

SIXTH FRAMEWORK PROGRAMME
PRIORITY 8: Policy-Oriented Research



SPECIFIC TARGETED RESEARCH PROJECT n°SSPE-CT-2004-503604

Impact of Environmental Agreements on the CAP

Document number: MEACAP WP2 D4a*

MEACAP: First Stage Ground Rules

Authors: **Stephan Hubertus Gay, Bernhard Osterburg, FAL,
David Baldock and Agata Zdanowicz, IEEP and Davy McCracken, SAC**

Date: February 2005

* Deliverable 4b is concerned with the policy context for the MEACAP project and is entitled 'Recent evolution of the EU Common Agricultural Policy (CAP): state of play and environmental potential'. It includes an up to date profile of the Common Agricultural Policy and its implementation

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Introduction

The purpose of this paper is to provide guidelines for the evaluation of technical and policy measures undertaken in the course of the MEACAP project. This should lead to a consistent approach to evaluation between the different work packages of the project. Comparable information for different measures is a high priority both for coherence and to meet the information and analytical requirements of WP6. Well structured description and analysis of individual measures will be the foundation of the later stages of the project, including economic evaluation with the aid of modelling work. Detailed and fairly consistent data is needed for the proposed modelling in WP6.

A three step approach to evaluation of technical measures has been agreed. This is outlined below. The intention is to progressively deepen the analysis, focussing on a smaller number of measures and eliminating less robust measures as the screening process proceeds. The guidelines indicate which considerations should be taken into account at each stage but very rigid rules are not appropriate in this context and a measure of judgement and discretion will be needed.

The third step of the screening process should be carried out in close co-operation with the consecutive work packages as it will only be done for a small selection of technical measures. In addition, the requirements of WP 6 and 7 have to be considered in greater detail to ensure the usability of information. The selection of these measures will be based on the information from the first two steps.

No pre-determined economic or policy scenarios will be assumed for the screening exercise. We will need to rely on literature and analysis incorporating a variety of assumptions and it is not feasible to re-base the potentially lengthy screening operation on a single set of core assumptions e.g. about oil prices, even though this would have certain advantages. Furthermore, no economic or policy scenarios will be preset for use in the modelling procedure in WP6. A detailed description will be provided for the models selected. Most models appropriate for use in the MEACAP project will incorporate mostly preset economic and policy scenarios which can only partly be adjusted. This limitation has to be kept in mind when drawing up policy recommendations based on the model results in WP7.

Screening of policy measures begins in a limited way in WPs 3-5 for individual measures closely associated with technical options related to Kyoto Protocol or CBD requirements. However, the screening of broader policy measures mainly is concentrated in WP6 where options will be explored with the aid of models. The information required and factors to be considered in the screening and evaluation of policy measures are set out separately in these guidelines. The links between technical and policy evaluation procedures should be noted.

In the first section of this paper a definition of the terms “technical” and “policy measure” is provided. This is followed by the guidelines for screening technical and policy measures respectively, with an accompanying annex relating to WP5. Finally there is a short discussion of the formal farm typology to be adopted, based on FADN. This will be utilised in the modelling stage in WP6.

Terminology

The term ‘**measure**’ is used widely in this project. It is of importance to distinguish between two types of measure. Thus a rather detailed description of both is presented here.

technical measure: set of adjustments to practical farming, forest or associated activities aimed at achieving certain results. A technical measure can have a narrower or broader scope, depending on its objective. It may or may not involve new equipment or ‘hard technology’ (e.g. improved slurry application technology). It may be a change of practice, using existing equipment and knowledge. Often it can be defined by specifying how, when and where a given activity should be conducted (e.g. limiting spreading of organic fertiliser to certain periods or changing cultivation methods on steep slopes to prevent erosion). Other technical measures may be more complex, e.g. conversion to organic farming.

policy measure: a policy intervention aimed at influencing an individual’s or group’s behaviour by intervening in the status quo. In agricultural terms the objective will often be either a change in or the continuation of the current management practices. Measures are generally either compulsory for the farmer (e.g. the prohibition of certain pesticides) or voluntary, sometimes using a set of incentives (e.g. agri-environmental payments).

Certain policy measures are designed to influence technological choices at farm level (e.g. conversion to organic farming) but others leave technical decisions entirely in the hands of the farmer or other policy addressees.

Guidelines for the screening of technical measures in the MEACAP project

A three step screening process for technical measures has been agreed to be appropriate for this project.

Step 1: Description of the technical measure; identification of advantages and disadvantages with regard to cost, environmental side effects, greenhouse gas mitigation / biodiversity potential and technical feasibility (mainly qualitative). Sections 1., 2., 3., and at a basic level, 4- 6 of the guidelines below apply. Some measures are eliminated at this stage.

Step 2: Further elaboration of selected technical measures, if possible in a quantitative form; detailed reference to constraints (social, institutional, environmental etc.); quantitative ranking with ‘killing assumptions’; potentially eliminating some measures. Killing assumptions should be clearly justified; selection of others for detailed discussion under step 3. Sections 1. to 7. of the guidelines below apply.

Step 3: A more complete and detailed analysis of emission factors as well as costs and benefits should generate more complete information for further modelling. Where possible, available information should be shared before the delivery date to improve the incorporation in further modelling. All sections of the guidelines below apply, with a focus on sections 5. and 7. Starting with section 8. some involvement of the WP6 and WP7 teams may well be required, leading the screening process into the field of policy options.

In the Annex an example of an overview page for the first two steps for biodiversity measures (WP5) is given, which can be adapted for use in other Work Packages. The following guidelines cover the main aspects to be addressed in the screening of technical measures. Not all points are of relevance or importance to all measures and data will not always be available. The points should be incorporated in different steps of the screening process as described above. Sections 9 and 10. should not influence the selection of measures in WPs 3-5 but need to be clarified when policy recommendations are considered in the later stages of MEACAP.

1. Description of technical measure: Give a clear description of the envisaged measure to distinguish it from other measures.

2. Main potential: What is the main potential of this measure for either greenhouse gas (GHG) mitigation or biodiversity? How precisely can the objectives / targets be specified?
3. Technical feasibility: Indicate whether this measure is technically feasible and, if already implemented, give reference to the stage of implementation and possible data (for the EU-15 or 25). Where possible, comment on the required degree of change to existing farming practice and any additional conditions necessary for implementation. Consideration should be given to the management changes required to implement the measure at farm level and the extent to which the required knowledge is applicable.
4. Implication for GHG mitigation / biodiversity: Give a short description of the implications for both of the two main environmental concerns of this study. If no implications are likely, this should be mentioned. In the case of GHG mitigation, emission factors should be given. Issues of time frame (for both GHG mitigation and biodiversity some of the outcomes desired may only appear over medium to long-term time horizons), system boundaries and, if known, environmental accounting for inputs need to be incorporated. In a later stage of the screening process the technical measure should be compared to a clearly defined reference, e.g. usual farming / forestry practice (for renewable energies this will in most cases be the usage of diesel / heating oil).
5. Revenues and costs (real as well as opportunity costs): In this section information on costs and revenues should be set out, primarily in monetary terms but it is also helpful to refer to input quantities (e.g. unskilled and skilled labour time, area etc.). Comparability between different Member States is desirable despite the wide ranging spectrum of costs, and expressed per area or output units (ha, LU etc.). Investment costs should be listed in as much detail as possible, including initial investment costs, capacity, maintenance costs, useful life expectancy and usage of other input factors. All prices should be reported without value added tax and a clear reference to the origin of the information should be given, including clarity about the reference time period. Standard agricultural production processes like wheat or rapeseed production do not need to be analysed as they are already available in the models to be used in WP 6.
6. Constraints (Social, institutional, environmental etc.): Broader constraints need to be set out e.g. environmental ‘side-effects’ including noise and smell, location and transport considerations, structure of farming, education, ethics, animal husbandry and

health, conflicting policy aims, food vs. energy, political tradition, aesthetics / local cultural tradition.

7. Potential magnitude of technical measure: Where are the quantitative dimensions for the implementation of this technical measure? What is the likely magnitude of implementation, scale and scope of application? Insignificant measures should be eliminated. Consider climatic and other natural limitations, e.g. altitude, rainfall, frost, soil type that may limit application. Refer to available knowledge (literature, statistics and expert opinions) on this topic. But an extrapolation to the EU-level or to the regional level (NUTS II) is not required. It will be carried out in WP6 for selected measures.
8. Monitoring and control parameter (direct and indirect): How can the implementation of this technical measure be monitored and controlled? Can its effects be distinguished? Possible link with monitoring and control of cross compliance under the CAP. List likely costs and efforts for monitoring and control and comment briefly on feasibility.
9. Support and constraints in existing policies: Are there any relevant supportive policy measures implemented within CAP? Are there other EU or national policies of importance? Do any policy constraints hamper the implementation of this technical measure?
10. Possible policy measure to support this technical measure: How should a policy measure (possibly in the framework of the CAP) be designed to support the implementation of this technical measure? Does a particular institutional framework seem necessary to construct effective political measures? If so, is such a framework in place or emerging in the EU and its 25 member states?

Screening policy instruments and measures

The screening of policy measures proceeds in stages, starting with WPs 3-5 and continuing within an integrated framework in WPs 6 and 7. A number of factors will need to be taken into account in evaluating potential policy measures and selecting the most appropriate ones for further analysis.

These will include:

- Description of the key characteristics of the measure – including clarity about the policy addressees.
- Categorisation by policy type (e.g. regulation, advice, fiscal measure, incentive scheme etc.)
- Information about whether it has been used previously, if so, where and when (e.g. at Member State level, within the CAP or EU environment policy, outside the EU etc.)
Results of previous use will be considered in later stages.
- Potential applicability at the EU level
- Nature of objectives and linkages to other policies and policy objectives, noting particularly any linkages to policies germane to the Kyoto Protocol or Biodiversity Convention. Political congruence with or conflict with other policies will have to be assessed.
- As much clarity as possible about the mechanisms involved, including the actions required by farmers or other addressees and that required of administrative bodies. Administrative burdens and transaction costs will need to be considered.
- Information about expected outcomes from the application of the policy – in shorter and longer term, where the basis for such a judgement is available. Impacts on farm incomes, commodity markets, farm structure etc may be relevant. Some impacts will be unintended and may be unwelcome.
- Information about budgetary aspects and implications for public expenditure where relevant
- Potential limitations and constraints e.g. types of farm, forest or practice covered/excluded, uncertainties about technology or costs, acceptability to farmers,

distributional concerns, particular scale or location sensitivities, market assumptions, equity issues, ethical considerations etc.

- Monitoring and evaluation issues.

Information in these categories and other factors which are relevant to an evaluation should be compiled into a policy profile. This will be utilised to make assessments in a comparative framework in WPs 6 and 7. The foundation for eventual judgements on key parameters such as technical and economic feasibility, efficiency, effectiveness, environmental acceptability etc will be these policy profiles.

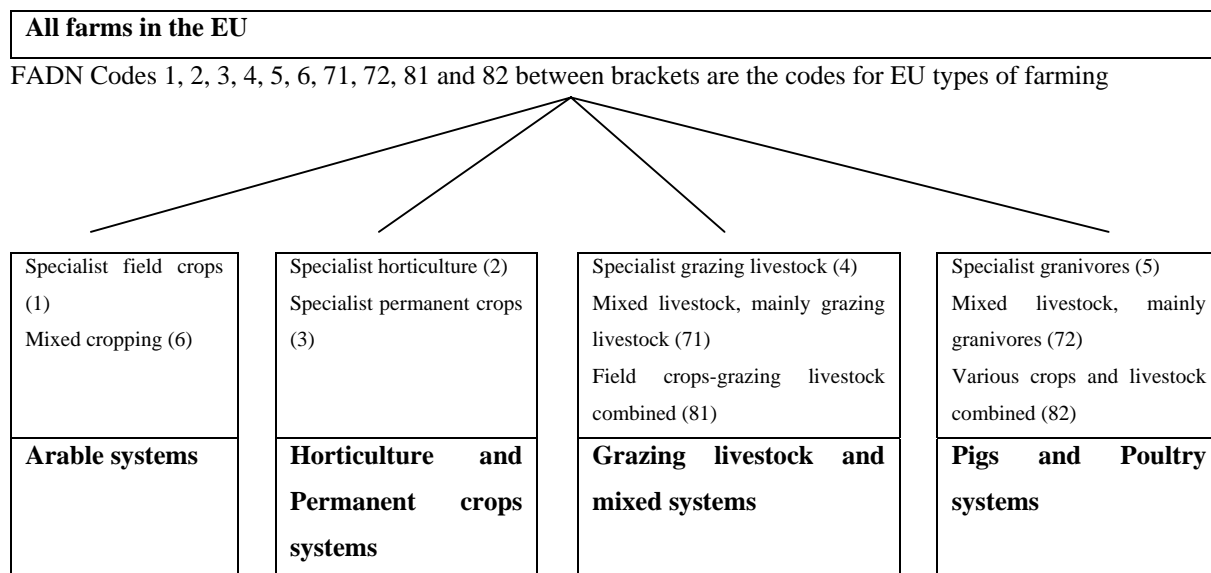
Farm typology and the use of FADN

A farm typology is needed to assure in advance the possibility for later modelling of measures in a consistent way. As forestry will only be included to a limited extent in the sector modelling process, no distinction is required beforehand between different types of forestry.

Discussions with different partners have led to the opinion that it is not practical for all work packages to use the same detailed farm typology, albeit it may be useful within a particular work package. However, it has been decided to share a single broad or “top level” division of farm types as proposed by the Scottish Agricultural Council in August 2004. This will form the only farm typology to be maintained in all work packages and is, therefore, presented below. It is based on FADN categories since this database has advantages for European level analysis. A consistent database is available at least for EU15 countries.

For the further work in WP 6 and 7, it is desirable to use the FADN data to distinguish between farms which are adopters and non-adopters of a technical measure.

Figure: Top level farm typology for the MEACAP project



Despite its advantages, all involved should ensure that they remain aware of some of the difficulties associated with the FADN database:

- FADN is only just being instigated in the new Member States, so there is no historical database available in these countries and it may take some time for the system to be up and running in all countries. Even once it is in full operation, it is clear that the

thresholds set for FADN in the new member states will exclude a large proportion of farms in these countries because of their small size. It will therefore be essential for MEACAP partners to appreciate the significance of farms excluded from the database

- It will be necessary to form some cross-linkages between the FADN-based farm type classification used in MEACAP and other agricultural, land use or environmental characteristics relevant to the analysis. Sometimes it may be appropriate to use other available information as reference e.g. land use data, GIS-based information.
- It will also be important to know whether the approaches taken can be used to identify trends over time, especially with regard to being able to predict likely changes in land-use, landscape mosaics and greenhouse gas mitigation.

Annex: WP5 technical measures: information requirements

Front page of summary information that should be collected for each technical measure selected in WP5. This page would include all the required information for the first and most of the information needed for the second step of the screening process. More detailed information collected on each measure and used in the qualitative scoring process would be held on subsequent pages under each of the 10 headers shown in the guideline.

Technical Measure		Focus of Technical Measure			
		In-field		Landscape elements	
		<i>Enhance</i>	<i>Recreate</i>	<i>Enhance</i>	<i>Recreate</i>
Arable Systems	<i>Intensive</i>				
	<i>HNV</i>				
Horticulture & Permanent Crop Systems	<i>Intensive</i>				
	<i>HNV</i>				
Grazing & Mixed Systems	<i>Intensive</i>				
	<i>HNV</i>				
Pigs & Poultry Systems	<i>Intensive</i>				
	<i>HNV</i>				
Semi-subsistence Systems					

Broad description																																							
Evaluation Stage 1*																																							
Potential biodiversity impact					Technical feasibility					Cost effectiveness					Environmental added value																								
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5																				
Evaluation Stage 2*																																							
Potential biodiversity impact					Technical feasibility					Cost effectiveness					Environmental added value					No Social constraints					No animal/crop health or welfare considerations					Available knowledge									
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

* The potential value of a measure to each category should be scored by highlighting the range of scores of most relevance (with 1 being a low score and 5 being a high score). Measures which scored 1-2 across all or most of the categories at Evaluation Step 1 would not progress to Evaluation Step 2.