AGRIGRID

Methodological grids for payment calculations in rural development measures in the EU

Framework and methods for data collection
'Agrienvironmental measures'
(Measures under 214 of Reg. 1974/06)

Second draft

AUA

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Date: 5th of April 2007

1. Objective of the subtask

The designed framework is aiming at facilitating data collection documenting current methods of payment calculations in the agri-environmental measures (AEM), in seven partner countries (and selected regions): Scotland (UK), Germany (DE), Greece (GR), Finland (FI), Italy (IT), Czech Republic (CZ), Lithuania (LT) as well as Spain (ES) and Poland (PL) .

Although the main attention will be paid to the payment calculation methods applied in the AEM valid for 2007-2013, several questions (e.g. uptake or other statistical data, development of payment rate) will be focused on earlier AEMs as well.

2. Methods for data collection

We recommend using two methodological approaches for data collection which can be variously combined in each country:

a) literature reviews of key policy documents (e.g. RDPs, national governmental statements and regulation, EU regulations), research studies and specialized literature deal with payment calculation issues as well as relevant grey literature and relevant statistical data.

b) semi-structured interviews with key representatives of government agencies and organisations responsible for payment calculations in each specific field.

2.1 Scope of the project

2.1.1 <u>Determination of regions</u>

Research will take place in seven partner and two sub-contractor countries. In all countries, except Germany, Italy and Spain, the methods of payment calculations will be analysed within the whole country approach. In these three MS due to their administrative structure, a number of regions will be chosen according to diversity and data availability.

List of participated countries / regions:

- Scotland (UK)
- Germany (DE)
    - _____
    - _____
    - _____
- Greece (GR)
- Finland (FI)
- Italy (IT)
    - _____
    - _____

- _____

■

■ Czech Republic (CZ)

■ Lithuania (LT)

+ Spain (ES)

- _____

- _____

+ Poland (PL).

2.1.2 <u>Determination of specific schemes</u>

Schemes under code 214 (agrienvironmental measures) of Reg. (EC) No 1974/2006, are of interest in the present framework. Each partner or subcontractor should deal with the organic agriculture scheme[1] applied in the chosen regions or MS. When there are more than one types of contract under the organic scheme, e.g. separate livestock and plant organic production schemes in Greece or separate sectoral organic subschemes in Cyprus, partners and subcontractors should take all in account since there are differences in the calculations. Furthermore each partner and subcontractor should chose two other country-region specific, schemes. Selection criteria: area coverage anticipated, number of beneficiaries anticipated, representativeness of the objectives set (natural resources/landscape/biodiversity protection or maintenance, climate change, or other).

2.2 How to fill in the questionnaire - recommendation

- translate the questionnaire into your language
- choose the appropriate approach for your country:

  - in the case of literature review: key policy documents should be gather, especially chapters about the selected RD measure from the new RDP (2007-2013)
  - in the case of interviews: carry out interviews with the institutions / actors identified

- mention particular sources of data under each question / table to be clear where data came from

- attach the translation in English of the text in parts of your RDP (points 5.1, 5.2, 5.3.2.1, 5.3.2.1.4 and 5.3.2.1.6 in Annex II of Reg. 1974/06) and write down short overviews over the literature reviewed

- write down short protocol of the interviews carried out indicating extra remarks and own observations.

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[1] Should it be called measure, submeasure or anyother term. What is essential is that it should be at the level of the contract.

2.3　How to conduct the interviews

2.3.1　Selection of respondents

The respondents should be selected applying the following criteria:

- respondents who are responsible for payment calculations in the agri-environmental measures, e.g. representatives of research institutes, consultancy firms, representatives of universities, expert groups, officers at the Ministry of Agriculture and / or Ministry of Environment, , etc.

- respondents who deal with the final payments implementation and can have certain influence on the final level of payment, e.g. officers at the Ministry of Agriculture and / or Ministry of Environment, representatives of paying agencies, expert groups, representatives of agencies for nature conservation and landscape protection etc.

2.3.2　How to conduct the interview

- Please describe briefly what is the scope of AGRIGRID project and main objective of the actual subtask.
- *(While presenting the project please refer to the Internet site of the project http://www.macaulay.ac.uk/agrigrid/ as the source of the basic information on our activities)*
    - You may give to the respondents the questions before the interviews to make them familiar with the issues we intend to investigate.

As the interviews deal with qualitative data it is indispensable to carefully take notes on the course of the interview. Therefore it is recommended to conduct the interviews by at least two researchers to be able to make the notes efficiently and to review the impressions and results of the interview in a team.

- Mention that if respondents will be interested in the results, they can look at the project's homepage, where final reports will be uploaded as soon as they are completed.

2.3.3　Protocol

Each interview is documented in a protocol, which is only for internal use and contains the answers to the questions asked as well as the additional remarks made by the interviewee. The protocol should include:

- the name of the person interviewed and representing institution
- date and place
- remarks and comments of the interviewee that cannot be included in the questionnaire
- own observations and reflections on the interview

3. Timetable

Steps	Responsibility	Deadline
First draft of general framework sent to Ps	P4	till 15th of February 2007
Comments on the first draft sent back to P4	Ps	till 22nd of February 2007

Final version of general framework completed and sent to Ps	P4	end of February 2007
Creation of 6 questionnaires for selected RD measures and sent to Ps for comments and modification	P1,P3,P4,P5,P6	till 9th of March 2007
Finalization of 6 questionnaires according to comments of partners and sent to PS (+Sc) for fulfilment	P1,P3,P4,P5,P6	till 05th of April 2007
All questionnaires completed and sent back to P1,P3,P4,P5,P6 (WP2-WP6 team)	Ps (+Sc)	till 4th of June 2007
First draft of summary reviews for each RD measure sent to Ps	P1,P3,P4,P5,P6	till 18th of June 2007
Comments on the summary reviews	Ps (+Sc)	till 25th of June 2007
Summary reviews for each RD measure completed and sent to P4	P1,P3,P4,P5,P6	end of June 2007
Clarification of summary reviews and additional necessary information changes with P1,P3,P5,P6	P4	till 19th of July 2007 (end of review workshop)
Outcome of measure-specific reviews presented at review workshop	P1,P3,P4,P5,P6	from 16 to 19 of July 2007
First draft of deliverable D2 (synthesis report from the 5 summary reviews) sent to Ps	P4	end of July 2007
Comments on the first draft D2 sent back to P4	Ps	till 15th of August 2007
Final version of deliverable D2 completed and sent to P1 (coordinator)	P4	end of August 2007

Note:

P4 = Czech team; Ps = all 7 partners; Sc = subcontractors (will be selected later)

4. General framework

for creation of questionnaires focused on the particular RD measure

The proposed framework is structured in 4 parts .

Proposed structure:

    I.   Basic data about the RD measure as a whole (AEM, LFA, Natura etc.),

    II.   Information about the methodology of the payment calculation,

    III.   Information about the data sources,

    IV.   Contextual information.

I. Basic data

From this part we would like to obtain basic information about the <u>whole structure</u> of the AE Measures ; level of the payment for single schemes, sub-measures or categories; measure uptake; existence of payment differentiation and changes with respect to the last programming period. Collection of additional information about the eligibility criteria (conditions for RD measure access) and objectives of selected AEMs are also a part of this framework.

1.   Fill in following table „**Overview of the current AEMs"** according to the instructions below:

    a)   Name of sub-measures, schemes or categories of the AEM

        (please, it has to be down to the level of the contract signed with the farmer)

    b)   Differentiation of the payment = existence of more payments for one sub-measure, scheme or category (*e.g.: by region, farm structure, time of commitments for OF, slope land etc.*); in this column write NO or YES according to existence of differentiated payments (also write their payment levels or intervals in the column c));

    c)   Level of payment (presumption is €/ha, if different unit is used, please write it with). *For countries, where EUR is not used write the level of payment as in national currency so in EUR. Eventually add exchange rate used*

    d)   The percentage level of proposed payment compared with calculated

        If the level is differing from 100% write the <u>reasons below the table</u>.

    e)   Targeting of payments – determination of areas where it is possible to enter into the particular sub-measure, scheme or category.

        There are two scales of targeting in the case of AEMs.

Horizontal	***Zonal:***
A measure/submeasure/scheme applicable in all the corresponding administrative level. NUTS I, NUTS II,	*A measure/submeasure/scheme applicable in part of the corresponding administrative level.*

Focused	*Non-focused*

Focused on specific areas (Nitrate Sensitive Areas-Nitrate Vulnerable zones, High Nature Value Areas, specific crop areas (rice fields, intensive crops), erosion susceptivle zones, LFAs)

Thus a scheme can be horizontal and focused e.g. can be implemented in all NVZs of a region/country, zonal and focused e.g. protection of a specific valuable landscape etc.

Existence of measure (single sub-measures, schemes, categories) before the year 2007 and change of its payment level in the new RDP. The existence of measure is investigated in scope of the earlier RDP for programming period 2000/2004-2006. If the measure existed previously, fill in column f) with previous payment level.

Table 1: Overview of the current RD measure

a	b	c	d	e	f
Name of measure (i.e. sub-measures, schemes, categories)	**Is payment somehow differentiated? Yes/No**	**Level of payments**		**Targeting**	**If measure existed previously, fill in previous payment level.**
		EUR/ha (CZK/ha)	**% in calculated level of payment**		

Are in your country implemented any differentiated AE payments. If YES (*should be already mentioned in column b) of the table 1 above*), describe what kind of differentiated payments exists (How are payments differentiated?) and why such differentiation is provided .

Natural conditions	**Farm structural characteristics**	**Regional characteristics**	**National Park, Protected Landscape Area, Natura areas**

2. Have differentiated approaches been implemented in past but not in subsequent programme?

    ☐   YES

    ☐   NO

    If YES, write which and why do not continue?

    ……………………………………………………………………………………

    ……………………………………………………………………………………

3. Have differentiated approaches been discussed in-house but not been implemented?

    ☐   YES

    ☐   NO

    If YES, write which and why have not been implemented?

    ……………………………………………………………………………………

    ……………………………………………………………………………………

4. Are in your country applied any maximum criteria (e.g.: farm size, amount of money) which limit level of payment?

    (degression of payment according to hectares = full support up to 100 ha, 50% up to 300 ha, 0% over 300 ha; maximal payment per farm; payment for limited time of commitment as in OF, etc.).

    ☐ YES

    ☐ NO

    If YES, describe the limits, particular sub-measures / schemes by which are used and reasons for setting these limits:

    ………………………………………………………………………………………

5. Are in your country provided payments which levels exceed limits given in EC Regulation nr. 1698/2005 (eventually any national limits)?

    ☐ YES

    ☐ NO

    If YES, provide the justification given and describe the payment calculation levels:

    ………………………………………………………………………………………

6. What problems did you encounter during the payment calculations? (What problems have been encountered?)

    (e.g.: determination of decrease of the hay production incurred by lower fertilization, more difficult work in vineyards with higher slope land, etc.)

…………………………………………………………………………………………………

…………………………………………………………………………………………………

7. What solutions did you derive for these problems? (What solutions have been derived for these problems)?

    …………………………………………………………………………………………………

    …………………………………………………………………………………………………

8. Which issues remain unsolved and why?

    …………………………………………………………………………………………………

    …………………………………………………………………………………………………

9. Is potential over- and under-compensation an issue when designing new measures and payment schemes?

    …………………………………………………………………………………………………

II. Methodology of the payment calculation „How payment levels are currently calculated"

From the second part of the questionnaire we would like to obtain information about the methodology of payment calculation <u>for the three selected agrienvironmental schemes</u>. We are interested mainly in approaches using for the calculation, with identification of foregone income (losses), additional costs and possible savings. It is necessary to pay attention to transaction costs as well. Regarding to the project aims limits of payments, problems with payment calculation and their solutions are also investigated.

It is important not to forget the connection between payments and so-called "baselines" (conditions resulting from the national law and cross-compliance (either SMRs included in Annex III or GAEC included in Annex IV of Regulation (EC) No 1782/2003), which are not possible to pay out within the AEM payments.

10. Identification of commitments entering into the payment calculation of scheme measure and detail description of payment calculation process:
    According to EU regulation payments should compensate income foregone and additional costs,:
    - <u>foregone income / losses</u> (e.g.: decrease of production in OF, lower quality of hay production due to later cutting, etc., in addition also counteractive savings are included as for example price premium for organic products);
    - <u>additional costs</u> (e.g.: obligatory training, additional grass cutting, costs at soil analysis, higher labour costs, etc., in addition also counteractive savings are included as for example the savings of fertilization or spraying costs in OF);
    - <u>transaction costs</u> (*since the transaction costs can be used only within agri-environment and animal welfare payments we decided to analyse them in separate question below*).

    Please fill the following tables:

table 2

	Contract level description	Contractual obligation	Specifications for the obligation	Relevant management practice	Regulatory measures
	1	*2*	*3*	*4*	*5*
Description of the coloumn	*Reference to the code, describe briefly the agreement - contract signed by farmers*	*Describe the specific contractual obligation*	*Fill if the obligation is linked to some prerequisite (environmental, social or other)*	*Specify the land use / management practice changes or maintenance resulting by the obligation.*	*Identify relevant cross compliance[2] or other regional, national or EU regulatory measures*
Example	3.Nitrate pollution reduction in plain areas. 3.1. Set aside of irrigated area	Set aside of the 18% of the irrigated farm area	-	Leave uncultivated 18% of the irrigated land each year.	
		Field margins' maintenance at least 2% of the total contract area	Field margins	Leave uncultivated all field margins resulting to at least 2% of the irrigated land each year.	Cross compliance: 1,5 m should be left uncultivated near water reservoirs, ditches etc. in Nitrate Sensitive Area (NSAs)
	3.Nitrate pollution reduction in plain areas. 3.2. Non irrigated crop rotation of irrigated area	Non irrigated crop rotation of the 18% of the irrigated farm area	-	Cultivate a non irrigated crop on at least 18% of the irrigated land each year.	
		Field margins' maintenance at least 2% of the total contract area	Field margins	Leave uncultivated all field margins resulting to at least 2% of the irrigated land each year.	Cross compliance: 1,5 m should be left uncultivated near water reservoirs, ditches etc. . in NSAs
	3.Nitrate pollution reduction in plain areas. 3.2. Non irrigated crop rotation of irrigated area	Reduction of inorganic Nitrate fertilisers	Land with slopes of more than 10%	Maximum amount of Nitrate fertilisers aloud 20% lower than the Cross compliance obligation	Cross compliance: Maximum N fertiliser amount Corn 280 kg/ha, cotton 130 kg/ha, sugar beets 140 kg/ha, winter

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[2] SMRs included in Annex III or GAEC included in Annex IV of Regulation (EC) No 1782/2003

					cereals 120 kg/ha in this NSA
		Winter cover with a leguminus crop	Land with slopes of more than 10%	The land should be sown during the winter with a leguminus crop	Cross compliance: 1,5 m should be left uncultivated near water reservoirs, ditches etc. . in NSAs.

table 3

Relevant management practice	Cost changes	Cost change calculations	Data description	Income changes	Income change calculations	Data description
Specify the land use / management practice changes or maintenance (Coloumn 4 of table 1)	*Describe all relative cost changes identified*	*Describe the specific calculations and methodologies used*	*For each data item used provide the source*	*Describe all relative income changes identified*	*Describe the specific calculations and methodologies used*	*For each data item used provide the source*

Note: Since this area is one of main objectives of the AGRIGRID project, it is necessary to provide an explanation for the payment calculations in maximum detail as possible - detail description of compensatory payment layout = what items were included in calculation and what is the rationale of including such items into the calculation...)

table 4

Level		Applicable max level of payment				Combination with other measures, submeasures either AEM or non AEM(RDP and other).		Transaction cost		
		Parameters used (socio-economic etc.)	Level set (per value of parameter)	In case of exceeding the level describe the specific calculations and methodologies used	For each data item used provide the source	Parameters used (socio-economic etc.)	Existing limitations or incentives (per value of parameter)	Parameters used (socio-economic etc.)	Describe the specific calculations and methodologies used	For each data item used provide the source
Measure	X									
Submeasure	X.1									
Submeasure	X.2.									
Submeasure	X.....									

11. If it is not possible to link payment calculations and cost and income change elements to specific practices then please use the following format..

Write in following sequence (*see examples for AEM in CZ or Hungarian examples in annex 3*):
A) write **name of particular sub-measures**, schemes or categories
B) determination of **eligible criteria** (*fill if the sub-measure is limited for some specific areas*)
C) describe **relevant commitments** of particular sub-measures, schemes or categories
D) describe necessary **land use /management practice changes** or maintenance resulting from these commitments and identification of those which are entering into the payment (*for those which are not entering into the payments write reasons*)
E) finally describe the **process of payment calculation** for chosen sub-measures, schemes or categories of the RD measure (preferably into the table). The aim is to identify particular items of payment, its data source and used reference period. For better understanding please use notes describing the process of payment calculation in more detail.

12. If it is not possible to describe the process of payment calculation for AEMs / chosen sub-measures in your country by using the procedures suggested above, explain used methodologies of calculation more detailed here:
………………………………………………………………………………………..
………………………………………………………………………………………..
………………………………………………………………………………………..
………………………………………………………………………………………..

III. Data sources

This part aims at data, which are used for the payment calculation. The objective is to compare availability of data and to found out which data sources are used and for which purposes.

13. Fill in following table according to the instructions below:
a) specify data sources used for calculation for RD measure (*try to provide whole list*);
b) write organisation responsible for data source
c) periodicity (*it means how frequently are they up-dated, published*);
d) spatial aggregation level (*it means how data are used within payment calculation, not in which form exist*)
e) purpose of the source usage (*write briefly the main range of usage within payment calculation*).

Table 5: The list of the data sources necessary for payment calculation and their usage

(examples in table related to AEM in CZ)

a	b	c	d	e
Data sources	**Organisation responsible**	**Periodicity**	**Spatial aggregation level**	**Purpose of usage**
FADN	VUZE	annual	whole country	• Gross margin of particular crops / animal categories • …
LPIS				
Data from National Statistic Office	Czech Statistic Office		whole country	• Average wage in agriculture – cost of hour • Number of LU – average animal density
Norms / cost limits		once in two years	whole country	• Costs of mechanization (cutting, ploughing…)
Prescripts, laws				
Technical bibliography				
Research outputs				
Case studies				• Cost for manual work (manual cutting, …) • Costs for sheep breeding on dry grassland
Expert studies				• data for organic farming (vegetable and permanent culture)
Commodity reports				• clarification of average yields of crops
Green report of MoA				
data from associations				

14. Which data do you miss for easier calculation (= availability of which data would be made the payment calculation easier)? Could you specify?

   …………………………………………………………………………………………

   …………………………………………………………………………………………

IV. Contextual information

The final part of the questionnaire covers subsidiary information which make possible to provide statistical comparison as among RDP measures as among countries. Next a payment administration issue is added where we would like do investigate administrative complexity of the payment calculation (i.e. how many institutions are involved into the calculation).

15. Statistical comparison – indicators of " uptake"

   Based on data in tables below, we can compare following indicators:

- share of areas under the selected RD measure as a whole / or particular sub-measures, schemes or categories / in the UAA (%);
- share of farms / holdings involved in the RD measure (in classification according to sub-measures, schemes or categories) in whole number of farms / holdings in agriculture (%);
- share of financial expenditure of the RD measure in the total budget of RDP (%);
- average payment in €/ha of the selected RD measure (eventually per farm,…).

table 6

	2004		2005		2006	
		%		%		%
UAA						
Area of agricultural land in RD measure						
Number of holdings / farms (total)						
Number of holdings / farms entering in RD measure						
financial expenditure for RDP (total)						
financial expenditure for the RD measure						

16. Could you consider administration complexity of calculation?
   a) How many institutions are involved into payment calculation:
      ☐ 1
      ☐ 2 – 3
      ☐ more then 3
      Write their names:

   b) How many institutions are involved in making observations / controlling / testing of payments:
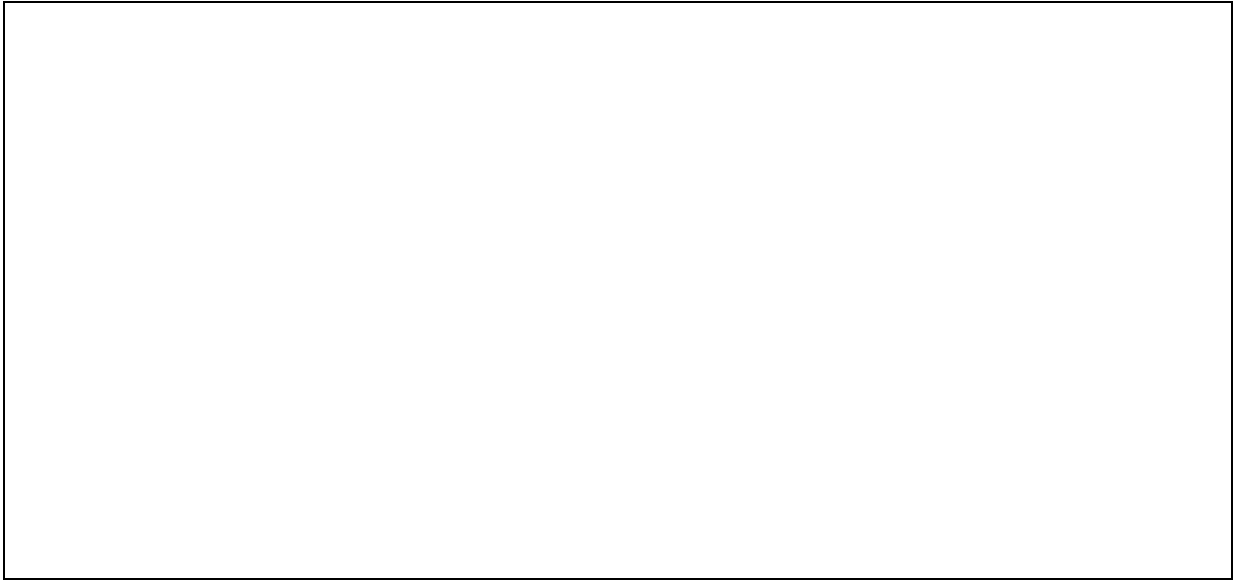   ☐ 1
      ☐ 2 – 3
      ☐ more then 3
      Write their names:

17. Write down state rules and regulations which define the AEMs:
   ……………………………………………………………………….

If you have any additional comments on the survey, please use this box:
(It is expected to add here: remarks and comments of the interviewee that cannot be included in the questionnaire, own observations and reflections on the interview, etc…)

Annex – examples of payment calculation process *(source: RDP 2004-2006 Hungary)*

Please use this example as preliminary form which is necessary to complete more detail information.

Integrated crop management on arable land

A) Relevant commitments (management prescriptions)
1. preparation of full soil sample analysis by an accredited soil laboratory when entering into the scheme and in the last year of the commitment
2. preparation of nutrient management plan based on soil analysis results
3. N fertilizer rate cannot exceed 170 kg/ha/year
4. in case of arable crops use of highly toxic pesticides are prohibited
5. in case of vegetables, plant protection products can be used which are classified as "permitted without restrictions" ("green") or "permitted with moderate restrictions" ("yellow"), listed in NRDP regulation, („restricted" (red) active agents is allowed only when epidemic or gradation is to be prevented based on the prior approval and permit of the Plant and Soil Conservation Service)
6. plant varieties with resistance/tolerance against at least one major disease must be selected
7. use of pest forecasting system is obligatory

B) Management changes (agronomic assumptions)
1. cost of soil analysis ,
2. cost of nutrient management plan
3. 15% income loss due to limited nutrient supply
4. higher cost of environmentally friendly pesticides
5. same as above
6. extra cost of resistant/tolerant varieties of seeds
7. extra cost of pest forecasting system application

C) Table of process of payment calculation

Items	Losses [Euro/ha]	Gains [Euro/ha]
Extra income		
subtotal		
Income loss		
15% due to limited nutrient use	72	
subtotal	72	
Cost saved		
conventional pesticide cost		104
cost of conventional seed		48
subtotal		152
Extra cost		
Env. friendly pesticides	125	
complex soil analyses in every 5 y	8	
use of pest forecasting system	19	
cost of resistant seed	58	
nutrient management plan	4	
subtotal	213	
total losses/gains	285	152
income forgone		
Payment rate	133	

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Organic grassland management scheme

A) Relevant commitments (management prescriptions)

1. comply with the rules of the EU Council Regulation 2092/91 on organic production
2. in case of grazed grassland
    i.   grazing livestock allowed: cattle, sheep, goat, buffalo, horse, deer, red deer, and donkey
    ii.   livestock density must be kept between the following values:

grassland habitat types	minimum and maximum livestock density (LU/ha)
sandy grasslands	0,2-0,5
saline pastures and grasslands	0,2-0,5
hill dry pastures	0,2-1,0
dry grasslands with scattered trees	0,2-1,0
wet meadows	0,2-1,0
floodplain grasslands	0,2-1,0

3. shepherded or rotational grazing must be applied (in one section the number of grazing days must respect grass yield but must not exceed 10 days)
4. no pesticide, over sowing, chemical weed control, application of chemical fertilizer and irrigation are allowed
5. in the case of mowed grassland
    a.   during the mowing (cutting) of the meadows/pastures game deterring chains and nature (game)conservation cutting methods should be applied (cutting from the centre of the field outwards, field edges being cut last)
    b.   mowing is prohibited during wet periods when it can cause damage to the habitat

B) Management changes (agronomic assumptions)

1. cost of organic inspection (80% is compensated)
2. no agronomic effect (at present livestock density rarely reaches the upper limit, restriction is for avoiding eventual overgrazing)
3. cost of shepherding is calculated at the rate of 3 hours/hectare/year
4. due to no nutrient supply the hay production is less by 30% on average
5. a) 10% extra cost on cutting, b) 5% loss of hay value

C) Table of process of payment calculation

Items	Losses [Euro/ha]	Gains [Euro/ha]	Data sources
Extra income			
Subtotal			
Income loss			
30% Hay yield loss due to lack of fertilization	80		
5% income loss due to limited mowing	13		
Subtotal	93		
Cost saved			
Fertilization cost		47	
Subtotal		47	
Extra costs			
80% of organic inspection cost	1		
10% extra cost on cutting	3		
cost of shepherding (3 hours/ha/year)	6		
Subtotal	10		

TOTAL losses/gains		104	47
Income forgone			
	Payment rate	59	