional environment and influences search cost of farmers
  - Institutional organisation will influence negotiation procedure and thus negotiation cost
  - Institutional rules on control will determine administrative costs for farmers
  - The whole institutional environment will also influence the picture farmers have of AES and therefore indirectly influence their behaviour.

Influence of TC on uptake of AES

- Most research (see e.g. Vanslembrouck et al (2001)) on uptake of AES reveals that uptake is dependent on :
  - farmers' characteristics (younger, larger, …),
  - farm characteristics (can AES be incorporated in the management)
  - Transaction cost related parameters (administration costs, …)
- $\Delta\pi_{farmer} = \Delta R_{farmer} - \Delta I_{farmer} - \Delta TC$ *(Private TC)*
- Not much real measurement of the height of the private transaction cost and their relation with the governance and institutional quality

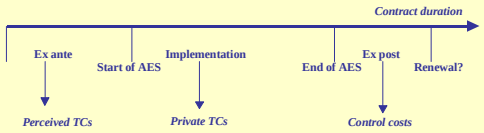
Relation with public TC

		Private transaction costs of participation in the scheme	Net compensation from participation in the scheme (i.e. notional profit foregone by the farmer)
PRIVATE			
PUBLIC	**Public transaction costs (administrative costs of operating the scheme)**	**Compensation payments to participants**	

Typology of transaction costs

Main category	Sub-category	State agency costs: Fixed	State agency costs: Variable with number of participants	Participant costs: Fixed	Participant costs: Variable with e.g. ha entered
Information	Surveying of the designated areas	X			
	Designation of area and designing management prescriptions	X			
	Re-notification /re-design of prescription	X			
	Farmers being informed on the scheme •Information gathering •Participation of courses / workshop •Time spent to collect and assimilate information •Time spent to make decision to participate •Costs spent to collect and assimilate information			X	
Contracting	Promote of the scheme to farmers	X	X	X	
	Negotiation between organisation and farmers		X	X	X
	Administration of contract (making payments)		X	X	X
Policing	Environmental monitoring and scheme evaluation	X			
	Enforcement of farmer compliance		X	X	X

Difference in perceived and real TCs

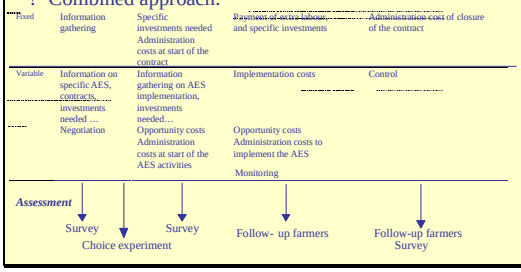


The level of private TCs

- Theoretically the level of TCs for a contractant depends on:
  - Asset specificity: how much new assets have to be deployed (mainly fixed TCs and important at entry of contract)
  - Frequency of transactions
  - Uncertainty in the transactions' environment
- Empirical evidence mainly concentrate on public TCs (Falconer and Whitby, 2002; Vatn, 2002)
- No empirical evidence on private transaction costs

ITAES research

- Therefore WP6 of ITAES concentrates on measuring private TCs
- Combined approach:



Follow-up of farmers

- To have information on operational and administrative costs of AES during implementation a farmer's follow-up has been set up:
- 20 to 30 farmers per country taking note of all costs of AES (divided over measures with high and low uptake) including operational costs, administrative costs and benefits foregone.
- This must give for the first time information on real full costs of AES for farmers
- Enable to relate costs to institutional setting of measures

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Actual situation

	B	NL	IT	FR	TS	FINL	IRL	D	UK
winter covering	12		1	21					
hedgerow management - riparian zones		PM	4	20		PM			
late mowing		PM		5					
buffer strips	5		4						
meadow/grassland management			8		18				
botanical management		PM			5				
meadow bird management	9								
extensive grazing with zero fertilisation				14					
water management	6								
mechanical weeding	8								
traditional biotope						PM			
organic farming - grassland					5				
crop rotation in cave protection zones					4				
TOTAL Farmers	**30**	**18**	**16**	**30**	**20**	**20**	**PM**	**PM**	**PM**

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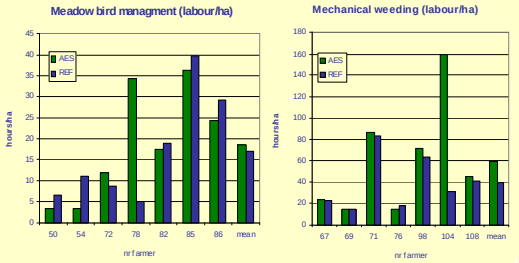
Preliminary results for Flanders

Labour/ha until 30/07/2005



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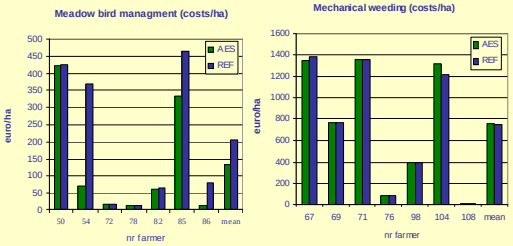
Preliminary results for Flanders

Costs/ha until 30/07/2005



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Preliminary results for Flanders

Hours/ha	Meadow birds (farmer nr. 86)		Mech. weeding (farmer nr. 98)	
	AES	REF	AES	REF
operational general	11,98	18,24	37,9	38,4
operational specific	0,81	2,79	6,66	
administrative general	8	8	25	25
administrative specific	3,5		2	
Total Labour	24,29	29,03	71,56	63,4

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Preliminary results for Flanders

Investments

AES		Type investment Buildings	Machinery	Other	Total	Mean cost/year (€)
AE meadow birds	number	0	0	1	1	3088,88
	%	0	0	100	3,1	
AE small landscape elements	number	0	1	0	1	237,27
	%	0	4,2	0	3,1	
AE water	number	5	2	0	7	1667,66
	%	71,4	8,3	0	21,9	
Applying cover crops during winter	number	1	8	0	9	404,81
	%	14,3	33,3	0	28,1	
Mechanical weeding	number	1	9	0	10	338,42
	%	14,3	37,5	0	31,3	
Parcel edges	number	0	4	0	4	99,26
	%	0	16,7	0	12,5	
Total	number	7	24	1	32	
	%	100	100	100	100	

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Conclusions

- There is a relation between governance structure of AES and the private TCs farmers have when implementing AES
- There exist evidence that private TCs influence participation of farmers
- TCs depend on transaction characteristics
- No empirical work so far on measuring TCs
- ITAES tries to fill the gap

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Governance, transaction costs and institutional quality

The Political Economy and Public Transaction Cost Perspective

V. Beckmann
Humboldt University of Berlin

Outline

(1) Introduction
(2) Objective and approach of WP4
(3) Some selected results
(4) Conclusions and relevance for the new rural development regulation

Governance, Transaction Costs and Institutional Quality

Governance: Management of political, economic and social systems

Transaction Costs: Costs of establishing and running political, economic and social systems, (information, decision, administration, monitoring, enforcement, evaluation, adjustment,...)

Institutional Quality: Transparency, Accountability, … – Attributes of good governance

Good Governance

EC (2001): European Governance. A White Paper

(1) Openness
(2) Participation
(3) Accountability
(4) Effectiveness
(5) Coherence

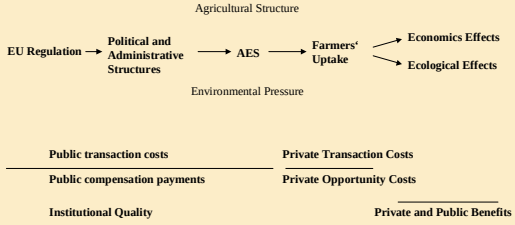
reinforce proportionality and subsidiarity

Objectives and Approach of WP4

(1) Systematic description of the governance structures for AES in the EU
(2) Institutional analysis of the effectiveness and quality of different governance structures (including the EU regulation) for AES

Two steps (a) inventory of institutional settings, (b) institutional analysis based on expert and stakeholder interviews in the selected ITAES countries

Analytical Framework



Analytic Research Questions

(1) Do differences in decision-making and implementation procedures significantly effect the design of AESs and their effectiveness?

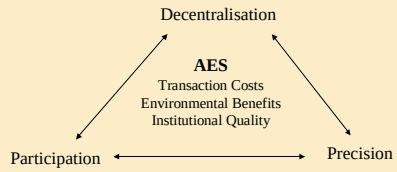
(2) How can the EU deal with the diverse political and administrative structures in their member states?

Regulation (EC) No 1257/1999

"given the diversity of the Community's rural areas, rural development policy should follow the principle of subsidiarity; whereas it should therefore, be as decentralised as possible and emphasis must be on participation and a bottom up' approach…"

(Preamble, Para. 14)

Agri-Environmental Policy The Key Issues



Involvement of different policy levels in design and implementation of AES

	EU	National level (ministries)	Region (adm.)	Local level (admin.)	Civil society organisations	Independent agencies
General objectives and frame-work conditions	X	X	C		C	
Design of AESs (**programming**)		X	X	(X)	C	
Notification	X					
Financing	X	X	X	(X)		
Implementation: **Promotion & advice**		X	X	X	(X)	(X)
- Gathering and approval of **applications**		(X)	X	X		
Payments		X	X	(X)		
Control &enforcement		X	X	X		
Control of proper implementation	X					
Monitoring & Eval.	X	X	X	C	C	X

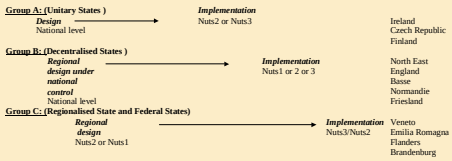
Political and Adminstrative Structures (1)

Extent of decentralisation

Unitary States	Decentralised Unitary States	Regionalised Unitary States	Federal States
Ireland Czech Republic (process of de-centralisation)	France (26 regions) Finland (1 auto-nomous region) The Netherlands	United Kingdom (devolution) Italy (20 regions)	Germany (16 Laender) Belgium (since 2001; 3 regions, 3 communities)

Political and Adminstrative Structures (2)

Implications for the design and implementation of AES



Design of AES and Participation (1)

- Design of AES predominantly under responsibility of MoA
- Increasing involvement of environmental administration (apart from France)
  - e.g. Finland, Czech Republic
  - Still, often lack of co-operation and differing priorities of MoA and MoE, parallel schemes without linkages
- In some cases united MoAE:
  UK, The Netherlands, some German *Laender*

Design of AES and Participation (2)

- Growing influence of stakeholders on design of AES (e.g. Finland, France, REPS3 in Ireland)
- Traditionally strong and influential environmental NGOs in The Netherlands and the UK
- In the Czech Republic design of pilot schemes under SAPARD with involvement of local NGOs

Minor stakeholder participation	Significant stakeholder participation (consultation)	Stakeholder representation in decision making body
Czech Republic (national schemes)	Czech Republic (SAPARD) Germany Ireland Italy (Emilia-Romagna, Veneto) The Netherlands	Belgium Finland France United Kingdom

Precision Environmental targeting

Environmental zoning of AES/designated areas

No Environmental Targeting	Some Environmental Targeting/Zoning	Mainly environmental Targeting/Zoning
Finland Germany (extensification schemes)	Belgium Czech Republic (RDP) France (Local Programmes) Germany (nature conservation measures) Ireland Italy (Emilia-Romagna, Veneto)	United Kingdom (England) The Netherlands Czech Republic (SAPARD)

Conclusions

- Political and administrative structures **do have an impact** on the design of AES, but the relationship is still under explored
- Significant participation of **environmental stakeholders** seems to have a strong impact on the environmental targeting of AES
- Despite all differences in the political and administrative systems, almost **no design of AES at the local level** can be observed

- Further institutional analysis will pay attention on how participation and decentralisation effects transaction costs and institutional quality

New RD regulation (1)

- Unified programming, financing
- Strategy plans, stronger role of evaluation
- Increasing participation, partnerships
- Increasing role of local initiatives (LEADER)
- Options to pay for private transaction costs

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New RD regulation (2)

- Introduction of principles of good governance in the rural development policy
- Some transaction costs will probably decrease other may significantly increase
- More precise guidelines for the governance of AES, but usual formulation is: "**member states shall … according to heir own institutional arrangements**"

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Thank you !

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Workshop on European Agro Environmental policies
Brussels: 13 September 2005

What are we heading to?

David Baldock, François Bonnieux, Pierre Dupraz
INRA-ESR, Rennes

Towards more complexity

- A dramatic change since the early AESs
- A multiple objective policy
- Many programmes with a collection of similar measures
  - A variety of organisations & programming systems
  - Intractable control systems
  - Administrative burden
- Environmental effectiveness?
- Efficiency?
- Coherence?
- Transparency?

A changing context

- Is any measure better than no measure?
- What is an efficient AESs?
- Is it fair to subsidise the reduction of pollution?
- What are the likely impacts of cross-compliance on farming practices?
- Should AESs promote public goods only?

Revising AESs

- A better targeting to local context
- Compromise precision & transaction costs
- A role for community organisations
- Technology for providing non-commodity outputs
- Demand of non-commodity outputs
- Longer & revisable contracts
- Tailored contracts for remarkable sites
- Simplified schemes to compensate natural handicaps