

AGRIGRID

Methodological grids for payment calculations in rural development measures in the EU (Project Reference: SSPE-CT-2006-044403)

Specific Targeted Research Project under priority 8.1 Sustainable management of Europe's natural resources:

8.1.B.1.1 Modernisation and sustainability of agriculture and forestry, including their multifunctional role in order to ensure the sustainable development and promotion of rural areas

Task 14 New methods for calculating premiums in the rural development measures

Methodological grids for payments in animal welfare measures (215) in the EU (D8)

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List of project partners

Project partner	Short name	EU Member States
The Macaulay Land Use Research Institute	MLURI	Scotland
Institute of Farm Economics Johann Heinrich von Thuenen-Institute	vTI	Germany
Agricultural University of Athens	AUA	Greece
Institute of Agricultural Economics and Information	ÚZEI	Czech Republic
Lithuanian Institute of Agrarian Economics	LAEI	Lithuania
MTT Agrifood Research Finland	MTT	Finland
National Institute of Agricultural Economics	INEA	Italy
Humboldt University Berlin	HUB	Germany
Subcontractor		
Instituto de Desarrollo Rural Sostenible	IDRiSi	Spain
Agrotec Polska Sp. z o. o.	-	Poland

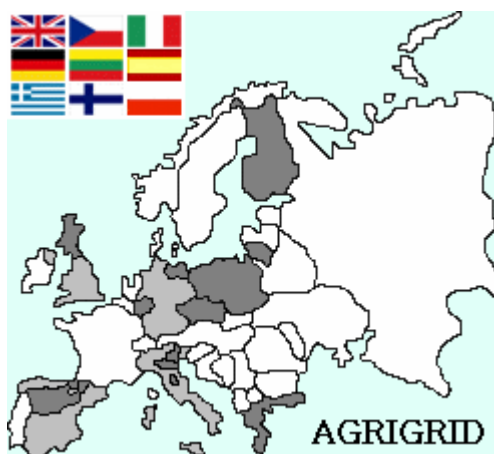


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List of abbreviations

DE _{MWP}	Mecklenburg West-Pomerania (Germany)
EC	European Commission
ES _{CL}	Castilla Y Leon (Spain)
EU	European Union
EUR	Euro
FADN	Farm Accountancy Data Network
FI	Finland
GAEC	Good Agricultural and Environmental Condition
GR	Greece
ha	hectare
H ^A	Mountain area type in Czech Republic
H ^B	Mountain area type in Czech Republic
IT _{ER}	Emilia – Romagna (Italy)
LFA	Less Favoured Area
LVZ	<i>Landwirtschaftliche Vergleichszahl</i> , an indicator measuring the quality of agricultural land
RDP	Rural Development Programme
RDR	Rural Development Regulation
SCO	Scotland
SMR	Statutory Management Requirement
UAA	Utilised Agricultural Area

1. Introduction

The aim of the report corresponds to the overall AGRIGRID project aim to develop methodological grid for the Animal Welfare Payments (further – Animal Welfare) measure payments calculation applicable across EU countries. The report covers methodological issues for Animal Welfare measure grid development; main points of EU regulation emphasizing baseline requirements, obligatory commitments and related costs/revenues components; payment differentiation; review of cost components calculation process; implementation of application of payment limits and RDR requirements; identification of the problems encountered and final remarks.

Methodology of Animal Welfare measure grid development includes graphical representation of logic framework, general explanation of main data development approach and step-by-step template.

Animal Welfare measure is one of the measures targeting the sustainable use of agricultural land under the Axis 2: Improving the environment and the countryside. Animal welfare payments can be paid on the basis of Articles 36 (a) (v) and 40 of Regulation (EC) No 1698/2005 and Article 27 point 5.3.2.1.5 of Annex II of Regulation (EC) No 1974/2006 in the EU.

The reference level for calculating income foregone and additional costs resulting from the commitments given shall be the relevant standards and requirements referred to in Article 39(3) and Article 40(2) of Regulation (EC) No 1698/2005.

The compensatory payment for Animal Welfare payments measure shall be granted as: a flat rate, annually, can have sub-measures, can be differentiated. The Animal Welfare payment level has to be determined on the basis of standard costs with regard to standard assumptions of additional costs, income foregone and transaction cost moreover calculated payment cannot exceed 500 EUR/LSU per year.

The object for analyzing is six countries of nine analyzed in AGRIGRID project, which have chosen to implement Animal welfare measure in RDP for 2007-2013: Mecklenburg West-Pomerania (Germany) (DE_{MWP}), Castilla Y Leon (Spain) (ES_{CL}), Finland (FI), Greece (GR), Emilia – Romagna (Italy) (IT_{ER}), Scotland (SCO).

The Animal Welfare measure was implemented during 2000-2006 Programming period only in Germany and Scotland

The section Payment differentiation shows different options of differentiation implementation among the countries explored. After the research was carried out, differentiation categories, sub-categories and elements were identified and adopted for the grid for Animal Welfare measure payment calculation.

It was noticed that countries use different approaches for Animal Welfare payments differentiation: animal species (DE_{MWP}, FI; IT_{ER}, ES_{CL}), applied husbandry conditions (DE_{MWP}), farm system (IT_{ER}, ES_{CL}), and commitment typology (IT_{ER}).

Summarizing the results on Animal Welfare payment calculation processes, it was noticed that payment could include two additional elements – savings and additional profit- besides additional costs, income foregone and transaction costs, which are mentioned in the EU Regulation. To our mind, only three elements (additional costs, income foregone and transaction costs) have to be used for Animal Welfare payment calculation. It is very difficult to estimate additional income because the amount mostly depends on market conditions. Despite the exception in Finland, where additional income is incorporated in to the Animal Welfare payment calculation, we propose not to include it to the grid, because of fluctuations of the prices, which influence income, and additional income could not appear at all.

With reference to the comparative analysis, it was observed that, during the payment calculation process, it was complicated to determine the base line, there was an absence of reliable data and complexity of costs which are components of payment calculations because of changes of farming system and management.

Various combinations of different data sources such as legal acts, statistical data, scientific literature, handbooks, and experts' recommendations, were used to calculate Animal Welfare payments across the different countries.

Calculation of cost/revenue components section outlines how the revenue and eligible costs for the Animal Welfare payment calculation were determined, and the main points within payment calculation across countries and an overview of data sources.

The section on the implementation of payment limits and RDR requirements reviews payment characteristics, which have an influence on the payment calculation process.

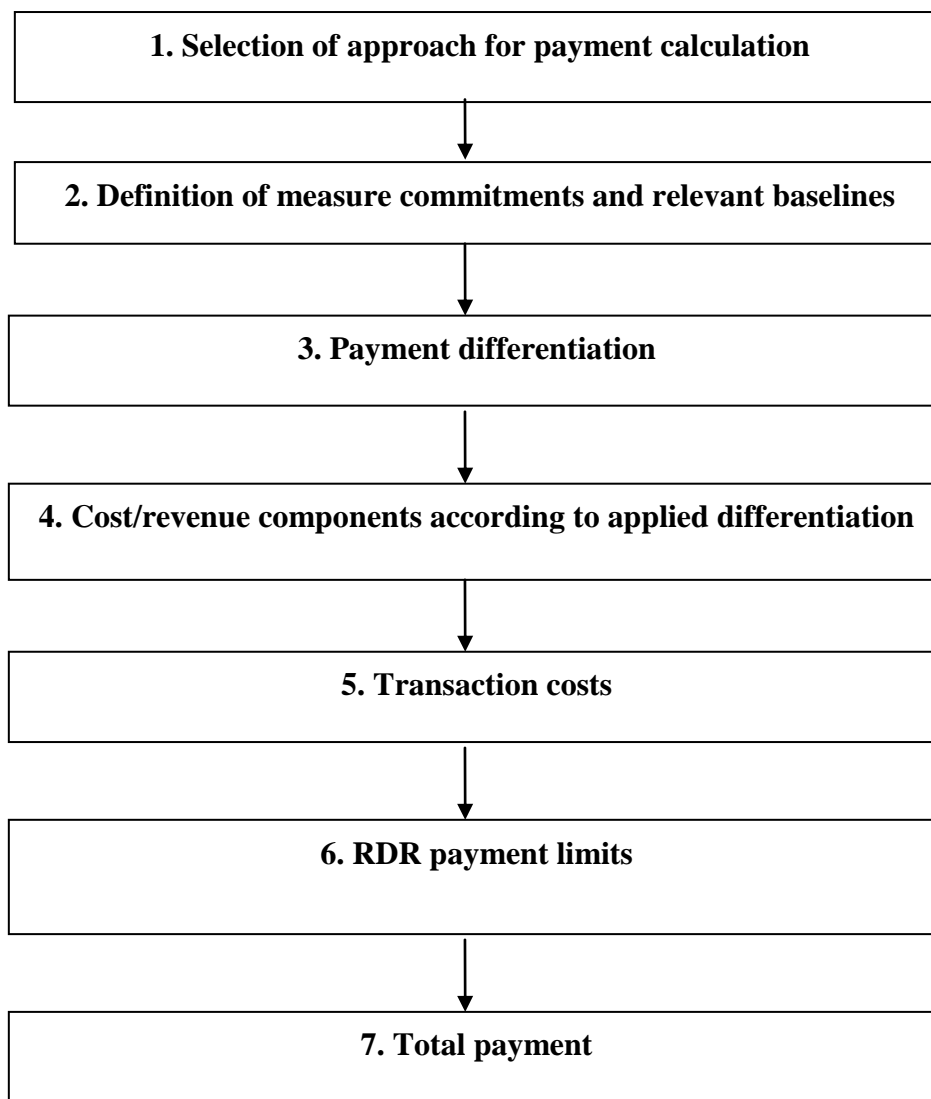
Problems identified within the payment calculation process and solutions are stated in the report. Animal Welfare measure is newly introduced in most of the partner countries. Therefore, the fact that there was no reference model to follow made the whole process more complicated. There is no typical husbandry system, which is necessary to estimate additional costs. Lack of technical and economic data, and of scientific literature, was identified as a problem too. In one case, market prices were included into the calculation of income foregone that means payment calculation was based on a market assumption for the future that is not certain.

Finally in the report, there are concluding remarks related to the results of the project. It presents the creation of a unified data base, grid for Animal Welfare measure payment calculation process, up-to-date software tool for Animal Welfare payment calculation, which simplifies payment calculation process for policy makers and EU experts.

2. Methodology

In this section, methodological issues for the Animal Welfare measure grid development are described. The methodology of the Animal Welfare measure grid development includes a graphical representation of logic framework, general explanation of main data development approach and a step-by-step template. The logic framework is presented in Figure 1.

Figure 1. Logic framework for Animal Welfare measure grid development



The logic framework enabled a unified payment calculations approach for all countries examined spread among all EU countries. Clarification of the main components of the logic framework is presented below in sections 3 to 6 of the report.

Selection of approach for payment calculation. During the project period it was noticed that Balance sheet (FADN) approach only partly satisfies data demand for payment calculations. Therefore, the Practices approach was established by project partners. This approach is especially exploitable for Animal Welfare measure payment calculation, because of payment structure complexity.

A step-by-step template is the most important part of the methodology and presents Animal Welfare measure grid development process (Annex 1). It is based on the logic framework and used as the background for the software tool.

3. Baseline, commitments and identification of cost/revenue components

In this section, commitments, relevant baseline, practices and costs/revenue applied for the Animal Welfare measure are discussed including analytical review and proposed list of them after countries examples analysis and approval of experts (Annex 2).

Baseline requirements cover relevant GAEC, included in Annex IV, and SMRs, included in Annex III of Regulation (EC) No 1782/2003, which are not included in the payment calculation process. According to Annex III of Regulation (EC) No 1782/2003, SMRs concerning Animal Welfare (C16, C17 and C18) are related to the Animal Welfare measure baseline.

GAEC requirements for the Animal Welfare baseline are related to the minimum level of maintenance issue, mostly with minimum livestock stocking rates and/or appropriate regimes and protection of permanent pastures standards.

Analysis shows that there are additional baseline requirements used in the countries examined. For example, Observance of Good Livestock Practises is incorporated into the

baseline in Emilia Romagna (Italy), National regulations concerning animal production welfare in Finland, animal welfare and farm animal husbandry regulation in Germany.

An initial examination identified that GAEC and SMRs are both used in Germany, Finland, Emilia-Romagna (Italy) and Scotland as baseline requirements for payment calculation under Animal Welfare. Any GAEC requirements affecting payment calculation are specified in Greece and Castilla Y Leon (Spain). In Castilla Y Leon (Spain) SMRs are not specified.

In general obligation for the **Animal Welfare** measure is to make on a voluntary basis animal welfare commitments while baseline presently is not obligatory. On the purpose to impose determinate commitment we propose following practices to be included into the grid: Purchase of material, Transportation, Processing, Services, Plan writing, Management, Health care visiting, Littering, Mucking, Storage, Rent and Other if necessary after newly implemented standard. The list of practices for **Animal Welfare measure** has been derived from the experience of the countries examined extending it with presumable occasion.

The list of cost and revenue components is directly related to the practices list. Cost and revenue components were set up after countries examples analysed and approved by experts. Every practice has its own operating costs stemming from the obligations or restrictions imposed by the new standards. For example practice “Transportation” consists of costs for Machinery and equipment, Electricity, lubricants and heating fuels, Wages for permanent and seasonal work, other farming overheads and Interest and financial charges.

It is very difficult to estimate additional income because it’s amount mostly depends on market conditions. Despite the exception in Finland, where additional income is incorporated in to the **Animal Welfare payment** calculation, we propose not to include it to the grid, because of fluctuations of the prices, what have influence on income and additional income could not appear at all.

4. Payment differentiation

Animal Welfare measure payments could be differentiated taking into regional or local site conditions and actual land use as appropriate. During the project period, differentiation

categories, sub-categories and elements were identified and agreed by partners. After the research had been carried out, it was concluded that the Animal Welfare measure payments can be differentiated according administrative land division, land characteristics, type of animals, planning and management, and others if necessary.

Additional differentiation by federal state incurred in Germany, where federal states can reduce payments up to 30% or increase allowances up to 20%.

Practical examples show that the Animal Welfare measure is differentiated in all the countries explored. After the overview of selected differentiation for Animal Welfare measure in Mecklenburg West-Pomerania, Germany payment is differentiated according to: type of animals, and planning and management. Type of animals has two sub-categories which also includes two elements:

Sub-category 1: Cattle

Element 1: Breeding heifers

Element 2: Dairy cows

Sub-category 2: Pigs

Element 1: Breeding sow

Element 2: Pigs for fattening (meat)

Planning and management has one sub-category that includes four elements:

Sub-category 1: Type of husbandry

Element 1: Summer pasture

Element 2: Free stall barn with grazing

Element 3: Free stall barn on straw

Element 4: Free stall barn on straw with run-outs

In this case, two levels of differentiation are applied. In different countries, there may be different number of levels (one or more).

Detailed proposed Animal Welfare measure payment differentiation is presented in Annex 3.

5. Calculation of cost and revenue components

This section includes the calculation of eligible costs and revenue for the Animal Welfare payment calculation, the main points within payment calculation across countries and an overview of data sources.

The main points regarding payment calculation across countries are as follows: support shall be granted to farmers who make Animal Welfare commitments on a voluntary basis. Payments cover only those commitments going beyond the relevant mandatory standards established following Article 4 of, and Annex III to, Regulation (EC) No. 1782/2003 and other relevant mandatory requirements established by national legislation and identified in the programme. These commitments shall be undertaken as a general rule for a period between five and seven years. Where necessary and justified, a longer period shall be determined for particular types of commitments. Even though payments shall be granted annually and shall cover additional costs and income foregone resulting from the commitment made and transaction cost, it was determined that additional income would not be included in the payment calculation because fluctuations of prices will have an influence on income.

Cost components for Animal Welfare measure payments calculation are mostly material and labour cost. Costs lists consist of: Purchase of material, Transportation, Processing, Services, Plan writing, Management, Health care visiting, Littering, Mucking, Storage, Rent etc. According to Regulation (EC) No 1974/2006, Animal Welfare measure payments calculations do not contain elements linked to fixed investments costs. Material costs have to be calculated as a product of material quantity and price. It is more complicated to estimate labour cost, especially the setting up of a tariff for labour rate per hour.

Cost components are detailed in to the sub-costs level until the primary data (Annex 4).

Beside additional costs, income foregone has an influence on the payment amount. The Finland example shows that they include this element into the Animal Welfare payment calculation, and its amount was determined as not received production amount (because of implementation Animal Welfare measure) multiplied by the price.

Finally, the transaction costs could appear in the payment calculation. Transaction costs are estimated as a percentage of total additional costs and income foregone or fixed amount. To our mind Transaction costs should be calculated as an exact amount of costs actually made. Countries experience that there are some difficulties and uncertainties calculating transaction costs. Two different ways of calculation of transaction costs were observed: 1) as a percentage of total expenditure and 2) as a constant amount added to payment. Transaction costs are an essential part of Animal Welfare payment therefore we propose they should be calculated as an exact amount of costs actually made.

Cost components should be verifiable by clearly sourcing the figures, as most of the countries have problems with the data. The Animal Welfare measure is related to specific activities, and data in FADN and Governmental Statistics Departments are not sufficient. Therefore, expert estimates have been widely used for the calculation. Together with measure implementation ideas, data collection and submission have to be solved.

6. Implementation of application of payment limits and RDR requirements

The maximum amount for the Animal Welfare measure is EUR500/LSU/year set by Regulation (EC) No 1698/2005. Specific national payments limitations were observed in different countries: maximum amount per farm (Finland and Scotland) and specific additional limits depending on animal species and regional aspects (Emilia-Romagna region, Italy).

Total payment has to be calculated for LSU, converting animals to livestock units, using relevant coefficients for different animal species. Total payments for LSU cannot exceed RDR limit (EUR500/LSU/year). Cost components should be verifiable from clear sourcing of the figures.

Due to the fact that payment for the Animal Welfare measure cannot exceed the RDR limit, limits are implemented into the grid, and any payment exceeding limit is reduced until it reaches the maximum amount set by RDR.

7. Problems encountered and future tasks

In Animal Welfare payment calculations, all of the countries under investigation were faced with a number of different problems. In some countries such as Germany, over- and under-compensation was not seen as an important issue in designing the animal welfare measure, but it was seen as an important issue in other countries, such as Scotland, Emilia-Romagna (Italy) and Finland. In Scotland, payment rates based on national averages are used and considered to be sufficient, taking into account higher administration costs of more complex schemes and payment calculations. It was a question of whether a regional approach would improve the payment calculations. It was recognized that some required actions and tasks would differ between different livestock systems, but these differences appeared not big enough to justify higher administration costs. In Emilia-Romagna (Italy), payment calculations have been carried out on the hypothesis that a farm implements one commitment per each improvement category. This may cause over-, but mainly, under-compensation for farms implementing a different number of commitments but it deals with higher administrative costs. Calculations were based on real costs in Castilla y Leon (Spain), under- or over-compensation were considered.

In Scotland the focus and future direction of this measure was seen more in animal health than animal welfare, if it will be allowed by the Commission in the future.

During the project period, it was observed there was no data base which includes all the detailed data required for the Animal Welfare payment calculation. As far as it was mentioned above, this problem was solved by partners and Practices approach was developed.

It was found that content within the same economic categories differs in the countries under examination. This problem was solved within the project framework, but in general it is a task for future work.

No country had a special tool for payments calculation. Payment calculations were based mostly on expert estimations, which was time-consuming and costly. This problem was solved by building software to accelerate the payment calculation process.

To our mind it would be very useful to create an analogous tool to estimate the effectiveness of the support.

Further dissemination has to be implemented by publications and by training.

8. Conclusions and policy recommendation

The results of the project are as follows: the creation of a unified data base, grid for Animal Welfare measure payment calculation process; an up-to-date software tool for the Animal Welfare payment calculation, which simplifies the payment calculation process for policy makers and EU experts.

After the research was carried out, it was identified that the Animal Welfare measure is widely enough applied among the countries analysed. Six countries out of the nine analyzed involved Animal Welfare measure in 2007-2013 RDP. Only in Germany and Scotland was the Animal Welfare measure implemented during 2000-2006 Programming period.

Animal Welfare measure payments can be differentiated according administrative land division, land characteristics, type of animals, planning and management, and others if necessary.

Grid for Animal Welfare measure is based on logic framework and includes these main elements: selection of approach for payment calculation; definition of measure commitments and relevant baselines; payment differentiation; cost/revenue components according to applied differentiation; transaction costs; RDR payment limits; and total payment.

Beside additional costs, income foregone has an influence on the payment amount. The Finnish example shows that they include this element in the animal Welfare payment calculation. This element was included into the grid and its amount was determined as the production amount not received (because of implementation of the Animal Welfare measure) multiplied by the price.

The result of the projects is an up-to-date tool for Animal Welfare payment calculation, which simplifies the payment calculation process for policy makers and EU experts.

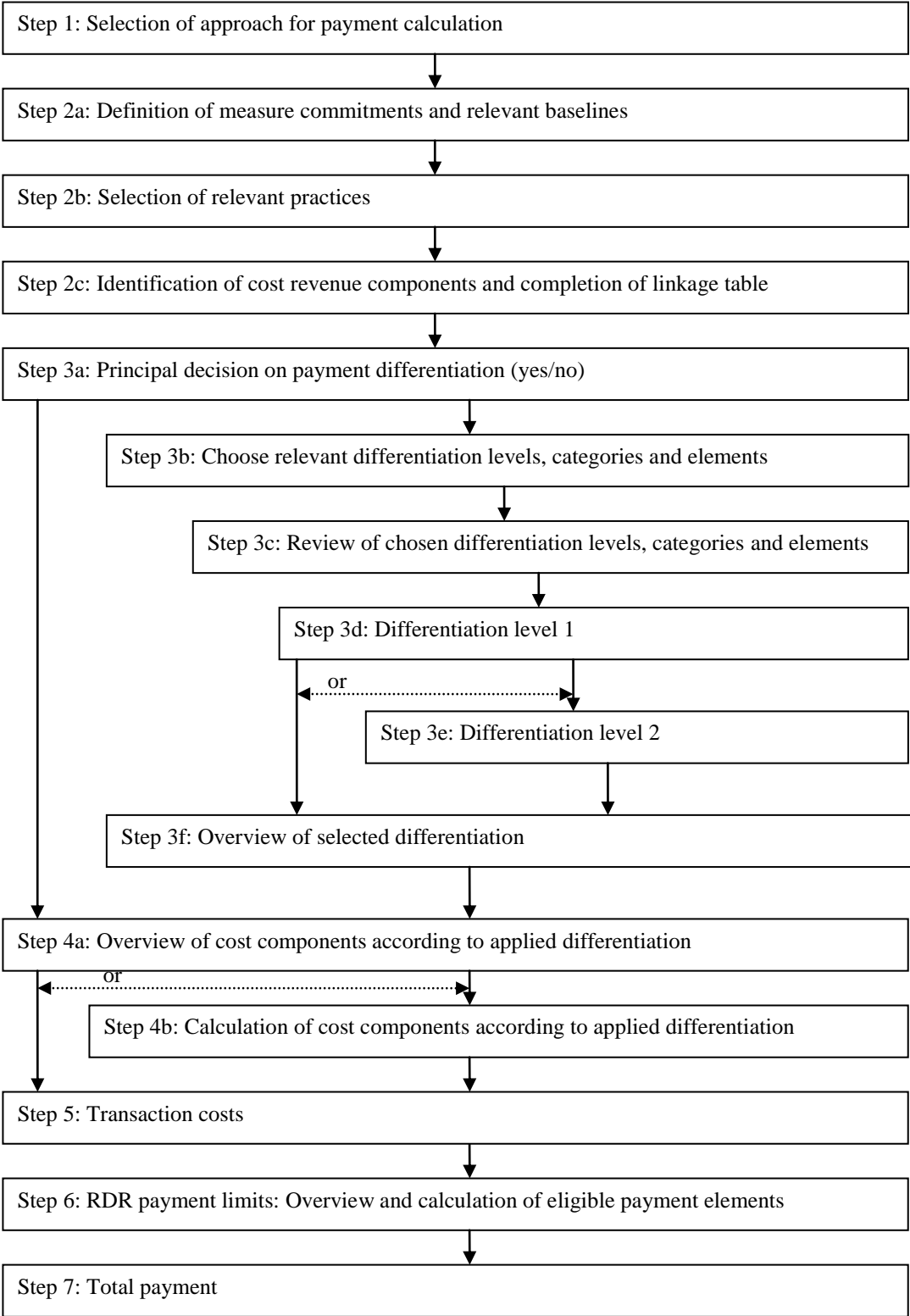
To our mind it would be useful to have such a tool before forthcoming programming period.

At the moment we propose to develop research related to support efficiency evaluation.

Due to the fact that balance sheet (FADN) approach only partly satisfies data demand for payment calculations, Practices approach was established.

Annexes

Annex 1. Step-by-step Animal Welfare payment calculation



Annex 2. Animal Welfare measure commitments, relevant baseline, practices and costs

Commitment	Baseline	Practices	Cost
To make on a voluntary basis animal welfare commitments	No obligatory presently	Purchase of material	Seeds and seedlings purchased and produced
			Fertilizers and soils improvers
			Crop protection products
			Other crop specific costs
			Purchased feeding stuffs
			Feeding stuffs produced on the farm
			Other livestock specific costs
			Machinery and equipment
			Land improvements and buildings
			Electricity, lubricants and heating fuels
			Water
			Other farming overheads
			Transportation
		Electricity, lubricants and heating fuels	
		Wages for permanent and seasonal work	
		Other farming overheads	
		Interest and financial charges	
		Processing	Machinery and equipment
			Electricity, lubricants and heating fuels
			Water
			Payments for external services
			Other farming overheads
			Wages for permanent and seasonal work
			Opportunity cost of family work
		Services	Payments for external services
			Opportunity cost of family work
		Plan writing	Payments for external services
			Opportunity cost of family work
		Management	Machinery and equipment
			Land improvements and buildings
			Electricity, lubricants and heating fuels
			Water
			Payments for external services
			Other farming overheads
			Wages for permanent and seasonal work
			Opportunity cost of family work
		Health care visiting	Payments for external services
			Wages for permanent and seasonal work
		Littering	Opportunity cost of family work
			Wages for permanent and seasonal work
		Mucking	Opportunity cost of family work
			Wages for permanent and seasonal work
		Storage	Machinery and equipment
			Land improvements and buildings
			Electricity, lubricants and heating fuels
			Water
			Payments for external services
Other farming overheads			
Wages for permanent and seasonal work			
RENTS			
Opportunity cost of family work			
Rent			
RENTS			
Other			

Annex 3. Animal Welfare Payment differentiation

Differentiation category: Administrative land division

Differentiation sub-categories	Differentiation elements
EC Regulations / National laws / Regional laws	LFA Area
	Natura 2000 Area
	NVZ Area
	Protected Areas (National or Regional)
	Other areas
Administrative land differentiation based on specific indicators	Municipality with average of >210 kg of N/ha of UAA
	Municipality HA
	Municipality HB
	Area OA
	Area OB
	Area S
	Area SX
	Gemarkung 1 (LVZ)
	Gemarkung X (LVZ)
	Choerent Region 1
	Choerent Region 2
	Choerent Region 3
	Area HUA
	Area LUA
	Standard regions (transport cost)
	Fragile regions (transport cost)
	Very fragile regions (transport cost)
	More disadvantaged land (grazing categories)
	Less disadvantaged land (grazing categories)
	Ratio 1 (degree prot/usage restrictions)
	Ratio 2 (degree prot/usage restrictions)
	EMZ range 1
	EMZ range 2
Other areas	

Differentiation category: Land characteristics

Differentiation sub-categories	Differentiation elements
Slope	1° range of slope
	2° range of slope
Soil fertility/quality	1° degree of fertility
	2° degree of fertility
	Improved soil
	Unimproved soil
Altitude	Mountain
	Hill
	Plain

Differentiation category: Type of animals

Differentiation sub-categories	Differentiation elements
Horse	Horse for fattening (meat)
	Breed Žemaitukai
	Breed Lithuanian Weighted
	Other
Cattle	Calves for fattening (meat)

	Other cattle < 12 months
	Male cattle 12 - 24 months
	Female cattle 12 - 24 months
	Male cattle > 24 months
	Breeding heifers
	Heifers for fattening (meat)
	Dairy cows
	Other cows
	Breed Burlina
	Dying breeds
Sheep	Ewe (female for breeding)
	Other sheep (male for breeding)
	Various breeds
	Sheep for milk
	Sheep for fattening (meat)
Goat	Goat for breeding (female)
	Other goats (male for breeding)
	Goat for fattening (meat)
Pig	Piglets
	Breeding sow
	Pigs for fattening (meat)
	Other pigs (boars)
	Various breeds
Poultry	Table chickens (meat)
	Laying Hens
	Other poultry
	Breed gees
Other animals	

Differentiation category: Planning and management

Differentiation sub-category	Differentiation elements
Type of husbandry	Summer pasture
	Free stall barn with grazing
	Free stall barn on straw
	Free stall barn on straw with run-outs
	Open cycle
	Close cycle
Type of final product	Cheese Parmigiano
	Cheese Grana Padano (or edible milk)

Differentiation category: Others

Annex 4. Step-by-step examples of Animal Welfare payment calculation Mecklenburg West-Pomerania, Germany (DE_{MWP}) and Finland (FI)

Step 1: Selection of approach for payment calculation

FI - Practices approach

DE_{MWP} - Practices approach

Step 2a: Definition of measure commitments and relevant baselines

Step 2b: Selection of relevant practices

Step 2c: Identification of cost revenue components and completion of linkage table

Country/ region	Commitment (Step 2a)	Baseline (Step 2a)	Practices (Step 2b)	Cost (Step 2c)
FI	To make on a voluntary basis animal welfare commitments	No obligatory presently	Purchase of material	Purchased feeding stuffs
				Feeding stuffs produced on the farm
			Transportation	Machinery and equipment
				Wages for permanent and seasonal work
			Services	Payments for external services
				Opportunity cost of family work
			Plan writing	Payments for external services
				Opportunity cost of family work
DE_{MWP}	To make on a voluntary basis animal welfare commitments	No obligatory presently	Management	Water
				Wages for permanent and seasonal work
				Opportunity cost of family work
			Health care visiting	Payments for external services
			Rent	RENTS
			Purchase of material	Purchased feeding stuffs
				Feeding stuffs produced on the farm
			Littering	Wages for permanent and seasonal work
Mucking	Wages for permanent and seasonal work			
Storage	Electricity, lubricants and heating fuels			
Rent	RENTS			

Step 3a: Principal decision on payment differentiation (yes/no)

FI - Yes

DE_{MWP} - Yes

Step 3b: Selection of relevant differentiation category and elements

Step 3c: Review of chosen differentiation levels, categories and elements

Step 3d: Differentiation level 1

Step 3e: Differentiation level 2

Step 3f: Differentiation level 3

Step 3g: Differentiation level 4

Step 3h: Overview of selected differentiation

Overview of selected differentiation for Animal Welfare measure in Finland

Differentiation level 1	1 Differentiation category	Type of animals	
	2 Differentiation sub-category	Cattle	Pig
		X	

Overview of selected differentiation for Animal Welfare measure in Mecklenburg West-Pomerania, Germany

Differentiation level 1	1 Differentiation category	Type of animals				
	2 Differentiation sub-category	Cattle		Pig		
	3 Differentiation element	Breeding heifers	Dairy cows	Breeding sow	Pigs for fattening (meat)	
Differentiation level 2	1 Differentiation category	Planning and management				
	2 Differentiation sub-category	Type of husbandry				
	3 Differentiation element	Summer pasture				
		Free stall barn with grazing				
		Free stall barn on straw				
Free stall barn on straw with run-outs			X	X		

Step 4a: Overview of cost components according to applied differentiation

Step 4b: Calculation of cost components according to applied differentiation

FI

Practice	Sub-element 1	Sub-element 2	Equation	Cost, EUR/animal
Services	Services	Service Price	= Service x Service Price	1.76
Plan writing	Time	Labour Price	= Time x Labour Price	14.23
Health care visiting	Time	Labour Price	= Time x Labour Price	5.25
Purchase of material	Quantity	Price	= Quantity x Price	0.52
Transportation	Machinery cost	Distance	= Machinery x Distance + Time x Labour Price	0.52
	Time	Labour Price		
Management	Time	Labour Price	= Time x Labour Price	10.78
Total Additional costs	x	x	x	33.05
Services	Services	Service Price	= Service x Service Price	8.26
Plan writing	Time	Labour Price	= Time x Labour Price	9.92
Purchase of material	Quantity	Price	= Quantity x Price	0.51
Transportation	Machinery cost	Distance	= Machinery x Distance + Time x Labour Price	0.51
	Time	Labour Price		
Management	Time	Labour Price	= Time x Labour Price	5.72
Rent	Quantity	Rent	= Quantity x Rent	3.03
Total Income foregone	x	x	x	27.95
Total Additional income	x	x	Additional income	46.42
Proposed amount of support (without Transaction costs)	x	x	=Additional costs + Income foregone – Additional income	14.58

DE_{MWP}

Dairy cows

Payment components	Sub-element 1	Sub-element 2	Equation	Cost, EUR/animal
Additional costs	x	x		53.50
Littering	Time	Labour Price	= Time x Labour Price	16.25
Mucking	Time	Labour Price	= Time x Labour Price	8.75
Straw production/purchasing	Quantity	Straw Price	= Quantity x Straw Price	6.75
Storing	Quantity	Storing Price	= Quantity x Storing Price	6.75
Rent	Quantity	Rent	= Quantity x Rent	15.00
Income foregone	x	x	x	0.00
Additional income	x	x	x	0.00
Total costs	x	x	=Additional costs + Income foregone – Additional income	53.50

Breeding pigs

Payment components	Sub-element 1	Sub-element 2	Equation	Cost, EUR/animal
Additional costs	x	x		47.50
Littering	Time	Labour Price	= Time x Labour Price	7.25
Mucking	Time	Labour Price	= Time x Labour Price	10.97
Straw production/purchasing	Quantity	Straw Price	= Quantity x Straw Price	14.64
Storing	Quantity	Straw Storing Price	= Quantity x Storing Price	14.64
Income foregone	x	x	x	0.00
Additional income	x	x	x	0.00
Total costs	x	x	=Additional costs + Income foregone – Additional income	47.50

Step 5: Transaction costs

FI - Estimated average amount of transaction costs **2.92 EUR/LSU**

DE_{MWP} - No transaction costs

Step 6: RDR payment limits: Overview and calculation of eligible payment elements

Step 7: Total payment

Converting animals to livestock units

Bulls, cows and other bovine animals over 2 years	1
Bovine animals from 6 months to 2 years	0.6
Bovine animals under 6 months	0.4
Sows (with piglets and dry sows)	0.5
Other pigs (including weaners)	0.3

FI

Payment component	EUR/animal
Proposed amount of support (without Transaction costs)	14.58
Transaction costs	2.92
Total payment	17.50

	EUR/animal	RDR payment limits, EUR/animal	Maximum payment amount
Total payment	17.50	500	17.50

	EUR/animal	EUR/LSU
Total payment	17.50	17.50

DE_{MWP}**Dairy cows**

Payment component	EUR/animal
Proposed amount of support (without Transaction costs)	53.50
Transaction costs	0.00
Total payment	53.50

	EUR/animal	RDR payment limits, EUR/animal	Maximum payment amount
Total payment	53.50	500	53.50

Breeding pigs

Payment component	EUR/animal
Proposed amount of support (without Transaction costs)	47.50
Transaction costs	0.00
Total payment	47.50

	EUR/animal	RDR payment limits, EUR/animal	Maximum payment amount
Total payment	47.50	500	47.50

	EUR/animal	EUR/LSU
Total payment for Dairy cows	53.50	53.50
Total payment for Breeding pigs	47.50	158