



## AGENT-BASED SUPPORT TOOL FOR THE DEVELOPMENT OF AGRICULTURE POLICIES

### D5.7 Policy Environment module



Deliverable Number	D5.7
Lead Beneficiary	AUTH
Authors	AUTH, IDE, CAAND, PBS
Work package	WP5
Delivery Date	31/08/2022 (M36)
Dissemination Level	Public

[www.agricore-project.eu](http://www.agricore-project.eu)



The Agricore project has received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement No. 816078





## Document Information

Project title	Agent-based support tool for the development of agriculture policies
Project acronym	AGRICORE
Project call	H2020-RUR-04-2018-2019
Grant number	816078
Project duration	1.09.2019-31.8.2023 (48 months)
Deliverable authors	Stefanos Nastis (AUTH), Asterios Theofilou (AUTH), Obdulia Parra (CAAND), Wojciech Zarski (PBS)
Deliverable reviewers	IDENER Team

## Version History

Version	Description	Organisation	Date
0.1	Deliverable ToC proposal	AUTH	30 Jun 2022
0.2	Deliverable ToC approved	IDE	04 Jul 2022
0.3	Inclusion of content (First Draft)	AUTH, IDE	20 Jul 2022
0.4	Revision and comments	IDE, AUTH	07 Aug 2022
0.5	Implementation of comments (Second Draft)	AUTH, IDE	19 Aug 2022
0.6	Revision of UML Diagram	IDE	22 Aug 2022
0.7	Inclusion of XML descriptions	AUTH, IDE, PBS	25 Aug 2022
0.8	Final exportation and formatting	IDE	30 Aug 2022
1.0	Deliverable complete	AUTH	31 Aug 2022

## Disclaimer

All the contributors to this deliverable declare that they:

- Are aware that plagiarism and/or literal utilisation (copy) of materials and texts from other Projects, works and deliverables must be avoided and may be subject to disciplinary actions against the related partners and/or the Project consortium by the EU.
- Confirm that all their individual contributions to this deliverable are genuine and their own work or the work of their teams working in the Project, except where is explicitly indicated otherwise.
- Have followed the required conventions in referencing the thoughts, ideas and texts made outside the Project.

## Executive Summary

AGRICORE is a research project funded by the European Commission under the RUR-04-2018 call, part of the H2020 programme, which proposes an innovative way to apply agent-based modelling to improve the capacity of policymakers to evaluate the impact of agricultural-related measurements under and outside the framework of the Common Agricultural Policy (CAP).

This deliverable presents the results of *Task 5.7 - Policy Environment Module*, led by the Aristotle University of Thessaloniki (AUTH). The objective of task 5.7 is to design a module capable of incorporating those policies of interest for the policymaker or the agro-economic researcher into the AGRICORE simulation environment. Agricultural policies are articulated through measures and instruments to which farms can adhere (on a compulsory or voluntary basis). Since in AGRICORE each farm is represented by an agent, these measures and instruments are incorporated into the simulation by modifying the optimisation problem that each agent resolves to determine its future actions. That is, a given instrument is included:

- (i) by incorporating an additional additive term to the objective function (usually linked to a binary decision variable that determines the agent's adherence to that scheme/instrument).
- (ii) modifying the constraints affecting the resolution of the objective function (by adding new constraints or varying their limit values).

Given the wide diversity of policy mechanisms that make up pillars I and II of the CAP, as well as the regulatory freedom that the Commission gives to member states (MS) to implement them through specific instruments, the first sub-objective of this task has been to identify all the elements that completely describe one policy. To this end, a domain diagram has been constructed using the Unified Modelling Language (UML), which contemplates the whole context of public policy definition (in principle agricultural policies, but could be extended to other types), including its main elements (requirements, commitments, indicators, verification mechanisms, etc.).

The second step was to implement this diagram in the form of a fillable template to describe each policy, including its elements and their numerical values. To create such a template in a standardised way, a tagged language (eXtensible Markup Language - XML) has been used. To test the functionality of this template, several policies belonging to both Pillar I and Pillar II and related to the three AGRICORE use cases have been described.

The last step is to build a mechanism to read these templates and translate them into concrete modifications of the optimisation problem encoded in the agents. At the moment, this is done using simple scripts in which the numerical values of the different policies are hardcoded and that, once executed, replace the preloaded generic objective function of the agents with the new objective function already incorporating the policy to be analysed.

In the future, these scripts could be able to read the values automatically from the XML templates and modify the target function, even allowing the incorporation of more than one policy concurrently.

The implementation of task T5.7 is of course related to the modelling work package WP3. Moreover, it is also associated with work package WP4, since the AGRICORE graphical interface already contemplates a section for recording and editing policy descriptions within an agricultural public policy repository.

## Abbreviations

Abbreviation	Full name
ABM	Agent-based Model
ABS	Agent-based Simulator
BEFM	Bio-Economic Farm Model
CAP	Common Agricultural Policy
GUI	Graphical User Interface
IA	Impact Assessment
IAM	Impact Assessment Module
OOP	Object-Oriented Programming
TEO	Techno-Economic Orientation (similar to TF - Type of Farming)
UAA	Utilised Agricultural Area
UML	Unified Modelling Language
XML	eXtensible Markup Language

## List of Figures

Figure 1: Policies and Programmes .....	7
Figure 2: AGRICORE cycle for policy analysis.....	10
Figure 3 Main types of UML relationships between classes.....	13
Figure 4 Agricultural Policies UML Domain Diagram .....	15
Figure 5: Example of UML relationship that should be translated into XML schema.....	30
Figure 6 Policy Repository GUI mockup .....	34
Figure 7 mockup of the graphical user interface allowing modification of the XML description of a selected policy .....	34
Figure 8 Mockup of the graphical user interface allowing the selection of policies for incorporation into the simulation .....	35

## List of Tables

Table 1 Reserved characters in XML .....	24
Table 2 XML Template.....	27

# Table of Contents

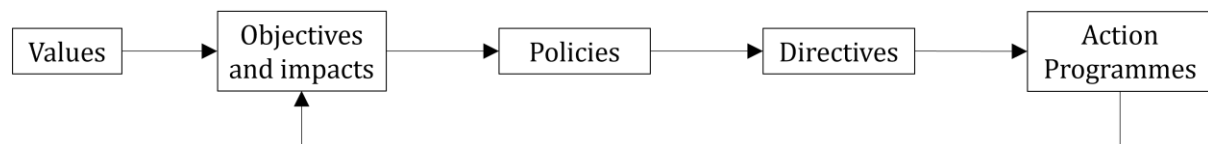
<b>1</b>	<b>Introduction.....</b>	<b>7</b>
<b>2</b>	<b>Methodology.....</b>	<b>9</b>
2.1	Modelling framework.....	9
<b>3</b>	<b>Application.....</b>	<b>12</b>
3.1	Domain models and UML.....	12
3.1.1	Relationships.....	12
3.1.2	Multiplicity.....	13
3.2	Design of a UML Domain Diagram for the description of public (agricultural) policies.....	14
3.2.1	ActualBeneficiary:.....	16
3.2.2	AgriculturalHolding:.....	16
3.2.3	AgriEnterpriseReq:.....	16
3.2.4	Beneficiary:.....	16
3.2.5	Budget:.....	16
3.2.6	CapPayment:.....	17
3.2.7	Commitment:.....	17
3.2.8	DescriptionOfRequirement:.....	17
3.2.9	Discount:.....	17
3.2.10	Evaluator:.....	17
3.2.11	FarmHoldingReq:.....	17
3.2.12	FarmOwnerReq:.....	18
3.2.13	Funding:.....	18
3.2.14	Incompatibility:.....	18
3.2.15	Instrument:.....	18
3.2.16	ImpactAssessment:.....	18
3.2.17	KPI:.....	18
3.2.18	Measure:.....	19
3.2.19	PhysicalPerson:.....	19
3.2.20	PotentialBeneficiary:.....	19
3.2.21	PublicPolicy:.....	19
3.2.22	Premium:.....	20
3.2.23	Range:.....	20
3.2.24	Requirement:.....	20
3.2.25	Subsidy:.....	20
3.2.26	TaxReduction:.....	20
3.2.27	Verificator:.....	20
3.3	Tailoring an XML template for the tagged-text-based description of public policies.....	21
3.3.1	Tagged schemas and XML.....	21
3.3.2	How are the Policies translated to XML.....	27
3.4	Translation of XML into mathematical language and incorporation of the policy into ABM. ....	31
3.5	Usage of the Policy Environment Module through the Graphical User Interface (GUI) .....	33
<b>4</b>	<b>Conclusions.....</b>	<b>36</b>
	<b>References.....</b>	<b>37</b>
	<b>Appendix: XML description for selected policies.....</b>	<b>39</b>
	Andalusian "Ecologic Agriculture" M11 measure.....	39
	Greek "Young farmers" M6.1 measure .....	48
	Polish "Agri-environment-climate commitments" M10.1 measure .....	78
	Andalusian Eco-scheme.....	100
	Greek Eco-scheme 31.8.....	106
	Polish Eco-schemes I.4.14.....	125



# 1 Introduction

Despite being a subject of debate within the academic community for almost a century, there is no single, standardised definition of the concept of public policy. In fact, the definition that is perhaps most famous ("public policy is whatever governments choose to do or not to do" (Dye, 1972: 2)) is precisely a counter-definition, a phrase so open-ended that it contains strictly nothing. Previously, Dimock [1] had defined public policy as "deciding at any time or place what objectives and substantive measures should be chosen in order to deal with a particular problem". Later, Chandler and Plano included the following definition in their 'Public Administration Dictionary' [2]: "the strategic use of resources to alleviate national problems or governmental concerns".

More recently, based on program theory, Lassance [3] proposed a distinction between Public Policy ("an institutionalized proposal to solve a central problem, guided by a conception") and Public Program ("the given solution to each of the causal problems that explains a central problem in policy and which were deemed crucial by a strategy designed to surround, to face, and to overcome it"). He then argues that, as public policy problems are generally complex and multi-casual, more than one program is required to implement one policy (Figure 1).



**Figure 1: Policies and Programmes**

The increase in international organizations in Europe since 1948 has prompted the implementation of public policies, on both a European scale and in a number of areas. The CAP is a unique example of a sector-based redistributive policy that was highly federalized. Implemented in 1962, it initially aimed to increase agricultural production in a Europe still traumatized by the privations of the 1940s, as well as to support the income of farmers facing destabilizing changes. The reforms of 1992 and 2003 reinforced its market-oriented nature, while presenting numerous exceptions through provisions addressing social, regional and environmental questions [4]. Society assigns an increasing number of objectives to the policies influencing the agricultural sector and rural areas that it expects to see fulfilled. Therefore, justifications for policies extend well beyond mere food production. Evidence-based policy making implies the development and maintenance of appropriate instruments for use in the design of these policies and for the monitoring of their effects, taking advantage of new socio-economic approaches and increased possibilities enabled by progress in the ICT area [5]. Actually, the EU has developed its own 'Better Regulation Guidelines' [6] aiming "to design and prepare EU policies and laws in such a way that they achieve their objectives in the most efficient way <...>; one that allows political decisions to be prepared in an open and transparent manner, informed by the best available evidence, including via the comprehensive involvement of stakeholders".

Policy preparation should be supported by evaluations and impact assessments. Evaluations gather evidence to assess how a specific intervention has performed (or is working), taking account of earlier expectations in the context of an impact assessment and/or ensuing from the adopted legislation and whether there were unintended or unexpected effects that were not anticipated and considered in the impact assessment of the adopted act. Impact assessments collect evidence (including evaluation results) to assess whether future legislative or non-legislative EU action is justified and, if so, how it can best be designed to achieve relevant policy objectives [6]. Following these definitions, it is possible to equate the concept of 'evaluation' with

that of '*ex-post* analysis' and that of 'impact assessment' with that of '*ex-ante* analysis'. *Ex ante* analysis is used prospectively to inform policy decisions by estimating a policy's impact on multiple objectives. In contrast, *ex-post* analysis of impacts that may have multiple causes can retrospectively evaluate the effectiveness of policies [7]. BRG also state that both evaluations and impact assessments should rely on an evidence-based approach, for them "to be based on the best evidence drawn from a diverse and appropriate range of methods and sources". The 'Scientific Advice to European Policy in a Complex World' report [8] specifically recommends scientific advisors operating at high levels of complexity "to consider in their advice the evidence on the possible impacts of policy options generated through advanced modelling methods <...> such as dynamic systems modelling, sensitivity analysis or scenario modelling".

The objective of this document (D5.7 Policy Environment module), is to explain and analyse all the processes, tools and technologies used by the AGRICORE project, to develop a module which will translate the policy schemes of interest into the AGRICORE simulation environment. This document furthermore explains how the support instruments of both the CAP first and second pillars, have been defined flexibly, to be used by the external interface module, in order to introduce the necessary modifications of the agents' model structures as a previous step to the agents' instantiation.



## 2 Methodology

The AGRICORE tool is an agent-based model (ABM) and simulator (ABS) that allows both the evaluation (*ex-post* analysis) and impact assessment (*ex-ante* analysis) of agricultural policies at sub-regional, regional, national and supra-national scales. This is possible by constructing synthetic populations of agents that represent the actual populations on which the policy effect is to be studied. Each agent represents an individual farm, and during the synthetic construction process values are assigned to its attributes, so that the probability distribution of the values of each attribute in the synthetic population reproduces the probability distribution of the same attribute in the real population, but without it being possible to identify any individual in the real population or to assimilate it with a specific agent in the synthetic population. Once each agent has been assigned values for all its attributes, the mechanism that determines how it will proceed autonomously within the simulation must be incorporated. Although there are other approaches in the ABM literature (pseudo-random behaviour agents, chaotic agents, etc.), the usual approach when constructing agents that represent rational entities (in this case the person who manages each farm) is that their actions are determined by solving an optimisation problem. The structure of any problem of this type is based on maximising (alternatively minimising) a given objective function, subject to a series of restrictions on the inputs, outputs, or internal states of the system (being the system in this case the farm and its physical environment).

The different instruments or measures that make up the programmes that implement community policies are uncontrollable inputs for the agents in AGRICORE. Each agent incorporates them as an external perturbation that modifies the structure and/or numerical values of the optimisation problem to be solved at the beginning of each simulation step. Once these modifications have been included, the simulation is run. The result of the simulation is the set of actions taken by the different agents (which are now conditioned by the policy(ies) incorporated) and the effect of these actions on the state of the agents at the final instant of the simulation.

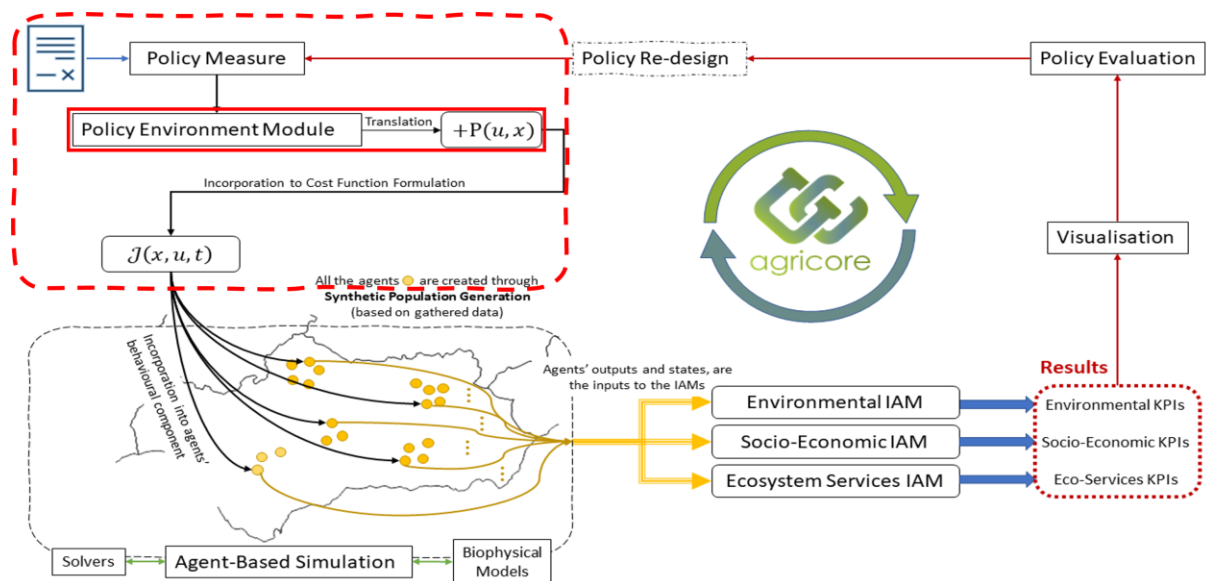
These actions, once aggregated, are in turn the input to an external impact assessment module that has three sub-modules (socio-economic, climate-environmental, and ecosystem service provision). Each of these modules outputs a set of key performance indicators (predefined and/or configurable) in line with the indicators that the policy designer has defined for future evaluation. KPIs from different simulations with different sets of policy-values can then be compared with each other and assessed with respect to the desired overall objectives, either to select the best policy mix or to customise some policy(ies) before (re)iterating the AGRICORE's cycle of policy analysis (Figure 2).

### 2.1 Modelling framework

The development of models for the impact assessment of agricultural policies has run parallel to the implementation and successive reforms of the Common Agricultural Policy. Despite the large body of literature, most models are limited geographically (being valid only for specific regions) or functionally (able to simulate only a few farm typologies or a limited set of policies). In recent years, there seems to be a consensus within the academic community about the need to build a Bioeconomic Farm Model (BEFM) that, thanks to its open and modular nature, allows it to be collaboratively developed, maintained and extended by a community of developers and users [9].

'Coverage of relevant policies' is suggested as one of the minimum set of features of a generic BEFM [10]. Britz et al. argue that a generic BEFM should include exchangeable policy modules to reflect the adoption of policies that are specific to a case study. In cases when opt-in measures are

available, policy modules may limit the possible solutions and/or designate subsidies as a component of the goal. In order to handle subsidies in the objective function, one needs to use a



**Figure 2: AGRICORE cycle for policy analysis**

general approach. Policy modules may include restrictions that limit environmental indicators like the soil-nutrient balance as specified in regional or national legislation. These definitions of indicators may differ from what the state-of-the-art in science advises. In order to avoid confusion, indicators derived from law should be coded in the relevant policy module and kept apart from indicator modules that are primarily used for reporting. Among other issues associated with the use of such generic model for policy evaluation, the following have been mentioned: "the growing need for maintaining consistency between EC regulations and local realities, which is a consequence of the increased freedom for Member States to implement the CAP at national and landscape levels" [11].

The same authors later mention what some of the solutions might be to allow for this interchangeability in the introduction of policies, namely:

- A complete separation between the code and the data, avoiding the appearance of numbers and references to specific list elements in model equations (e.g. code ' $a = 3$ ' and ' $y = a \cdot x$ ' instead of ' $y = 3 \cdot x$ '; or " $a = [\text{'wheat'}]$ " and ' $x[a] = y$ ' instead of " $x[\text{'wheat'}] = y$ ").
- Modularization of parameterizable equation blocks structured as functional units of code which can be arranged rather flexibly into a customized MP optimisation problem.
- Choice of an adequate functional form for the objective function, respecting the restrictions posed by the numerical solver.

However, even before these solutions, which are part of the mathematical approach and coding, there are a number of prior steps that in our opinion are not adequately addressed. In particular, related to the diversity of agricultural policies in various geo-administrative scopes (especially regarding the implementation of EU regulations by national and regional MS administrations), the translation of the Law (legal documents) into the set of structures needed to model these laws is not immediate. More specifically, a researcher considering conducting an impact analysis of a national or regional land policy using farm-level models will probably need to follow the following steps:

1. Look for the specific legal documents containing the redaction of the programmes that implement the policy/ies) of interest for the simulation scenario.
2. Possibly having to translate them from their original national language.
3. Define a specific objective function to be maximised/minimised including all the policy instruments (with their associated terms and/or constraints).

The AGRICORE approach proposes a few improvements to ease this process:

- The development of a controlled human-readable format to describe Agricultural Policies (actually the proposed format could be extended to describe any other type of public policy, but this extension is out of the scope of our project).
- The creation of a public repository of agricultural policy descriptions. This would be an open collection of descriptions created and uploaded by the user community and hosted within the AGRICORE cloud. As part of the preparation of a generic use case, its developers could download and incorporate into their private repository some of these descriptions (policies).
- Once in the private repository, policy instruments' parameters could be modified, before adding them to the simulation set-up translated into the Agents' objective function.

To the best of our knowledge, there does not exist such a standardised notation for public policy description. Correspondingly, the literature revision done in 'D5.1 - State of the art review of agricultural policy assessment models, tools and indicators' did not contemplated it. It is worth mentioning that AGRICORE's sister project MINDSTEP is also working on their own approach to mathematically describe public policies (Programming Tableaus).

## 3 Application

### 3.1 Domain models and UML

A domain is a collection of related concepts, relationships, and (possibly) workflows. Within the spectrum of domain models, the following types can be found (in order of increasing complexity)<sup>1</sup>: Glossaries < Taxonomies < Thesauri < Entity-Relationship Models < Object Models (UML) < Ontologies (description logic) < Domain Theories (first-order logic). Domain modelling is thus the activity of translating an informal description of a domain into a domain model. Domain models are used during the requirements gathering phase to clarify important domain-specific terms.

Domain models can be implemented using UML. The Unified Modelling Language (UML) was developed to create a standard visual modelling language, rich in semantics and syntactic structures, to describe the architecture, design, and implementation of large software systems, both structurally and behaviourally. It is composed of several kinds of diagrams and is equivalent to blueprints used in other fields. UML diagrams typically define the limits, architecture, and behaviour of the system as well as the objects it contains. Although UML is not a programming language itself, there exist tools that allow using UML diagrams to generate code in a number of different languages. UML is directly related to object-oriented analysis and design.

A UML domain model is a sketch of the elementary entities of the system and the relationships between them. It is platform-independent (not intended for any specific programming language) and attributes do not have data types<sup>2</sup>. The objects (conceptual classes) of the domain are not software objects (classes), but can later become classes during the software implementation. The graphical notation of a (conceptual) class is a rectangle divided horizontally into 3 parts. The first part holds the name of the class, the second one contains the attributes, and the third part list the methods. A UML Domain Model, also known as Visual Dictionary, is illustrated with a set of class diagrams without methods<sup>3</sup>. The different classes (objects for the domain model) might be connected to other(s) by relationships.

#### 3.1.1 Relationships

The following Figure 3 depicts the 4 main types of relationships provided by UML, using elements and concepts associated with air transport as examples.

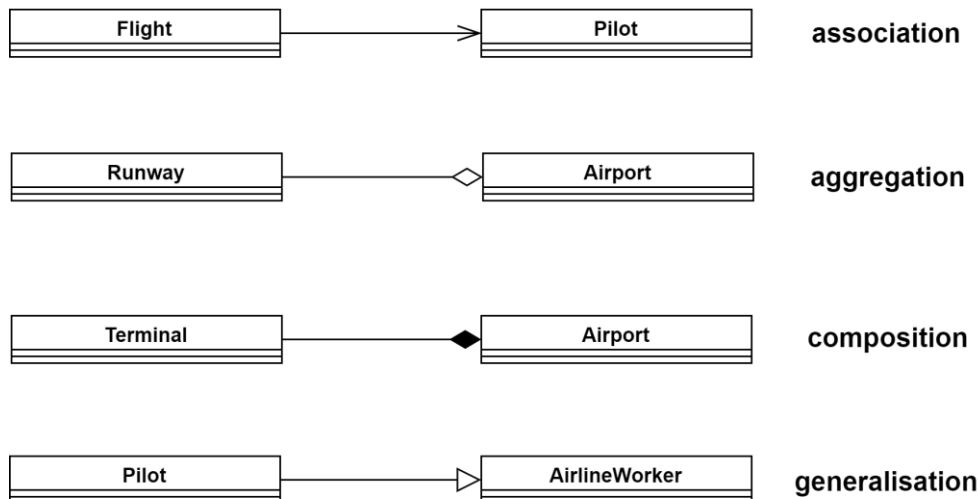
The basic relationship between two entities is the '**association**'. A simple solid line links both entities, which can exist independently of each other. By default, the association is bidirectional. In other words, the first entity refers to the second, and the second entity refers to the first. By including a straightforward arrow indicating the relationship's direction, we can alter this behaviour. In these situations, the reference to the other entity is only stored in the instance from which the arrow points (i.e. a **flight** must have an assigned **pilot**, but a **pilot** might not have any **flight** assigned for a specific day).

The link between a whole and its parts is represented by '**aggregation**'. It's drawn as a solid line with a diamond-shaped void at the end. The diamond is depicted at the class representing the entire group (e.g. an **airport** with one or more **runways**). This is the entity that houses the item collection from the perspective of implementation. An independent entity that represents the component may also be a component of other collections.

<sup>1</sup> <http://www.cs.sjsu.edu/~pearce/modules/lectures/ooa/analysis/DomainModeling.htm>

<sup>2</sup> <https://www.ictdemy.com/software-design/uml/uml-domain-model>

<sup>3</sup> <https://homepage.cs.uiowa.edu/~tinelli/classes/022/Spring15/Notes/chap9.pdf>



**Figure 3 Main types of UML relationships between classes**

Aggregation and '**composition**' are related concepts, but composition denotes a closer connection. Without the entity representing the whole, the entity representing the part is meaningless. When an entity that represents a whole is eliminated, all of its constituent components are also eliminated. In contrast to the runway without the airport in the preceding example, an airport terminal item is meaningless without its airport. As a result, in this instance, the composition is employed. Composition relationships are drawn like aggregations, but the diamond shape is filled.

The last relationship mentioned here is '**generalization**'. It embodies inheritance in terms of implementation. The traits and actions of one entity are inherited by another entity. The generalization is represented as a solid line with a blank triangle on one side. The entity from which it has inherited the arrow is on that side. A pilot is a type of airline worker and thus inherits all the attributes from AirlineWorker class (e.g.: Name, address, etc.) but the Pilot class also has its own attributes (e.g.: Flying licence number) that are not present for other types of airline workers.

### 3.1.2 Multiplicity

Finally, UML also allows the cardinality of the relationships (i.e. how many objects can exist in each relation). Cardinality is depicted by adding numbers (or symbols) at the beginning and the end of each relationship line, close to the corresponding class block.

A basic list of available multiplicity syntax is given below:

- **1 (number)** - Indicates a specific value (1 in this example). When the number is zero (0), the relationship is not forcibly required.
- **\* (asterisk)** - Indicates any number (even 0). Instead of an asterisk, we can find the  $\infty$  symbol in some diagrams.
- **0..\* (interval)** - We can specify an interval with 2 dots. Then we use the symbols we already known, such as: 2..6 or 1..\* or 0..1.

If the multiplicity is not specified, it indicates the default value of 1.

### 3.2 Design of a UML Domain Diagram for the description of public (agricultural) policies

The UML diagram for the conceptual domain of public agricultural policies proposed by AGRICORE is shown in [Figure X](#). It contains the basic concepts and elements that are typically necessary to fully describe a public policy, and thus to enable its agent-based simulation (ABS). However, this scheme should be considered as an initial version subject to modifications, as difficulties or gaps may emerge when applying it to describe real concrete policies, requiring the addition or editing of classes and/or their attributes. On the other hand, it is intended to be a comprehensive schema that aims to always contain all the elements needed to fully describe a policy and its implications. This does not mean, however, that it is required to define all elements in order to simulate any policy, so the scheme can be applied on a partial basis.

For the sake of clarity, it is worth mentioning here the difference between 4 fundamental concepts in object-oriented programming (OOP):

#### **Classes:**

A class is a detailed description of what an object is, as well as its definition and template. However, it is not the object itself. Additionally, a class is the fundamental unit of Object-Oriented Programming (OOP). It is a user-defined data type that has access to and uses its own data members (attributes) and member functions (methods), through the creation of a class instance (object). It is an object's blueprint. Once a class has been created and defined, it can be used to build as many objects as necessary.

#### **Objects:**

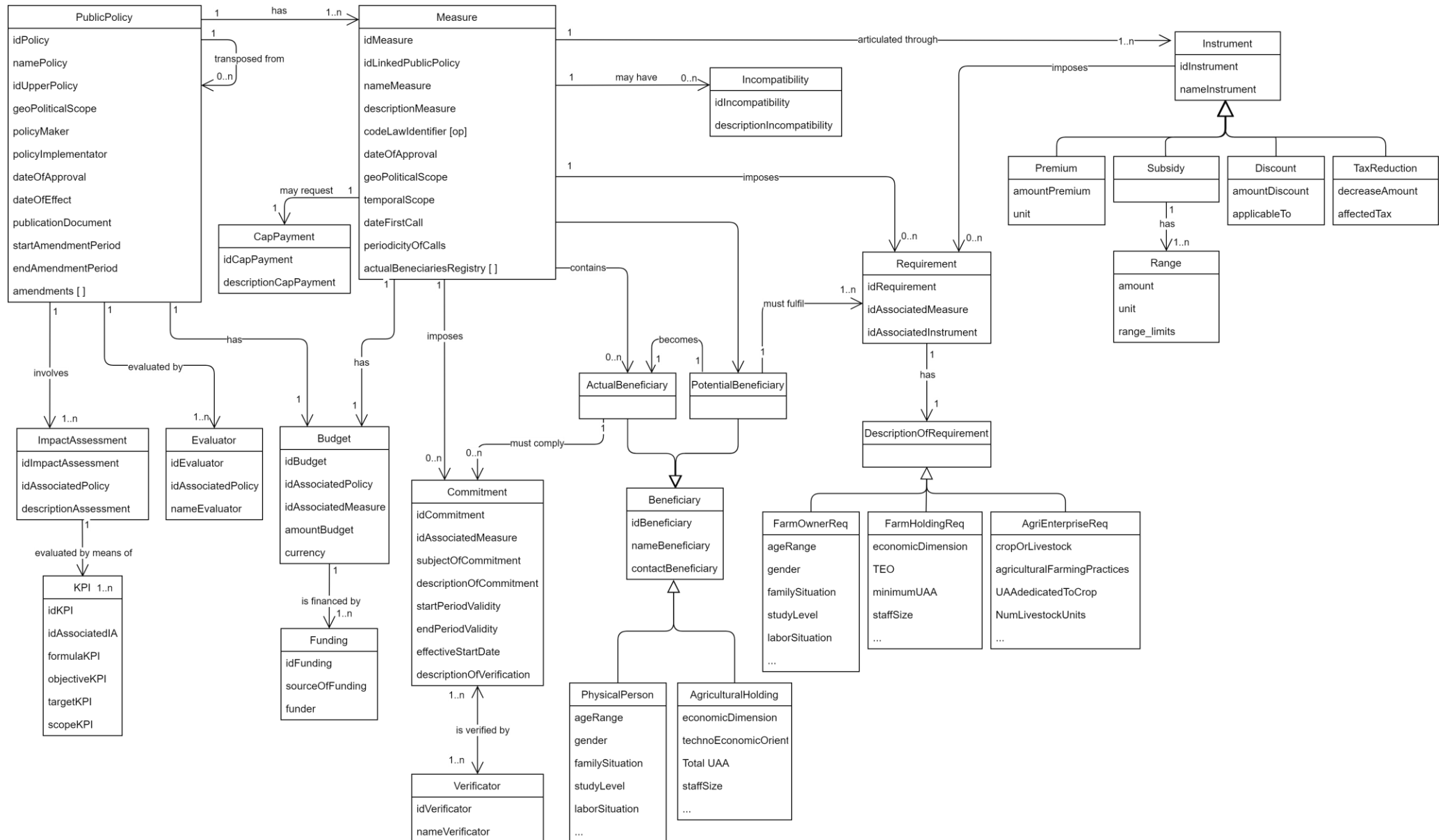
A class instance is an object. Objects can be used to access all of the class's data members and member functions. No memory is allocated when a class is defined, but it is allocated when it is instantiated (i.e. an object is created).

#### **Attributes:**

Attributes are data members inside a class or an object that represent the different features of the class. They can also be referred to as characteristics of the class that can be accessed from other objects or differentiate a class from other classes.

#### **Methods:**

A method is a programmed procedure (software function) that is defined as part of a class and included in any object of that class. A class (and thus an object) can have more than one method. A method in an object can only have access to the data known to that object, which ensures data integrity among the set of objects in an application. A method can be re-used in multiple objects.



### Figure 4 Agricultural Policies UML Domain Diagram



The classes and attributes that make up the diagram are mentioned and described below:

### 3.2.1 ActualBeneficiary:

An **ActualBeneficiary** is a natural or legal person who, being eligible to receive the benefit associated with a measure and/or one of its component instruments (**PotentialBeneficiary**), is in fact granted such benefit. Certain measures may require the creation of a register of actual beneficiaries, which will be composed of objects of such class.

### 3.2.2 AgriculturalHolding:

An **AgriculturalHolding** is an agro-livestock holding registered as such in the corresponding national census of holdings, which carries out one or more productive activities related to the primary sector and which, in addition, may carry out other non-agricultural activities (rural tourism, etc.). Agricultural holdings are the minimum simulation unit of the AGRICORE agent-based model, and have a number of attributes (the complete list is not shown in the diagram) which are presented in deliverable D3.1. The agents' attributes that can be most relevant for agricultural policy analysis are those that can determine their inclusion or exclusion as a **PotentialBeneficiary** of certain measures or instruments, e.g. their type of farming (**technoEconomicOrientation**), their size as a farm company (**economicDimension**), their total agricultural area (**TotalUAA**), the size of their workforce (**staffSize**) etc. An **AgriculturalHolding** is one of the two types of **Beneficiary** of any agricultural policy measure.

### 3.2.3 AgriEnterpriseReq:

An **AgriEnterpriseReq** is one of the 3 types of **DescriptionOfRequirements** that can be imposed on potential beneficiaries of an agricultural policy *measure* or *instrument*. These types of requirements concern the type of agro-livestock enterprises that can benefit (**cropOrLivestock**), or the minimum-maximum size these enterprises must have (**UAAdedicatedToCrop**, **NumLivestockUnits**), or the type of practices with which they can be performed (**agriculturalFarmingPractices**).

### 3.2.4 Beneficiary:

A *Beneficiary* is a legal person (**AgriculturalHolding**) or a physical person linked to an agricultural holding (owner, manager, worker, etc.) who can be awarded the benefits associated with an agricultural policy measure and/or one of its instruments. A beneficiary is defined by its name (**nameBeneficiary**), an identification code (**idBeneficiary**), and contact details (**contactBeneficiary**). The classes **PotentialBeneficiary** and **ActualBeneficiary** are child classes of the *Beneficiary* class and therefore inherit its attributes. **Beneficiary** is also the parent class of the classes **PhysicalPerson** and **AgriculturalHolding**, as these are the two possible types of entities that can receive the benefits of a policy measure or instrument.

### 3.2.5 Budget:

The **Budget** is the total amount of money allocated to a given Policy or Measure. A budget is defined by an identifier (**idBudget**), an amount (**amountBudget**) and a monetary unit (**currency**). A **Budget** is provisioned with the support of one or more **Funding**.

### 3.2.6 CapPayment:

A **CapPayment** is a payment under the Common Agricultural Policy. Some specific measures may involve payments associated with such Community legislation. A **CapPayment** is defined by an identifier (**idCapPayment**) and its description (**descriptionCapPayment**).

### 3.2.7 Commitment:

A **Commitment** is an ex-post requirement imposed by a given policy *measure*, and whose **ActualBeneficiaries** commit to comply. It is therefore a duty acquired by recipients of certain public aid and benefits, and non-compliance may be sufficient grounds for withdrawal of the benefit. The difference between **Requirements** and **Commitments** is that the former must be fulfilled by the potential beneficiaries in order to receive the benefit (in the present), while the latter must be fulfilled once the benefit has been allocated (in the future, once the call for aid has been resolved).

A **Commitment** is defined by its identifier (**idCommitment**), the identifier of the measure imposing it (**idAssociatedMeasure**), the committing element (**subjectOfCommitment**), the description of the actions to be realised (**descriptionOfCommitment**), the start and end of the period for which the subject of commitment must comply (**startPeriodValidity**, **endPeriodValidity**), the effective start date of the commitment (**effectiveStartDate**) and the description of the compliance validation mechanism (**descriptionOfVerification**).

### 3.2.8 DescriptionOfRequirement:

**DescriptionOfRequirements** describes the set of attributes needed to define a **Requirement**. As these attributes may vary depending on the type of requirement, this class has been created to group all possible sets of attributes associated to each type of requirement.

### 3.2.9 Discount:

A **Discount** is a type of instrument associated with a policy *measure*, consisting of a reduction applicable to the purchase price of some productive factor necessary for the agro-livestock activity. The **amountDiscount** of this reduction is understood to be paid through public funds.

### 3.2.10 Evaluator:

An **Evaluator** is a person or institution that is responsible for carrying out the assessment of a given public policy. Such an evaluation can be carried out during the design phase (ex-ante), during the implementation phase, or once the policy has been completed (ex-post). An **Evaluator** entity is defined by its name (**nameEvaluator**) and an identification code (**idEvaluator**).

### 3.2.11 FarmHoldingReq:

A **FarmHoldingReq** is one of the 3 types of **DescriptionOfRequirements** that can be imposed on potential beneficiaries of an agricultural policy *measure* or instrument. This type of requirement restricts the characteristics that the farm structure itself must have in order to be eligible for public support or benefits, and can therefore refer to its minimum or maximum **economicDimension**, its type of farming (**technoEconomicOrientation**), the minimum utilised agricultural area (**minimumUAA**) or the maximum, minimum number of workers it can have (**staffSize**), etc.

### 3.2.12 FarmOwnerReq:

A **FarmOwnerReq** is one of the 3 types of **DescriptionOfRequirements** that can be imposed on potential beneficiaries of an agricultural policy measure or instrument. This type of requirement restricts the characteristics that the owner of the agricultural holding must meet in order to be eligible for public support or benefits, and can therefore refer to his/her age (**ageRange**), the owner's gender, the characteristics of his/her family (**familySituation**), his/her educational level or his/her labour status (**labourSituation**), etc.

### 3.2.13 Funding:

A **Funding** is a deposit of money through which all or part of the **Budget** of a measure or policy is financed. It is defined by an identifier code (**idFunding**), the name of the funder and the source of funding (**sourceOfFunding**).

### 3.2.14 Incompatibility:

An **Incompatibility** is a mutually exclusive relationship established by one measure with respect to another(s). They are usually imposed to limit the total amount of aid that can be received by the same beneficiary, thus favouring the distribution of public funds. It is defined by an identifier code (**idIncompatibility**) and a list of measures that cannot be combined (**descriptionOfIncompatibility**).

### 3.2.15 Instrument:

An **Instrument** is each of the actions belonging to a *measure* by which a benefit or assistance is provided to a **Beneficiary**. Initially, 4 types of instruments are considered in AGRICORE: production Premiums, direct Subsidies, Discounts for the purchase of inputs, and *Tax Reductions*. An instrument is defined by its name (**nameInstrument**) and an identifier code (**idInstrument**).

### 3.2.16 ImpactAssessment:

An **ImpactAssessment** is a predefined plan for the evaluation of a given public *Policy*. It includes a selection of indicators to be calculated/compared, as well as the methodology to measure them. A single *Policy* can have more than one **ImpactAssessment** throughout its life cycle (it should have at least one ex-post). An **ImpactAssessment** is defined by an identifier (**idImpactAssessment**), the identifier of the policy to which it is associated (**idAssociatedPolicy**) and a description of the assessment (*descriptionAssessment*). An **ImpactAssessment** is realised through the definition and calculation of some KPIs.

### 3.2.17 KPI:

A **Key Performance Indicator (KPI)** is a metric for measuring the effect of the implementation of a *Policy*. It is defined by an identifier code (**idKPI**), a formula for its calculation (**formulaKPI**), the purpose of the indicator (**objectiveKPI**), the target value that the KPI is intended to achieve (**targetKPI**) and the temporal, geographical and administrative scopes used to apply it (**scopeKPI**). It is calculated as part of an **ImpactAssessment** linked to such policy and therefore the identifier of such IA is an attribute of the *KPI* (**idAssociatedIA**).

### 3.2.18 Measure:

A *Measure* (or *Program*) is the given solution to each of the causal problems that explains a central problem in policy and which were deemed crucial by a strategy designed to surround, to face, and to overcome it. They are therefore concrete actions aimed at tackling one or more of the objectives set by the *PublicPolicy* to which they belong. A *Measure* is defined by its identifier (*idMeasure*) and its legal name (*nameMeasure*). Its description (*descriptionMeasure*) and optionally the identifier of the Law where it is published (*codeLawIdentifier*) must also be included. In addition to its geo-administrative scope of effect (*geoPoliticalScope*), its date of approval (*dateOfApproval*), the date of the first call for the measure (*dateFirstCall*), its periodicity (*periodicityOfCalls*) and the total duration of the programme (*temporalScope*) must be included. Finally, if the measure already has a successful and active call, a record with the current beneficiaries can be included (*actualBeneficiariesRegistry*).

A *Measure* belongs to a *PublicPolicy* (*idLinkedPolicy*) and is articulated through one or more policy *instruments*. It may have *incompatibilities* with other *measures* and might impose some *Requirements* on *PotentialBeneficiaries* and some *commitments* on *ActualBeneficiaries*. A *Measure* should have a *Budget*, which might be the same of its parent policy or a dedicated one. Some measures might request *CapPayments*.

### 3.2.19 PhysicalPerson:

A *PhysicalPerson* is a natural person registered in the corresponding civil registry. In the context of AGRICORE, physical persons are human beings associated in some way with agricultural activity, either as owners, managers or workers of an *AgriculturalHolding*. Individuals associated with agricultural activities may as such be beneficiaries of certain aids or benefits associated with a policy *measure* or *instrument*.

### 3.2.20 PotentialBeneficiary:

A *PotentialBeneficiary* is a natural or legal person who fulfils a number of *requirements* associated with a policy *measure* or *instrument* that would make him/her/it eligible to receive the aid or benefit associated with that *measure* or *instrument*. The fact of fulfilling the requirements of the call does not guarantee, however, that the aid is granted (there could be more applicants than funds, for example). Therefore, usually, only a fraction of *PotentialBeneficiaries* become *ActualBeneficiaries*.

### 3.2.21 PublicPolicy:

A *PublicPolicy* is an institutionalized proposal to solve a central problem, guided by a conception. They are therefore guidelines established by public administrations in their efforts to achieve a set of objectives related to existing or foreseeable future problems. A *PublicPolicy* is defined by its identifier (*idPolicy*) and its legal title (*namePolicy*). It must also state which institution designs and establishes (*policyMaker*) the Policy and which institution implements it (*policyImplementator*), as both can be different. The document containing the legal description of the policy (*publicationDocument*) must be included, as well as the dates of approval (*dateOfApproval*) and effective date (*dateOfEffect*) and the geographical and/or administrative scope in which it takes effect (*geoPoliticalScope*). If the policy is itself the transposition of a higher administrative level *PublicPolicy*, the identifier of the transposed policy (*idUpperPolicy*) must be included. In case the policy is open for amendments, the start date (*startAmendmentPeriod*) and end date (*endAmendmentPeriod*) of the period open for amendments must be included, as well as the *amendments* made if any.

One or more *Measures* implement a given *PublicPolicy*, which must have an assigned *Budget* and involve at least one *ImpactAssessment*. It should be evaluated by at least one *Evaluator*.

### 3.2.22 Premium:

A *Premium* is a type of production-coupled instrument associated with a policy measure, consisting of the payment of a certain amount of money for each unit of output produced. It is defined by the unit in which production is measured (*unit*) and the amount paid per unit of production (*amountPremium*).

### 3.2.23 Range:

A *Range* associated with a *subsidy* is a set of values for land area or number of livestock units, bounded above and below (*rangeLimits*), for which the monetary value of the subsidy (*amount*) and its units (*unit*) are identical.

### 3.2.24 Requirement:

A *Requirement* is each of the pre-conditions imposed by a policy measure or instrument that a *Beneficiary* must fulfil in order to become a *PotentialBeneficiary* of such measure or instrument. It is defined by an identifier (*idRequirement*) and by the identifier of the measure/instrument that imposes the requirement (*idAssociatedMeasure* / *idAssociatedInstrument*).

### 3.2.25 Subsidy:

A *Subsidy* is a type of production-decoupled instrument associated with a policy measure, consisting of the payment of a certain amount of money per unit of land area/livestock unit cultivated/bred. It is defined by one or more *Ranges*, where each range may have a different monetary allocation per unit of land/livestock unit.

### 3.2.26 TaxReduction:

A *TaxReduction* is a type of production-decoupled instrument associated with a policy measure, consisting of a reduction (*decreaseAmount*) in the percentage of a certain tax (*affectedTax*) levied on the beneficiaries' activity.

### 3.2.27 Verificator:

A *Verificator* is a person or institution that is responsible for ensuring compliance with a given commitment associated with a policy measure. Such verification should be carried out during the period of validity of the commitment. A *Verificator* entity is defined by its name (*nameVerificator*) and an identification code (*idVerificator*).

### 3.3 Tailoring an XML template for the tagged-text-based description of public policies

Following the UML Domain Diagram creation is the UML to XML Schema transformation. This is the process of creating an equivalent XML schema model from a given UML model.

#### 3.3.1 Tagged schemas and XML

##### 3.3.1.1 What is XML

The letters XML derive from the words eXtensible Markup Language. XML is designed to store, transmit, and reconstruct data while being self-descriptive. It defines a set of rules for encoding documents in a format that is both human and machine-readable. XML is a software-independent and hardware-independent tool whose design goals (data storage, transmission, and reconstruction), are focused on simplicity, generality, and usability across the Internet [12]. XML is developed, recommended, and defined as it regards its standards by W3C (World Wide Web Consortium) [12][13][14][15]. It was derived from an older standard format called SGML (ISO 8879), in order to be more suitable for Web use.

As an example, if a user or a system needed to send the context of some emails to another user or system, they would need to send a file containing something like the following:

##### Example of email context information exchange

*Ann Jhon Hello Hello brother, how are you? How are Mike Eddie good old Nick Terry  
Everyone OK? Jack Jill Question Hi, will you be attending the seminar on Friday?  
MyPhone Me Gym Remember to schedule a weightlifting session for today. Gaby  
Emma List List you asked for Jim Steve tomorrow first Eva Sharra Thursday second  
Amy Bob Friday Third*

As it seems it would be hard to try and correctly understand the context of the file without some explanation. For instance, it would be really hard to know who is sending the email to whom, or if Amy and Bob are a new email thread or part of the Gaby-Emma list. XML is one of the best existing ways to markup the data that is transferred from one system to another. Bellow we can view the same context with the help of XML:

When creating XML documents, the user is essentially creating an electronic document, following a specific set of rules, that are expressed with tags inside the document. But XML does not **DO** anything. XML is information wrapped in tags. Various other software applications take the XML document and send, store, receive, or display it.

Some basic constructs that appear in XML files are:

- Tags. A tag begins with < and ends with > Start tags have their end tags e.g., <from> </from>
- Markup and content. As a general rule text that is between < and > is markup and other text in an XML file is content.
- Elements. An element is a part of the XML document that begins with a start tag and ends with the matching end tag.
- An attribute is a markup construct consisting of a name-value pair that exists within a start-tag e.g., <note date="20/06/2022">



```

<emails>
  <email>
    <to>Ann</to>
    <from>John</from>
    <heading>Hello</heading>
    <body>Hello brother, how are you? How are Mike Eddie good old Nick
Terry Everyone OK?</body>
  </email>

  <email>
    <to>Jack</to>
    <from>Jill</from>
    <heading>Question</heading>
    <body>Hi, will you be attending the seminar on Friday?</body>
  </email>

  <email>
    <to>MyPhone</to>
    <from>Me</from>
    <heading>Gym</heading>
    <body>Remember to schedule weightlifting session for today.</body>
  </email>

  <email>
    <to>Gaby</to>
    <from>Emma</from>
    <heading>List</heading>
    <body>List you asked for Jim Steve tomorrow first Eva Sharra Thursday
second</body>
  </email>

  <email>
    <to>Amy</to>
    <from>Bob</from>
    <heading>Friday</heading>
    <body>Third</body>
  </email>
</emails>
    
```

**Code Block 1 Example of XML data markup**

### 3.3.1.2 Main characteristics of XML

#### **Extensible:**

The property of extensible means that XML enables application-specific and application domain-specific variations of the basic language to be created. There are many languages and document formats that have been developed using XML syntax, or based on XML, including MathML, SVG, RSS, RDF Atom, Office Open XML, OpenDocument, and XHTML [16]. Taking into consideration that XML is accepted by the W3C, and that it is open source, it is understandable that currently, it is a de facto standard for cross-platform data transfers.

A markup language is a system for marking or tagging a document that indicates its logical structure and gives instructions for its layout on the page, especially for electronic transmission and display [17]. In the case of XML, its system defines the type of markup information included in the electronic document, and how it is combined with the content of that document, to facilitate use by humans and computer programs.



### A transmitting, storing and, reconstructing tool:

XML is used for standardizing the exchange of information between electronic systems. By labelling, categorizing and structurally organizing information with tags that follow specific rules, XML enables the data exchange between the systems that follow those rules [18].

### Human and machine-readable set of rules

The XML syntax rules are simple and logical and the XML documents that conform to those syntax rules are titled as “well formed”.

Some of the basic syntax rules are:

- XML documents must have a root element that is the parent of all other elements. In the following example the root element is **<note>**:

```
<note>
  <to>Amy</to>
  <from>Bob</from>
  <heading>Friday</heading>
  <body>Third</body>
</note>
```

**Code Block 2 XML syntax example**

- The XML prolog/declaration line is another syntax rule. It is optional. If it exists, it must come first in the document. This line contains information about the document. XML documents can contain international characters, like Norwegian øæå or French èèé. To avoid errors, the encoding used is specified in the prolog. UTF-8 is the default character encoding for XML documents.
- The following line is an example of the XML prolog/declaration:

```
<?xml version="1.0" encoding="UTF-8"?>
```

**Code Block 3 XML syntax example**

- All the elements must have a closing tag. Only the prolog (that is not considered a part of the document) may omit the closing tag.
- XML tags are case-sensitive. For example: **<note>** and **<Note>** are different.
- In XML, all elements must be properly nested within each other. For example, unlike HTML this is not OK for XML:

```
<to><from>Amy Bob</to></from>
```

**Code Block 4 XML syntax example**

since the **<from>** element was opened inside the **<to>** element, it should also be closed inside it.

- XML elements can have attributes in name/value pairs just like in HTML, but they must always be quoted. In the following example, the element **<note>** has an attribute with the name **[date]** and the value **[20/06/2022]** that is in quotes.

```
<note date="20/06/2022">
    <to>Amy</to>
    <from>Bob</from>
    <heading>Friday</heading>
    <body>Third</body>
</note>
```

#### Code Block 5 XML syntax example

- There are some “reserved” characters in XML that cannot be used, and a pre-defined combination is provided instead. Those are:

Reserved character	Meaning	Replacement
<	Less than	&lt;
>	Greater than	&gt;
&	Ampersand	&amp;
'	Apostrophe	&apos;
"	Quotation mark	&quot;

**Table 1 Reserved characters in XML**

Only [**<**] and [**&**] are strictly illegal but it is considered good practice to replace all of them with the equivalent.

- The syntax for writing comments in XML is as in the following example: **<!-- this is a comment and it has no effect in the rest of the document. It is as if it does not exist -->**
- In XML, multiple white spaces are not truncated, they are left as is (in contrast to HTML).
- In XML, there is a set of rules that are used to figure out the parent/child relationship of the elements. When an element(A) is contained by another element(B), then the first is a descendant of the second and the second is the ancestor of the first. In the example bellow, all elements are descendants of **<note>** and **<note>** is their Ancestor. This means that **<day>** and **<time>** are a subelements of **<date>** just as **<to>** and **<from>** are subelements of **<note>**.

```

<note>

  <to>Amy</to>

  <from>Bob</from>

  <heading>Greetings</heading>

  <body>Hello my dear friend!</body>

  <date>

    <day>Friday 07/07/2022</day>

    <time>18:30</time>

  </date>

</note>

```

### Code Block 6 Ancestors and descendants

#### Self-descriptive

The electronic document that is created with XML, contains both the information (data) that is stored/transmitted as well as information (metadata) about the format and the meaning of the data. This makes XML language self-descriptive.

#### Hardware-independent.

There are some applications that are “machine”, “hardware” or “platform” dependent which means that they only run in one type/series of computers. In contrast, other applications can run in a variety of different families of computers and they are characterized as “machine”, “hardware” or “platform” independent applications. XML is one such hardware-independent application.

#### Software-independent

XML is stored in plain text format, so any software application that can parse a text file can also handle and XML file and this makes XML software-independent. An example of hardware/software-independence is presented below:

Let’s assume that in a previous version of a web application that displays a person’s emails, the information needed was:

```

<email>

  <to>Jack</to>

  <from>Jill</from>

  <heading>Question</heading>

  <body>Hi, will you be attending the seminar on Friday?</body>

</email>

```

And the result looked like this:

Email	
To:	Jack
From:	Jill
Subject:	Question
Body:	Hi, will you be attending the seminar on Friday?

Now let us assume that in a new version of the web application that displays the emails, an additional field has been added to display the datetime information of the email.

```
<email>
  <time>22:07</time>
  <date>31/06/2022</date>
  <to>Jack</to>
  <from>Jill</from>
  <heading>Question</heading>
  <body>Hi, will you be attending the seminar on Friday?</body>
</email>
```

And the result looked like this:

Email	
Time:	22:07
Date:	31/06/2022
To:	Jack
From:	Jill
Subject:	Question
Body:	Hi, will you be attending the seminar on Friday?

And in some other devices with a different version of the software or in another email web application that only had a display field for date and not time, it might look like this:

Email	
Date:	31/06/2022
To:	Jack
From:	Jill
Subject:	Question
Body:	Hi, will you be attending the seminar on Friday?

### 3.3.2 How are the Policies translated to XML

Starting with the UML domain diagram that has been created, all entities with their attributes have been assigned their own tags and names. To represent them in XML, the following table was created containing the representations.

**Table 2 XML Template**

Name in the UML	XML representation
<b>PublicPolicy</b>	<b>&lt;PublicPolicy="" namePolicy="" idPolicy=""&gt; &lt;/PublicPolicy&gt;</b>
idPolicy	<PublicPolicy="" namePolicy="" idPolicy=""> </PublicPolicy>
namePolicy	<PublicPolicy="" namePolicy="" idPolicy=""> </PublicPolicy>
IdUpperPolicy	<idUpperPolicy> </idUpperPolicy>
geoPoliticalScope	<geoPoliticalScope="" NUTS2=""> </geoPoliticalScope>
policyMaker	<policyMaker = "" policyMakerNativeName = ""> </policyMaker>
policyImplementator	<policyImplementator = "" policyImplementatorNativeName = ""> </policyImplementator>
dateOfApproval	<dateOfApproval> </dateOfApproval>
dateOfEffect	<dateOfEffect> </dateOfEffect>
publicationDocument	<publicationDocument> </publicationDocument>
startAmendPeriod	<startAmendmentPeriod> </startAmendmentPeriod>
endAmendmentPeriod	<endAmendmentPeriod> </endAmendmentPeriod>
amendmments	<amendments> </amendments>
<b>ImpactAssessment</b>	<b>&lt;ImpactAssessment&gt; &lt;/ImpactAssessment&gt;</b>
idImpactAssessment	<idImpactAssessment> </idImpactAssessment>
descriptionAssessment	<descriptionOfAssessment> </descriptionOfAssessment>
<b>KPI</b>	<b>&lt;KPI=""&gt; &lt;/KPI&gt;</b>
idKPI	<idKPI> </idKPI>
objectiveKPI	<objectiveKPI> </objectiveKPI>
targetKPI	<targetKPI> </targetKPI>
scopeKPI	<scopeKPI> </scopeKPI>
<b>Evaluator</b>	<b>&lt;Evaluator="" nameEvaluator="" idEvaluator=""&gt; &lt;/Evaluator&gt;</b>
idEvaluator	<Evaluator="" nameEvaluator="" idEvaluator=""> </Evaluator>
nameEvaluator	<Evaluator="" nameEvaluator="" idEvaluator=""> </Evaluator>
<b>Budget</b>	<b>&lt;Budget&gt; &lt;/Budget&gt;</b>
idBudget	<idBudget> </idBudget>
amountBudget	<amountBudget> </amountBudget>
currency	<currency> </currency>
<b>Funding</b>	<b>&lt;Funding&gt; &lt;/Funding&gt;</b>
idFunding	<idFunding> </idFunding>
sourceOfFunding	<sourceOfFunding> </sourceOfFunding>

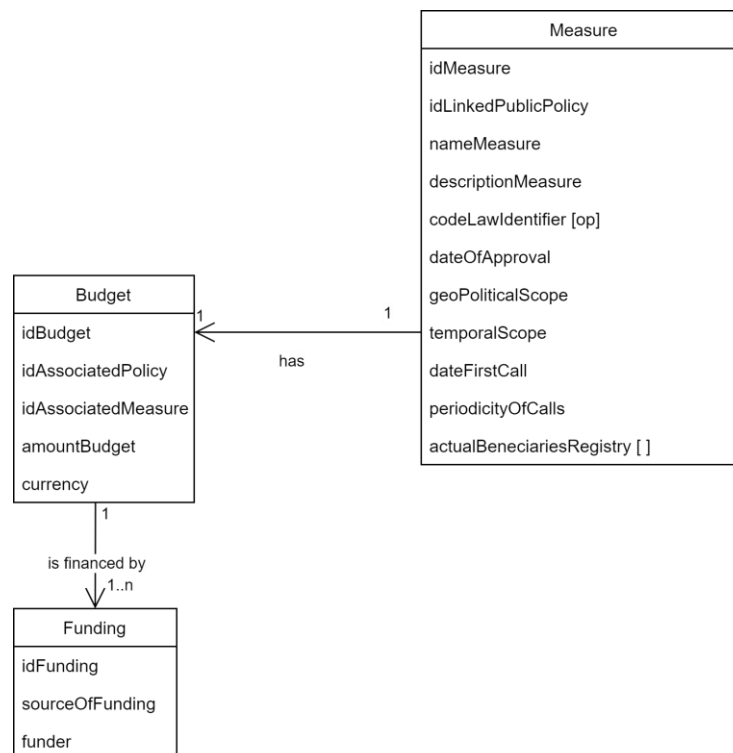
funder	<funder> </funder>
<b>Measure</b>	<b>&lt;Measure="" nameMeasure="" idMeasure=""&gt; &lt;/Measure&gt;</b>
idMeasure	<Measure="" nameMeasure="" idMeasure=""> </Measure>
idLinkedPublicPolicy	<idLinkedPublicPolicy> </idLinkedPublicPolicy>
nameMeasure	<Measure="" nameMeasure="" idMeasure=""> </Measure>
descriptionMeasure	<descriptionOfMeasure> </descriptionOfMeasure>
codeLawIdentifier	<codeLawIdentifier> </codeLawIdentifier>
dateOfApproval	<dateOfApproval> </dateOfApproval>
geoPoliticalScope	<geoPoliticalScope="" NUTS2=""></geoPoliticalScope>
temporalScope	<temporalScope> </temporalScope>
dateFirstCall	<dateFirstCall> </dateFirstCall>
periodicityOfCalls	<periodicityOfCalls> </periodicityOfCalls>
actualBeneficiariesRegistry	<actualBeneficiariesRegistry> </actualBeneficiariesRegistry>
<b>CapPayment</b>	<b>&lt;CapPayment&gt; &lt;/CapPayment&gt;</b>
idCapPayment	<idCAPPayment> </idCAPPayment>
descriptionCapPayment	<descriptionCAPPayment> </descriptionCAPPayment>
<b>Commitment</b>	<b>&lt;Commitment&gt; &lt;/Commitment&gt;</b>
idAssociatedMeasure	<idAssociatedMeasure> </idAssociatedMeasure>
idCommitment	<idCommitment> </idCommitment>
subjectOfCommitment	<subjectOfCommitment> </subjectOfCommitment>
descriptionOfCommitment	<descriptionOfCommitment> </descriptionOfCommitment>
startPeriodValidity	<startPeriodOfValidity> </startPeriodOfValidity>
endPeriodValidity	<endPeriodOfValidity> </endPeriodOfValidity>
effectiveStartDate	<effectiveStartDate> </effectiveStartDate>
descriptionOfVerification	<descriptionOfVerification> </descriptionOfVerification>
<b>Verifier</b>	<b>&lt;Verifier&gt; &lt;/Verifier&gt;</b>
idVerifier	<idVerifier> </idVerifier>
nameVerifier	<nameVerifier> </nameVerifier>
<b>Incompatibility</b>	<b>&lt;Incompatibility&gt; &lt;/Incompatibility&gt;</b>
idIncompatibility	<idIncompatibility> </idIncompatibility>
descriptionIncompatibility	<descriptionOfIncompatibility> </descriptionOfIncompatibility>
<b>ActualBeneficiary</b>	<b>&lt;ActualBeneficiary&gt; &lt;/ActualBeneficiary&gt;</b>
<b>PotentialBeneficiary</b>	<b>&lt;PotentialBeneficiary&gt; &lt;/PotentialBeneficiary&gt;</b>
<b>Beneficiary</b>	<b>&lt;Beneficiary&gt; &lt;/Beneficiary&gt;</b>
idBeneficiary	<idBeneficiary> </idBeneficiary>
nameBeneficiary	<nameBeneficiary> </nameBeneficiary>
contactBeneficiary	<contactBeneficiary> </contactBeneficiary>

<b>PhysicalPerson</b>	<b>&lt;PhysicalPerson&gt; &lt;/PhysicalPerson&gt;</b>
ageRange	<ageRange> </ageRange>
gender	<gender> </gender>
familySituation	<familySituation> </familySituation>
studyLevel	<studyLevel> </studyLevel>
laborSituation	<laborSituation> </laborSituation>
<b>AgriculturalHolding</b>	<b>&lt;AgriculturalHolding&gt; &lt;/AgriculturalHolding&gt;</b>
economicDimension	<economicDimension> </economicDimension>
technoEconomicOrient	<technoEconomicOrient> </technoEconomicOrient>
TotalUAA	<TotalUAA> </TotalUAA>
staffSize	<staffSize> </staffSize>
<b>Instrument</b>	<b>&lt;Intruments&gt; &lt;/Intruments&gt;</b>
idInstrument	<idInstrument> </idInstrument>
nameInstrument	<nameInstrument> </nameInstrument>
<b>Requirement</b>	<b>&lt;Requirements&gt; &lt;/Requirements&gt;</b>
idAssociatedMeasure	<idAssociatedMeasure> </idAssociatedMeasure>
idRequirement	<idRequirement> </idRequirement>
<b>DescriptionOfRequirement</b>	<b>&lt;DescriptionOfRequirement&gt; &lt;/DescriptionOfRequirement&gt;</b>
<b>FarmOwnerReq</b>	<b>&lt;FarmOwnerRequirement&gt; &lt;/FarmOwnerRequirement&gt;</b>
ageRange	<ageRange> </ageRange>
Gender	<Gender> </Gender>
familySituation	<familySituation> </familySituation>
studyLevel	<studyLevel> </studyLevel>
laborSituation	<laborSituation> </laborSituation>
<b>FarmHoldingReq</b>	<b>&lt;FarmHoldingRequirement&gt; &lt;/FarmHoldingRequirement&gt;</b>
economicDimension	<economicDimension> </economicDimension>
TEO	<TEO> </TEO>
minimumUAA	<minimumUAA> </minimumUAA>
staffSize	<staffSize> </staffSize>
<b>AgriEnterpriseReq</b>	<b>&lt;AgriEnterpriseRequirement&gt; &lt;/AgriEnterpriseRequirement&gt;</b>
cropOrLivestock	<cropOrLivestock> </cropOrLivestock>
agriculturalFarmingPractices	<agriculturalFarmingPractices> </agriculturalFarmingPractices>
UAAdedicatedToCrop	<UAAdedicatedToCrop> </UAAdedicatedToCrop>
NumLivestockUnits	<NumLivestockUnits> </NumLivestockUnits>
<b>Premium</b>	<b>&lt;Premium&gt; &lt;/Premium&gt;</b>



amountPremium	<amountPremium> </amountPremium>
unit	<unit> </unit>
<b>Subsidy</b>	<b>&lt;Subsidy&gt; &lt;/Subsidy&gt;</b>
<b>Range</b>	<b>&lt;Range&gt; &lt;/Range&gt;</b>
amount	<Amount> </Amount>
unit	<Unit> </Unit>
range_limits	<Range_Limits> </Range_Limits>
<b>Discount</b>	<b>&lt;Discount&gt; &lt;/Discount&gt;</b>
amountDiscount	<amountDiscount> </amountDiscount>
applicableTo	<applicableTo> </applicableTo>
<b>TaxReduction</b>	<b>&lt;TaxReduction&gt; &lt;/TaxReduction&gt;</b>
decreaseAmount	<decreaseAmount> </decreaseAmount>
affectedTax	<affectedTax> </affectedTax>

After all the UML entities and their attributes have been represented in XML form, their relationships will be expressed by their relative positioning. The entities relationships that are present in the UML, like “has”, “contains”, “involves” etc., are shown in the XML file by writing an element inside the other (containing it). For example, based on the UML, a Measure has some attributes, and also, a Measure “has” a Budget (which is a different entity), and a Budget “is financed by” a Funding that is also an entity with its own attributes. In the UML this looks like the Figure 5.



**Figure 5: Example of UML relationship that should be translated into XML schema**

To display those relationships in XML, we have the Measure entity contain the Budget entity and the Budget entity contain the Funding entity (each of them with the related attributes). The result for this example is as follows:

```
<Measures>
  <idLinkedPublicPolicy> </idLinkedPublicPolicy>
  <descriptionOfMeasure> </descriptionOfMeasure>
  <dateOfApproval> </dateOfApproval>
  <geoPoliticalScope ="" NUTS0 =""> </geoPoliticalScope>
  <temporalScope> </temporalScope>
  <dateFirstCall> </dateFirstCall>
  <periodicityOfCalls> </periodicityOfCalls>
  <Budget>
    <idBudget> </idBudget>
    <amountBudget> </amountBudget>
    <currency> </currency>
    <Funding>
      <idFunding> </idFunding>
      <sourceOfFunding> </sourceOfFunding>
      <funder> </funder>
    </Funding>
  </Budget>
</Measures>
```

**Code Block 7: UML relationship translated into XML**

Having completed the 'UML diagram to XML schema' mapping and the XML schema configuration, the next step was the application of this XML schema to describe the use case policies in order to identify the needed values from each policy. The corresponding XML descriptions for 6 selected policies are presented in the [Appendix](#).

### 3.4 Translation of XML into mathematical language and incorporation of the policy into ABM.

The last step of the policy translation process in the AGRICORE platform is the incorporation of the selected policy(ies) into the simulation environment. This means the modification of either the rules that drive agents' behaviour and/or the underlying equations that define the functioning of other modules (e.g. a given policy may condition the determination of selling prices in the Market Module (deliverable D5.3) without necessarily being included in the optimisation problem of the individual agents). However, most commonly, the measures associated with the policy selected for simulation do directly and explicitly affect the formulation of the optimisation problem that determines the agent's behaviour in each simulation step.

Taking the input-output assignation process (agro-economic operation in the short-term) as an example, the original generic formulation of the respective optimisation problem:

$$J(x, u) = \max_u \sum_{\forall i} \{q_i(x, u_i) \cdot p_i - q_i(x, u_i) \cdot c(u_i)\}$$

subject to

$$\begin{aligned} Aq &\leq b \\ u &\leq \mathcal{U} \\ x &\leq \mathcal{X} \end{aligned}$$

where:

$q_i \equiv$  quantity of product  $i$

$p_i \equiv$  price of product  $i$

$c(u_i) \equiv$  cost of production factor mix  $u_i$  needed to produce  $q_i$

$x \equiv$  economic and agronomic states of the agricultural holding agent

$A \equiv$  Technology Matrix

$b \equiv$  Vector of production factors endowments

$\mathcal{U} \equiv$  Set of constraints on the space of allowed agent's agro-management actions (decisions)

$\mathcal{X} \equiv$  Set of constraints on the space of allowed agent's agro-financial status (states)

is modified by the inclusion of the selected policy, becoming another optimisation problem whose formulation varies accordingly:

$$\mathcal{J}_{pc}(x, u) = \max_u \sum_{\forall i} \{q_i(x, u_i) \cdot p_i - q_i(x, u_i) \cdot c(u_i) + P_1(q_i, x, u_i)\}$$

subject to

$$\begin{aligned} A_{pc}q &\leq b_{pc} \\ u &\leq \mathcal{U}_{pc} \\ x &\leq \mathcal{X}_{pc} \end{aligned}$$

where

$P_1(q_i, x, u_i) \equiv$  incorporated summand representing the monetary income associated to the selected policy, which may be fixed or dependent on either the output,  $q_i$ , the agent's decisions,  $u_i$ , or the agent's states,  $x_i$ .

$A_{pc} \equiv$  Technology Matrix affected by the selected policy

$b_{pc} \equiv$  Vector of policy-constrained endowments of production factors

$\mathcal{U}_{pc} \equiv$  Set of constraints on the space of allowed agent's agro-management actions (decisions), additionally constrained by the selected policy.

$\mathcal{X}_{pc} \equiv$  Set of constraints on the space of allowed agent's agro-financial status (states), additionally constrained by the selected policy.

As mentioned above, the incorporation of policies can be captured in different ways and at different locations within the mathematical formulation of the optimisation problems that represent the agent's (manager's) own rationality.

Perhaps the most obvious is the appearance of new summand terms in the objective function itself, with a positive sign in the case of subsidies or premiums, or with a negative sign in the case of penalties.

An alternative way is to modify the constraint sets. The decision space  $\mathcal{U}$  can be modified, for example, by a crop diversification measure that imposes a minimum percentage distribution of area by crop type.

The space of admissible states  $\mathcal{X}$  can also be modified by policy-specific constraints. This would be the case, for example, for a small farm support policy that requires small farms to have an economic size (part of the financial status of the agent) below a certain value in order to receive support.

Finally, a very specific policy might also determine a modification in the structure of the objective function itself (change in the composition and weighting of sub-objectives or in the maximised variables).

So far in AGRICORE, the translation of XML into mathematical expression is a manual process that must be performed by a modeller with knowledge of the policy itself, of the agent model and of the mathematical solvers used to solve the model. However, the organisations involved in this task are studying different methodologies so that at the end of the project, this process can be as seamlessly automated as possible.

### 3.5 Usage of the Policy Environment Module through the Graphical User Interface (GUI)

To facilitate user operations, several mockups of the graphical user interface have been designed for the screens related to the indexing of policy descriptions, the editing of these descriptions and the selection of those policies that are to be incorporated into the simulation. Figure 6 shows how the Catalogue of Policies of an AGRICORE user will look like. The image displays the private section of the repository, i.e. a dedicated space within the user's DWH where the user-customised versions of the XML policies descriptions are stored. The side toolbar also holds the tab that gives access to the general catalogue of policies. This is a public repository of descriptions created by users and shared for their evaluation and use by other users in the community. The memory space associated with the general catalogue of policies will be hosted in one of the servers that AGRICORE dedicates to its public access tools. Both catalogues will offer search and filtering tools to make it easier for users to locate policies of interest to them.

The GUI offers another pop-up window (Figure 7) with selectors and a small, embedded XML editor. This window is used to create the initial version of a policy description from scratch. It can also be used, once the policy has been created, to edit its structure or numerical values in order to simulate the effect of different variations of the policy.

Finally, within the simulation set-up process, the user must choose the policy(ies) whose effect on the agents is to be simulated. This is done through the policy selection screen (Figure 8). Here, the user can incorporate directly, either from the personal catalogue or from the general catalogue, those policies that are of interest for the impact assessment.

The current mix of selected policies appears at the bottom of the screen, together with their most important characteristics. By clicking on the 'Continue' button, the 'XML to mathematical expression' translation functionality is launched, generating the formulation of the optimisation problems that are subsequently incorporated into each of the agents.

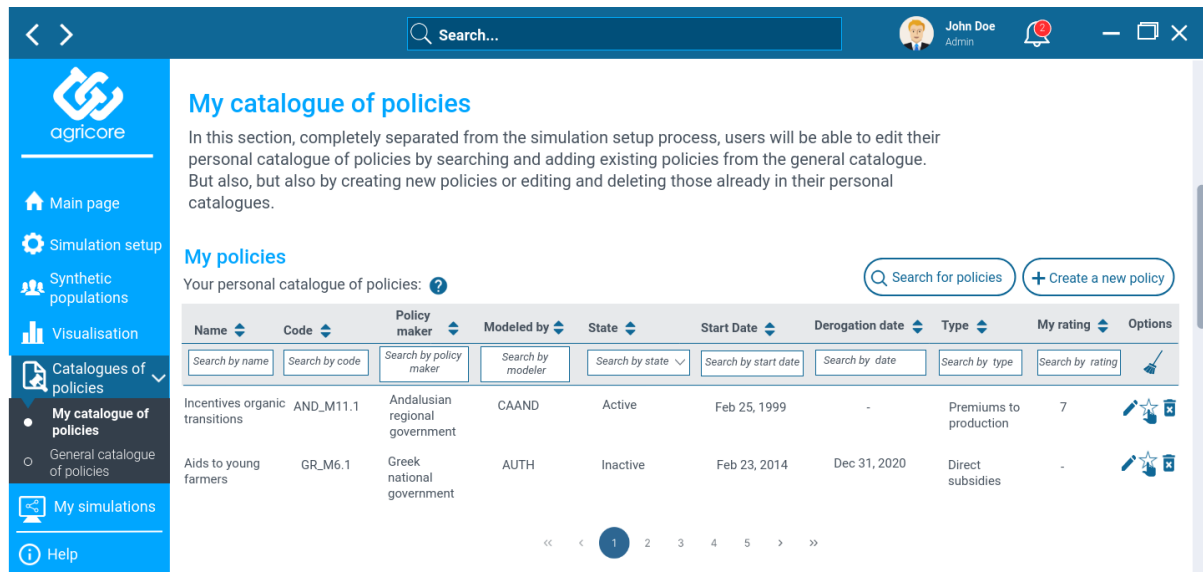


Figure 6 Policy Repository GUI mockup

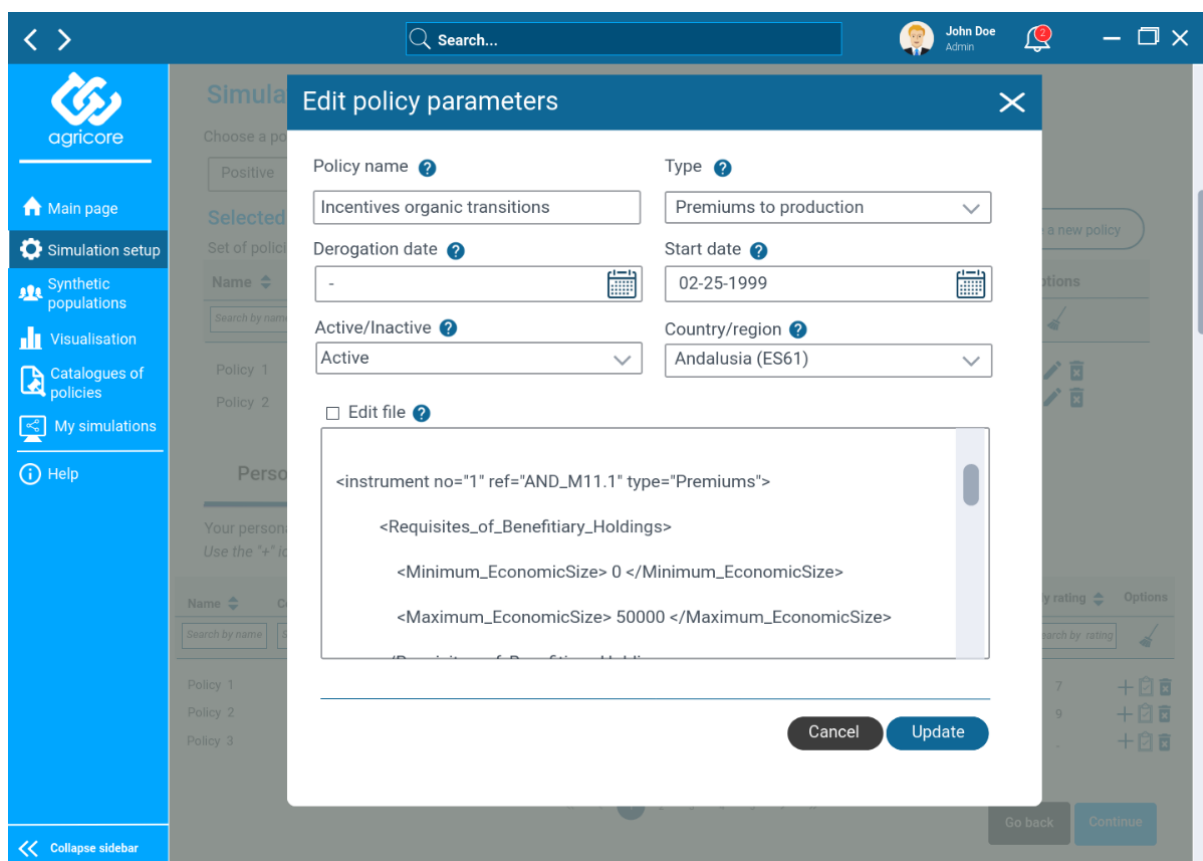
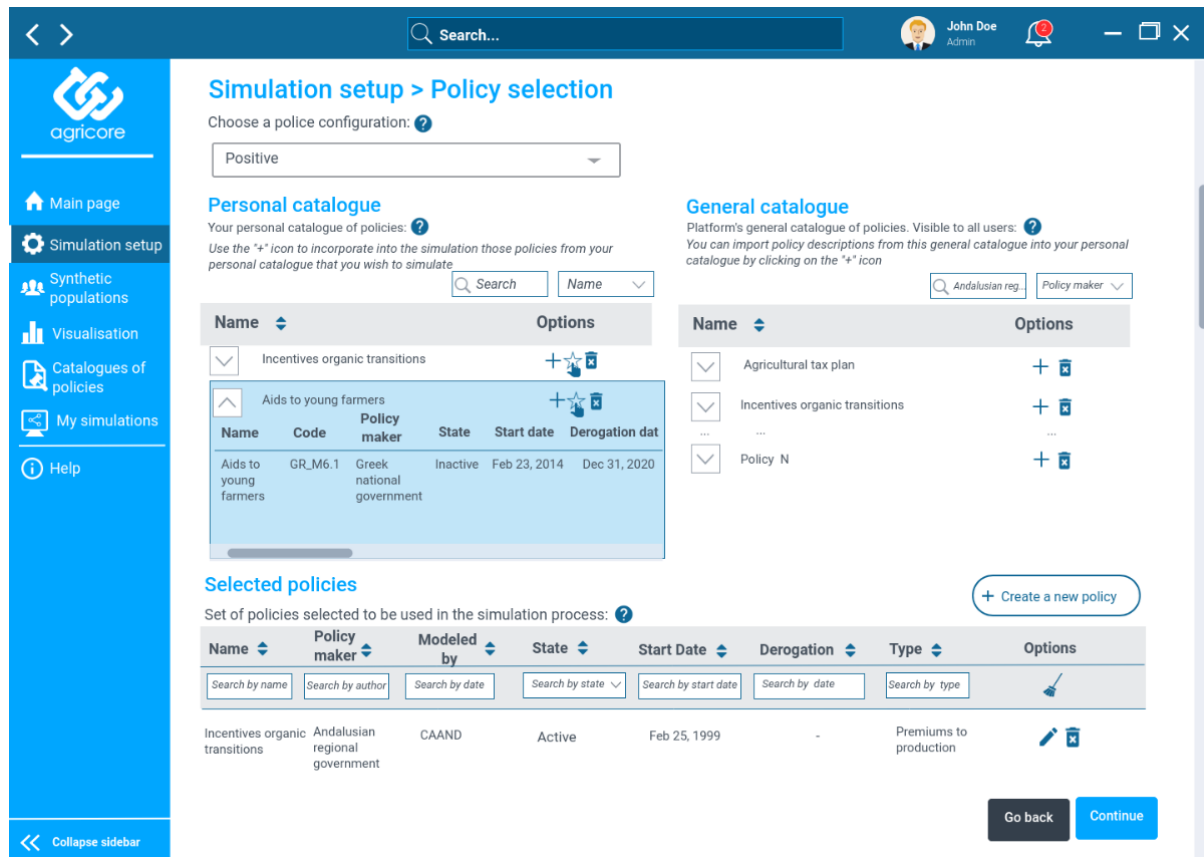


Figure 7 mockup of the graphical user interface allowing modification of the XML description of a selected policy



**Figure 8 Mockup of the graphical user interface allowing the selection of policies for incorporation into the simulation**

## 4 Conclusions

This document describes the complete development process of the policy translation module. All the procedures, tools and technologies used for the development of the module are explained and analysed, including the Unified Modelling Language and the eXtensible Markup Language.

Although the main output of task T5.7 is the complete policy environment module, a set of by-products have been generated as part of the work done. The first of these is a domain model diagram for the conceptual description of agricultural public policies, which includes the classes and attributes necessary to characterise any associated measure or instrument. The second by-product is the transposition of the domain diagram into an XML template that allows the description of any policy in a tagged textual language.

Finally, these XML schemas are translated into the corresponding mathematical formulation for the optimisation problems solved by the agents, which are conditioned and constrained by the selected policies.

The interaction with the policy environment module is done through different windows and screens of the AGRICORE graphical user interface. Through it, a user can access public and private repositories of descriptions, create new descriptions and edit them, and select specific policy descriptions to be incorporated into the simulation.

The proposed descriptive sequence is applied to 6 different policies, belonging to both Pillar 1 and Pillar 2 of the Common Agricultural Policy. The policies described are either the subject of the case studies covered by AGRICORE or other policies currently being implemented in the countries of these use cases.

The proposed methodology is generic enough to allow repeating the steps for any other instrument of the CAP that a researcher (or any other interested party) may select. However, the domain diagram and the resulting template are products under development and subject to future improvements and extensions, both by the AGRICORE consortium and by external individuals and institutions. Eventually, this approach could be extended to the description and modelling of public policies in other fields and sectors.

Future steps, in addition to debugging and extending the resulting domain diagram and templates, should focus on finding a way to automate the generation of the resulting optimisation models, allowing the simultaneous and immediate inclusion of several mutually compatible policies previously selected by the user.



## References

- [1] <sup>^</sup> [M. E. Dimock](#), “Government Corporations; A Focus of Policy and Administration, II,” *The American Political Science Review*, vol. 43, no. 6, pp. 1145–1164, 1949, doi: 10.2307/1950511.
- [2] <sup>^</sup> [R. C. Chandler and J. C. Plano](#), *The Public Administration Dictionary*. ABC-Clio, 1988. [Online]. Available: <https://books.google.es/books?id=jmFHAAAAMAAJ>
- [3] <sup>^</sup> [A. Lassance](#), “What Is a Policy and What Is a Government Program? A Simple Question With No Clear Answer, Until Now,” *SSRN Electronic Journal*, 2020, doi: 10.2139/ssrn.3727996.
- [4] <sup>^</sup> [L. Warlouzet](#), *European Public Policy*. 2020. [Online]. Available: <https://ehne.fr/en/node/12436>
- [5] <sup>^</sup> [E. Commission](#), *Funding and Tenders Portal - Topic ID: RUR-04-2018 - Analytical tools and models to support policies related to agriculture and food*. [Online]. Available: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/rur-04-2018-2019>
- [6] <sup>^</sup> [12E. Commission](#), “Better Regulation Guidelines,” Brussels, Nov. 2021. [Online]. Available: [https://ec.europa.eu/info/sites/default/files/swd2021\\_305\\_en.pdf](https://ec.europa.eu/info/sites/default/files/swd2021_305_en.pdf)
- [7] <sup>^</sup> [M. Qiu, Y. Weng, J. Cao, N. E. Selin, and V. J. Karplus](#), “Improving Evaluation of Energy Policies with Multiple Goals: Comparing Ex Ante and Ex Post Approaches,” *Environmental Science & Technology*, vol. 54, no. 24, pp. 15584–15593, Dec. 2020, doi: 10.1021/acs.est.0c01381.
- [8] <sup>^</sup> [Directorate-General for Research and Innovation \(European Commission\) and G. of Chief Scientific Advisors \(European Commission\)](#), “Scientific advice to European policy in a complex world,” Luxembourg, Sep. 2019. [Online]. Available: <https://data.europa.eu/doi/10.2777/80320>
- [9] <sup>^</sup> [S. Janssen and M. K. van Ittersum](#), “Assessing farm innovations and responses to policies: A review of bio-economic farm models,” *Agricultural Systems*, vol. 94, no. 3, pp. 622–636, Jun. 2007, doi: 10.1016/j.agry.2007.03.001.
- [10] <sup>^</sup> [W. Britz et al.](#), “A design for a generic and modular bio-economic farm model,” *Agricultural Systems*, vol. 191, p. 103133, Jun. 2021, doi: 10.1016/j.agry.2021.103133.
- [11] <sup>^</sup> [P. Reidsma, S. Janssen, J. Jansen, and M. K. van Ittersum](#), “On the development and use of farm models for policy impact assessment in the European Union – A review,” *Agricultural Systems*, vol. 159, pp. 111–125, Jan. 2018, doi: 10.1016/j.agry.2017.10.012.
- [12] <sup>^</sup> [12W3.org](#), “Extensible Markup Language (XML) 1.0 (Fifth Edition).” [Online]. Available: <https://www.w3.org/TR/REC-xml>
- [13] <sup>^</sup> [W3.org](#), “Extensible Markup Language (XML) 1.0.” [Online]. Available: <https://www.w3.org/TR/1998/REC-xml-19980210>
- [14] <sup>^</sup> [W3.org](#), “W3C Document License.” [Online]. Available: <https://www.w3.org/Consortium/Legal/2015/doc-license>
- [15] <sup>^</sup> [Dblab.ntua.gr](#), “XML and Semantic Web W3C Standards Timeline-History.” [Online]. Available: <https://web.archive.org/web/20130424125723/http://www.dblab.ntua.gr/bikakis/XML%20and%20Semantic%20Web%20W3C%20Standards%20Timeline-History.pdf>
- [16] <sup>^</sup> [XML.coverpages.org](#), “XML Applications and Initiatives.” [Online]. Available: <http://xml.coverpages.org/xmlApplications.html>

- [17] [^](https://www.merriam-webster.com/dictionary/markup%20language) Merriam-Webster, “Markup Language.” [Online]. Available: <https://www.merriam-webster.com/dictionary/markup%20language>
- [18] [^](#) L. Dykes, XML for Dummies (4th ed.). Wiley, 2005.
- [19] [^](#) J. de Andalucia, “Programming of European Funds - European Agricultural Fund for Rural Development 2014-2022.” [Online]. Available: <https://www.juntadeandalucia.es/organismos/economiahaciendayfondoseuropeos/areas/fondos-europeos/recursos-fondos-europeos/paginas/programacion-fondo-agricola.html>
- [20] [^](#) S. General of Union Resources and Infrastructure, “AGRICULTURAL DEVELOPMENT PROGRAM (RAP) 2014 - 2020.” [Online]. Available: <http://agrotikianaptixi.gr/el/content/ypometro-61-egkatastasi-neon-georgon>
- [21] [^](#) Polish Ministry of Agriculture and Rural Development, Program Rozwoju Obszarów Wiejskich 2014-2020 (PROW 2014-2020), [Online]. Available: <https://www.gov.pl/web/rolnictwo/-program-rozwoju-obszarow-wiejskich-2014-2020-prow-2014-2020>
- [22] [^](#) P. y A. Ministerio de Agricultura, “CAP Strategic Plan Proposal.” [Online]. Available: <https://www.mapa.gob.es/es/pac/post-2020/propuesta-plan-estrategico-PAC.aspx>
- [23] [^](#) S. General of Union Resources and Infrastructure, “AGRICULTURAL DEVELOPMENT PROGRAM (RAP) 2014 - 2020.” [Online]. Available: <http://www.agrotikianaptixi.gr/el/keimeno-synimmena-paa/shediasmos-se-ethniko-epipedo>
- [24] [^](#) Polish Ministry of Agriculture and Rural Development, “• Projekt Planu Strategicznego dla WPR na lata 2023-2027 (project, version 0.4)” [Online]. Available: <https://www.gov.pl/web/wprpo2020/plan-strategiczny-dla-wpr-na-lata-2023-2027-wersja-40-przyjety-przez-rade-ministrow>

For preparing this report, the following deliverables have been taken into consideration:

Deliverable Number	Deliverable Title	Lead beneficiary	Type	Dissemination Level	Due date
D5.1	State of the art review of agricultural policy assessment models, tools and indicators	UNIPR	Report	Public	M12
D4.3	Validated design for the AGRICORE interface	AAT	Report	Public	M27
D1.9	Agricultural Research Data Index Tool (ARDIT)	UNIPR	Other	Public	M31

## Appendix: XML description for selected policies

### Andalusian "Ecologic Agriculture" M11 measure

The main translated measure in the Andalusian Use Case is M11 – Ecologic Agriculture. This measure is defined by the Regional Government of Andalusia, and it belongs to Pillar II, so it is compatible with subsidies linked to measures of Pillar I.

This measure is aimed at olive farmers whose holdings are larger than one hectare and whose olive groves are in organic production or in the process of conversion. Depending on these two circumstances, the applicant farmer is eligible for two subsidies, both depending on the number of hectares of olive groves but mutually exclusive:

- M11.1.2. Conversion to organic olive groves (297.48 €/ha).
- M11.2.2. Maintenance of organic olive groves (247.9 €/ha).

In addition, farmers with olive groves in protected areas have priority access to the subsidy. It should be noted that the farmer must be certified as an organic farmer in SIPEA (Information System on Organic Production in Andalusia) to be eligible for aid under the measure, whether s/he is in the conversion period, which lasts at least 3 years, or maintenance.

After the analysis of the Andalusian “Ecologic Agriculture” M11 measure [\[19\]](#), the necessary values were extracted and fitted in the proper XML tags. Following is the resulted XML text.

```

<?xml version="1.0" encoding="UTF-8" ?>

<PublicPolicy="APDR" namePolicy="Andalusian Rural Development Program"
idPolicy="2014ES06RDRP001">

    <idUpperPolicy>"32013R1305"</idUpperPolicy> <!--Transposed from the UE
    Reglamente 1305/2013-->

    <geoPoliticalScope="Andalusia" NUTS2="ES61"></geoPoliticalScope>

    <policyMaker = "Andalusian Regional Government" policyMakerNativeName = "Junta
    de Andalucía"></policyMaker>

    <policyImplementator = "Andalusian Regional Government"
    policyImplementatorNativeName = "Junta de Andalucía"></policyImplementator>

    <dateOfApproval>"2015/08/10"</dateOfApproval>

    <dateOfEffect>"2014/01/01"</dateOfEffect>

    <publicationDocument> </publicationDocument>

    <startAmendmentPeriod>2014</startAmendmentPeriod>

    <endAmendmentPeriod>2020</endAmendmentPeriod>

    <amendments>"Extension to 2023"</amendments>

    <Budget>

        <idBudget>"Budget_2014ES06RDRP001"</idBudget>

        <amountBudget>1.050.921.834,80</amountBudget>

        <currency>EUR</currency>

        <Funding>

            <idFunding>"And_RegBudget_2015_36218"</idFunding> <!--Ideally the
            code of the item allocated in the Regional State Budget-->

            <sourceOfFunding>"The European Agricultural Fund for Rural
            Development Europe investing in rural Areas, through Andalusian Regional
            Budget"</sourceOfFunding>

            <funder>"European Union via Andalusian Regional
            Government"</funder>

        </Funding>

        ...

        <Funding>

            <idFunding>"And_RegBudget_2020_21792"</idFunding> <!--Ideally the
            code of the item allocated in the Regional State Budget-->

            <sourceOfFunding>"The European Agricultural Fund for Rural
            Development Europe investing in rural Areas, through Andalusian Regional
            Budget"</sourceOfFunding>

            <funder>"European Union via Andalusian Regional
            Government"</funder>
    
```

```

        </Funding>

    </Budget>

    <Evaluator="UE" nameEvaluator="European Parliament and the Council of the
    European Union" idEvaluator="EU0001"></Evaluator>

    <ImpactAssessment>

        <idImpactAssessment>"IA_2014ES06RDRP001"</idImpactAssessment>

        <descriptionOfAssessment> </descriptionOfAssessment>

        <KPIs>

            <KPI="EmissionReduction">

                <idKPI> </idKPI>

                <objectiveKPI> </objectiveKPI>

                <targetKPI> </targetKPI>

                <scopeKPI> </scopeKPI>

            </KPI>

            ...

            <KPI="IncrementOfFarmersIncome">

                <idKPI> </idKPI>

                <objectiveKPI> </objectiveKPI>

                <targetKPI> </targetKPI>

                <scopeKPI> </scopeKPI>

            </KPI>

        </KPIs>

    </ImpactAssessment>

    <Measures>

        <Measure="APRD-M11.1.2" nameMeasure="Conversion to organic olive
        farming" idMeasure="2014ES06RDRP001_M11.1.2">

            <idLinkedPublicPolicy>"2014ES06RDRP001"</idLinkedPublicPolicy>

            <descriptionOfMeasure> </descriptionOfMeasure>

            <dateOfApproval>"2015/05/26"</dateOfApproval>

            <geoPoliticalScope="Andalusia" NUTS2="ES61"></geoPoliticalScope>

            <temporalScope>"2014;2015;2016;2017;2018;2019;2020"</temporalScope>

            <dateFirstCall>2015</dateFirstCall>

            <periodicityOfCalls>"2 years"</periodicityOfCalls>
    
```

```

        <CapPayment>
            <idCAPPayment>"2014ES06RDRP001_M11.1.2_P1"</idCAPPayment>
            <descriptionCAPPayment>"Single annual
payment"</descriptionCAPPayment>
        </CapPayment>

        <Instruments>
            <Subsidy>
                <idInstrument>"2014ES06RDRP001_M11.1.2_I1"</idInstrument>
                <nameInstrument>"Subsidies to organic olive
cultivation"</nameInstrument>
                <Ranges>
                    <Range>
                        <Amount> 297,48 </Amount>
                        <Unit> € per cultivated Ha </Unit>
                        <Range_Limits> 1 to 40 Ha </Range_Limits>
                    </Range>

                    <Range>
                        <Amount> 0.6*297,48 </Amount>
                        <Unit> € per cultivated Ha </Unit>
                        <Range_Limits> 41 to 80 Ha </Range_Limits>
                    </Range>

                    <Range>
                        <Amount> 0.3*297,48 </Amount>
                        <Unit> € per cultivated Ha </Unit>
                        <Range_Limits> 81 Ha and above </Range_Limits>
                    </Range>
                </Ranges>
            </Subsidy>
        </Instruments>

        <Requirements>
    
```

```

        <FarmOwnerRequirement>

        <idAssociatedMeasure>"2014ES06RDRP001_M11.1.2"</idAssociatedMeasure>

        <idRequirement>"2014ES06RDRP001_M11.1.2_R1"</idRequirement>

        <DescriptionOfRequirement>

            <ageRange> </ageRange>

            <gender> </gender>

            <familySituation> </familySituation>

            <studyLevel> </studyLevel>

            <laborSituation>"Active Farmer"</laborSituation>

            <minimumCropIncome>Olives;20%</minimumCropIncome>

            <registredIn>"SIPEA"</registredIn>

            <registredIn>"REAFA"</registredIn>

        </DescriptionOfRequirement>

    </FarmOwnerRequirement>

    <FarmHoldingRequirement>

    <idAssociatedMeasure>"2014ES06RDRP001_M11.1.2"</idAssociatedMeasure>

    <idRequirement>"2014ES06RDRP001_M11.1.2_R2"</idRequirement>

    <DescriptionOfRequirement>

        <economicDimension> </economicDimension>

        <TEO> </TEO>

        <minimumUAA>1 Ha</minimumUAA>

        <staffSize> </staffSize>

    </DescriptionOfRequirement>

    </FarmOwnerRequirement>

</Requirements>

<Commitments>

    <Commitment>

        <idCommitment>"2014ES06RDRP001_M11.1.2_C1"</idCommitment>

    </idAssociatedMeasure>"2014ES06RDRP001_M11.1.2"</idAssociatedMeasure>
    
```



```

        <descriptionOfCommitment>"The holding must be certified in
        organic farming"</descriptionOfCommitment>

        <subjectOfCommitment>Beneficiary
        Holding</subjectOfCommitment>

        <startPeriodOfValidity>"Same year in which the farmer
        accesses to the M11.1.2"</startPeriodOfValidity>

        <endPeriodOfValidity>"startPeriod + 5
        years"</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
        <!--Description of proofs and tests to be demonstrated-->

        <Verifier>

        <idVerifier>AND_VF_Z30691</idVerifier> <!--
        Ideally the license number of the Verifier Organisation-->

        <nameVerifier>"ECOCERT S.A."</nameVerifier>

        </Verifier>

    </Commitment>

</Commitments>

<Budget>

    <idBudget>"Budget_2014ES06RDRP001_M11.1.2"</idBudget>

    <amountBudget>14.458.104,00</amountBudget>

    <currency>EUR</currency>

    <Funding>

        <idFunding>"And_RegBudget_2015_36218_h"</idFunding> <!--
        Ideally the code of the item allocated in the Regional State Budget-->

        <sourceOfFunding>"FEDER Funds through Andalusian Regional
        Budget"</sourceOfFunding>

        <funder>"European Union via Andalusian Regional
        Government"</funder>

    </Funding>

</Budget>

<Incompatibilities>

    <Incompatibility>

        <idIncompatibility>"2014ES06RDRP001_M11.1.2_X1"</idIncompatibility>
    
```

```

        <descriptionOfIncompatibility>"Instruments of M11.1.2 are
incompatible with Measure SM3 of the previous European
framework"</descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

<idIncompatibility>"2014ES06RDRP001_M11.1.2_X2"</idIncompatibility>

        <descriptionOfIncompatibility>"Instruments of M11.1.2 are
incompatible with Measure SM4 of the previous European
framework"</descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

<idIncompatibility>"2014ES06RDRP001_M11.1.2_X3"</idIncompatibility>

        <descriptionOfIncompatibility>"Instruments of M11.1.2 are
incompatible with Measure SM14 of the previous European
framework"</descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

<idIncompatibility>"2014ES06RDRP001_M11.1.2_X4"</idIncompatibility>

        <descriptionOfIncompatibility>"Instruments of M11.1.2 are
incompatible with Measure M10.1.7 of the current
ARDP"</descriptionOfIncompatibility>

    </Incompatibility>

</Incompatibilities>

</Measure>

    <Measure="APRD-M11.2.2" nameMeasure="Maintenance of organic olive
farming" idMeasure="2014ES06RDRP001_M11.2.2">

</Measure>

```

```
<Measure="APRD-M01" nameMeasure="Actions for the transference of
knowledge and information" idMeasure="2014ES06RDRP001_M01">
```

```
</Measure>
```

```
<Measure="APRD-M02" nameMeasure="Advisory, management and replacement
services for agricultural holdings" idMeasure="2014ES06RDRP001-M02">
```

```
</Measure>
```

```
<Measure="APRD-M03" nameMeasure="Quality schemes for agricultural
products and foodstuffs" idMeasure="2014ES06RDRP001-M03">
```

```
</Measure>
```

```
<Measure="APRD-M04" nameMeasure="Investments in physical assets"
idMeasure="2014ES06RDRP001-M04">
```

```
</Measure>
```

```
<Measure="APRD-M05" nameMeasure="Restoring agricultural production
potential damaged by natural disasters and catastrophes and implementing
appropriate preventive measures" idMeasure="2014ES06RDRP001-M05">
```

```
</Measure>
```

```
<Measure="APRD-M06" nameMeasure="Farm and business development"
idMeasure="2014ES06RDRP001-M06">
```

```
</Measure>
```

```
<Measure="APRD-M07" nameMeasure="Basic services and population renewal
in rural areas" idMeasure="2014ES06RDRP001-M07">
```

```
</Measure>
```

```
<Measure="APRD-M08" nameMeasure="Investments in forest area development
and improvement of forest viability" idMeasure="2014ES06RDRP001-M08">
```

```
</Measure>
```

```
<Measure="APRD-M09" nameMeasure="Creation of producer groups and
organisations" idMeasure="2014ES06RDRP001-M09">
```

```
</Measure>
```

```
<Measure="APRD-M10" nameMeasure="Agri-environment and climate"
idMeasure="2014ES06RDRP001-M10">
```

```
</Measure>
```

```
</Measures>
```

```
</PublicPolicy>
```

## Greek “Young farmers” M6.1 measure

The Sub-Measure 6.1 - Young Farmers, of the 2014–2020 Greek Rural Development Programme - RDP, aims to enhance the competitiveness of agricultural holdings through age renewal and the creation of farmer-entrepreneurs who, at the end of the support by the measure, will have obtained adequate managerial capabilities and own sustainable holdings.

The sub-measure consists of the provision of a flat-rate amount of support (grant) for the entrance of younger individuals, up to 40 years old, into the agricultural profession, through their first establishment on an agricultural holding. The sub-measure was budgeted for 241 m€ to the Greek RDP utilizing financing from the European Agricultural Fund for Rural Development (EAFRD).

The overall aim of the sub-measure is complemented, as stated at the 2014-2020 partnership agreement, with the provision of adequate training so that young farmers can contribute significantly to the country's professional agricultural social capital with sustainable farms and new production practices. The sub-measure opts for the first establishment of young farmers at an agricultural holding that offers adequate output (agricultural holdings with minimum 8,000€ at standard output) and supports the further future development of the holding, as described to the objectives (qualitative or quantitative) of a relevant business plan.

The objectives set are binding and subject to evaluation in terms of the degree of their achievement and their proper completion. The financial support is granted in the form of a financial grant and is supplied in two installments. The first installment (seventy percent of the total amount of support) is paid immediately after the official adoption of the accession decision. The second and last installment is supplied within five years of accession to the sub-measure and is subject to the proper implementation of the business plan and the achievement of the relevant objectives and commitments.

After the analysis of the Greek “Young farmers” M6.1 measure [20], the necessary values were extracted and fitted in the proper XML tags. Following is the resulted XML text.

```

<?xml version="1.0" encoding="UTF-8" ?>

<PublicPolicy="RDP 2014-2020" namePolicy="Rural Development Programme of Greece"
idPolicy="2014GR06RDNP001">

    <idUpperPolicy>"REGULATION (EU) No 1305/2013, Article 19"</idUpperPolicy>
    <!--Transposed from the EU Regulation 1305/2013-->

    <geoPoliticalScope="Greece" NUTS0="EL"></geoPoliticalScope>

    <policyMaker = "Ministry of Rural Development and Food" policyMakerNativeName
    = "Υπουργείο Αγροτικής Ανάπτυξης και Τροφίμων"></policyMaker>

    <policyImplementator = "Ministry of Rural Development and Food"
    policyImplementatorNativeName = "Υπουργείο Αγροτικής Ανάπτυξης και
    Τροφίμων"></policyImplementator>

    <dateOfApproval>"17/12/2015"</dateOfApproval>

    <dateOfEffect>" "</dateOfEffect>

    <publicationDocument>"ΦΕΚ 3442/Β' /25-10-2016"</publicationDocument>

    <startAmendmentPeriod></startAmendmentPeriod>

    <endAmendmentPeriod></endAmendmentPeriod>

    <amendments>" "</amendments>

    <Budget>

        <idBudget>"Budget_2014GR06RDNP001"</idBudget>

        <amountBudget>5,880,192,248</amountBudget>

        <currency>EUR</currency>

        <Funding>

            <idFunding>" "</idFunding> <!--Ideally the code of the item
            allocated in the Regional State Budget-->

            <sourceOfFunding>"EU - European Agricultural Fund for Rural
            Development (EAFRD) "</sourceOfFunding>

            <funder>"EU - European Agricultural Fund for Rural Development
            (EAFRD) "</funder>

        </Funding>

    </Budget>

    <Evaluator="UE" nameEvaluator=""></Evaluator>

    <ImpactAssessment>

        <idImpactAssessment>" "</idImpactAssessment>

        <descriptionOfAssessment> </descriptionOfAssessment>

        <KPIs>

            <KPI="">

                <idKPI> </idKPI>
    
```

```

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

    ...

    <KPI="">

        <idKPI> </idKPI>

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

</KPIs>

</ImpactAssessment>

<Measures>
    <Measure="RDP-M6.1" nameMeasure="6.1 Young Farmers"
idMeasure="2014GR06RDNF001_M6.1">

        <idLinkedPublicPolicy>"2014GR06RDNF001"</idLinkedPublicPolicy>

        <descriptionOfMeasure> </descriptionOfMeasure>

        <dateOfApproval>" "</dateOfApproval>

        <geoPoliticalScope="Greece" NUTS0="EL"></geoPoliticalScope>

        <temporalScope>"2014;2015;2016;2017;2018;2019;2020"</temporalScope>

        <dateFirstCall></dateFirstCall>

        <periodicityOfCalls>" "</periodicityOfCalls>

        <CapPayment>

            <idCAPPayment>"22023EL06AFSP001_Π1-31.1_P1"</idCAPPayment>

            <descriptionCAPPayment>"The financial support is granted in the
form of capital and is paid in two instalments. The first instalment (70% of
the total amount of support) is paid immediately after the adoption of the
accession decision. The last instalment is paid within 5 years of accession
subject to conditions of proper implementation of the business plan and the
achievement of the relevant objectives and
commitments."</descriptionCAPPayment>

        </CapPayment>

        <Instruments>

```



```

<Subsidy>

  <idInstrument>"</idInstrument>

  <nameInstrument>"</nameInstrument>

  <Ranges>

    <Range>

      <Amount> 17000 </Amount>

      <Unit> Euro </Unit>

      <Range_Limits> Plant </Range_Limits>

    </Range>

    <Increase>

      <TypeOfLand> Mountainous </Inc_1>

      <Amount> 2500 </Amount>

    </Increase>

    <Increase>

      <TypeOfLand> Disadvantaged </Inc_1>

      <Amount> 2500 </Amount>

    </Increase>

    <Increase>

      <TypeOfLand> Small islands with a population of
up to 3000 inhabitants </Inc_1>

      <Amount> 2500 </Amount>

    </Increase>

    <Increase>

      <TypeOfLand> Other areas </Inc_1>

      <Amount> 0 </Amount>

    </Increase>

    <Range>

      <Amount> 17000 </Amount>

      <Unit> Euro </Unit>

      <Range_Limits> Mixed </Range_Limits>

    </Range>

    <Increase>
    
```

```

        <TypeOfLand> Mountainous </Inc_1>

        <Amount> 2500 </Amount>

    </Increase>

    <Increase>

        <TypeOfLand> Disadvantaged </Inc_1>

        <Amount> 2500 </Amount>

    </Increase>

    <Increase>

        <TypeOfLand> Small islands with a population of
up to 3000 inhabitants </Inc_1>

        <Amount> 2500 </Amount>

    </Increase>

    <Increase>

        <TypeOfLand> Other areas </Inc_1>

        <Amount> 0 </Amount>

    </Increase>

<Range>

    <Amount> 19500 </Amount>

    <Unit> Euro </Unit>

    <Range_Limits> Livestock Farming </Range_Limits>

</Range>

    <Increase>

        <TypeOfLand> Mountainous </Inc_1>

        <Amount> 2500 </Amount>

    </Increase>

    <Increase>

        <TypeOfLand> Disadvantaged </Inc_1>

        <Amount> 2500 </Amount>

    </Increase>

    <Increase>

        <TypeOfLand> Small islands with a population of
up to 3000 inhabitants </Inc_1>

        <Amount> 2500 </Amount>
    
```

```

        </Increase>

        <Increase>

            <TypeOfLand> Other areas </Inc_1>

            <Amount> 0 </Amount>

        </Increase>

    </Ranges>

</Subsidy>

</Instruments>

<Requirements>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R1"</idRequirement>

        <DescriptionOfRequirement>"At least 45 points (A minimum
overall score of 45 points below which applications for support are not
accepted for funding.)"</DescriptionOfRequirement>
        </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R2"</idRequirement>

        <DescriptionOfRequirement>"AGE>=18 AND AGE<=40
"</DescriptionOfRequirement>
        </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R3"</idRequirement>

        <DescriptionOfRequirement>"GREECE except [PE Attikis, ONLY
in following ATTIKI_LIST]AND [PE Thessalonikis, Dimotiki Koinotita Sou
Diamerismatos Thessalonikis]"</DescriptionOfRequirement>
        </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

```

```

        <idRequirement>"2014GR06RDNP001_M6.1_R4"</idRequirement>

        <DescriptionOfRequirement>"The farmer must be enlisted in
OSDE"</DescriptionOfRequirement>
    </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R5"</idRequirement>

        <DescriptionOfRequirement>"The farmer must not have
exercised farming professionally during the last 5 years (i.e. applicant
beneficiaries should not have had an agricultural holding of 8000 euros standard
ourput AND not have worked in it more than 1750/2=875 hours AND their farming
income didn't exceeded 50% of his/her total income)"</DescriptionOfRequirement>
    </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R6"</idRequirement>

        <DescriptionOfRequirement>"The farmers spouse must not be a
professional farmer"</DescriptionOfRequirement>
    </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R7"</idRequirement>

        <DescriptionOfRequirement>"The prospective beneficiaries
that are natural persons: i) They have reached the age of 18, have full legal
capacity and solvency in accordance with the provisions of the Civil Code and
have not exceeded the 41st year of age. (ii) They are resident in the areas of
application of Sub-measure 6.1."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R8"</idRequirement>

        <DescriptionOfRequirement>"The candidate beneficiaries that
are Legal entities:(i) They shall be headed by a young farmer who fulfils the
conditions of point (a1) as their legal representative.ii) They have as their
leader - legal representative a young farmer, in accordance with the conditions
of paragraphs (ε) and (ζ) of Article 1 of the official invitation for
application submission, who participates in the capital of the legal person at
least 51%.iii) They have their seat in the wider area of the place of permanent
residence of the leader/legal representative and within the same Region.(iv)
Their main activity in the primary sector (Group of KAA 01 except KAA 01.6 and
KAA 01.7) in agricultural production. Activities in fishing are not taken into
account."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

```

```

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R9"</idRequirement>

    <DescriptionOfRequirement>"The new farmer heads of
agricultural holdings have been established for the first time, in accordance
with paragraph (ζ) of Article 1 of the official invitation for application
submission, during the twelve months preceding the date of submission of the
application for support."</DescriptionOfRequirement>
</FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R10"</idRequirement>

    <DescriptionOfRequirement>"They are registered in the
Integrated Administration and Control System (ΟΣΔΕ) and have submitted a Single
Application for Support in the year of submission of the application for
support under sub-measure 6.1."</DescriptionOfRequirement>
</FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R11"</idRequirement>

    <DescriptionOfRequirement>"They are registered with the
MAAE as professional farmers new entrants to the agricultural sector for
natural persons or as holders for legal persons. Especially for legal persons,
their leaders/managers must have been appointed as their legal
representatives."</DescriptionOfRequirement>
</FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R12"</idRequirement>

    <DescriptionOfRequirement>"Young farmer heads of
agricultural holdings must not have been engaged in an agricultural activity
for at least the last 5 years before the date of first
establishment."</DescriptionOfRequirement>
</FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R13"</idRequirement>

    <DescriptionOfRequirement>"To fulfil the status of "active"
farmer within 18 months from the date of first
establishment."</DescriptionOfRequirement>

```

```

</FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R14"</idRequirement>

    <DescriptionOfRequirement>"Young farmer heads of farms have
sufficient professional qualifications or undertake to acquire them through
Sub-measure 1.1 of the RDP 2014 - 2020 within 36 months from the date of their
approval decision."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R15"</idRequirement>

    <DescriptionOfRequirement>"Submit a Business Plan, in
accordance with the provisions of article 5 of the official invitation for
application submission, with a minimum duration of implementation of three (3)
years and a maximum of four (4) years with binding qualitative and/or
quantitative targets and time limits, as more specifically specified in Article
6 of the official invitation for application submission, for the development of
their agricultural activities and undertake the relevant obligations and
commitments, as more detailed in Article 7 of the official invitation for
application submission, including the acquisition or completion of sufficient
professional competence, where necessary."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R16"</idRequirement>

    <DescriptionOfRequirement>"Fall within the definition of
small and microenterprises (Commission Recommendation
2003/361/EK)."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R17"</idRequirement>

    <DescriptionOfRequirement>"They do not fall into the
categories of ineligible candidates according to Article 4 of the official
invitation for application submission."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R18"</idRequirement>

```

```

        <DescriptionOfRequirement>"In order to be evaluated,
        applicants are required to submit a multi-annual Business Plan, which must
        realistically describe the actions for the development of the agricultural
        holding in relation to the initial situation through the formulation of
        relevant binding quantitative or qualitative objectives for the economic and
        environmental sustainability of the holding."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R19"</idRequirement>

    <DescriptionOfRequirement>"The business plan must be
    agriculturally oriented and concern the agricultural sector, i.e. it must
    concern primary agricultural production (including activities such as sorting
    and simple packaging of own products), without excluding that some elements may
    concern in part, but not exclusively, the provision of agricultural services
    (such as, e.g. rental of agricultural machinery KΑΑ
    01.6)."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R20"</idRequirement>

    <DescriptionOfRequirement>"The minimum duration of
    implementation of the business plan shall be three years and the maximum shall
    be four years from the date of adoption of the decision to join. Implementation
    of the business plan shall start no later than nine months after the
    abovementioned decision to join."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R21"</idRequirement>

    <DescriptionOfRequirement>"The business plan shall form an
    integral part of the application for support and shall be completed in
    accordance with a standard template posted in electronic form on the ΠΣΚΕ. The
    submission of the business plan in electronic form as well as the conformity
    with the content and conditions of this Article shall be compulsory and an
    eligibility condition."</DescriptionOfRequirement>
    </FarmOwnerRequirement>

    <FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <idRequirement>"2014GR06RDNP001_M6.1_R22"</idRequirement>

    <DescriptionOfRequirement>"The business plan shall include
    the following:
        1. A description of the initial situation of the
        agricultural holding with regard to the following:
    
```



(a) a short curriculum vitae of the head of the agricultural holding with particular reference to his previous professional activity, to any experience in agricultural activities and to the history of the commencement of his agricultural activity as head of an agricultural holding.

(b) Description of the existing activity of the legal person.

(c) Detailed description of the initial situation with reference to the relevant economic and operational data of the holding and specific data on the size and capacity – its typical yield, the plant and livestock capital, the existing facilities and equipment, the existing direction of exploitation (plant, livestock, mixed).

2. Description of the final (future) situation of the agricultural holding with regard to the following:

(a) Detailed description and justification of the future situation with regard to the areas under crops and farmed animals, the premises and equipment of the holding and its direction (plant, forage, mixed). Indicatively, the justification for the future situation may be linked to the existing equipment of the holding, the particular knowledge of the farmer, the market trend, the decision to produce quality products linked to the place of production, etc.

(b) Detailed description of the objective(s) of the business plan(s) with reference to milestones/dates of achievement.

(c) A detailed description of the commitments that the beneficiary and/or the head of the holding undertake during the implementation of the business plan, in accordance with the specific institutional framework of Sub-measure 6.1 or the general obligations arising from national and Community requirements, with reference to milestones/dates of achievement.

(d) A detailed description of the actions to achieve the relevant objectives and commitments, together with a relevant timetable for the milestones for their implementation. The relevant activities may concern, but are not limited to:

i. The increase of the cultivated area or livestock (for example, the acquisition of land or the purchase of livestock).

ii. The restructuring of the holding.

iii. The implementation of investments (for example, purchase of equipment, creation of new or expansion of facilities).

iv. The implementation of other interventions of economic, technological or organizational modernization (for example participation in training, consulting services, certification actions, participation in collective promotional actions or collective investments), when they are not set as objectives.

(e) Budget and sources of financing of the business plan

(f) All information required for the monitoring of indicators and the evaluation of the RDP 2014-2020,

(g) Date of commencement of the implementation of the business plan, in accordance with paragraph 1.1 of Article 7 the official invitation for application submission.

3. Where part of the actions or actions is planned to be implemented by other measures/sub-measures/actions of the RDP 2014-20, the relevant measures/sub-measures/actions shall be indicated as follows:

a. 'Use of advisory services' (Sub-measure 2.1);

b. 'Investments in agricultural holdings' (Sub-measure 4.1);

c. 'Agricultural product and food quality systems' (Sub-measure 3.1),

d. 'Setting up of producer groups and organisations' (Measure 9);

4. In any case, the approval of the application for support for Sub-measure 6.1 of Young Farmers does not constitute a commitment to include and finance the mentioned actions from other measures/sub-measures/actions of the RDP 2014-2020. The achievement of the objective(s) is mandatory, regardless of whether or not it is included in other measures/sub-

measures/actions of the RDP, in accordance with the provisions of Article 5 the official invitation for application submission."

</DescriptionOfRequirement>  
</FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001\_M6.1"</idAssociatedMeasure>

<idRequirement>"2014GR06RDNP001\_M6.1\_R23"</idRequirement>

<DescriptionOfRequirement>"The business plan is drawn up by a consultant agrotechnical or agronomic technician who undertakes not only the obligation to draw up the business plan but also the obligation of technical support of the candidate until the completion of the business plan (submission of requests for modification of a business plan, payment requests, etc.). The relevant legal relationship is proved through the conclusion of a private agreement between the consultant and the prospective beneficiary."

</DescriptionOfRequirement>

</FarmOwnerRequirement>

<FarmOwnerRequirement>

<idAssociatedMeasure>"2014GR06RDNP001\_M6.1"</idAssociatedMeasure>

<idRequirement>"2014GR06RDNP001\_M6.1\_R24"</idRequirement>

<DescriptionOfRequirement>"The business plan may be amended at most twice in order to respond better and in a timely manner to changing conditions of implementation. Amendments shall be accepted only after a clear justification, in accordance with Article 15 the official invitation for application submission."

</DescriptionOfRequirement>

</FarmOwnerRequirement>

<AgriEnterpriseRequirement>

<idAssociatedMeasure>"2014GR06RDNP001\_M6.1"</idAssociatedMeasure>

<idRequirement>"2014GR06RDNP001\_M6.1\_R25"</idRequirement>

<DescriptionOfRequirement>"There should be NO rented animal capital"

</DescriptionOfRequirement>

</AgriEnterpriseRequirement>

<FarmHoldingRequirement>

<idAssociatedMeasure>"2014GR06RDNP001\_M6.1"</idAssociatedMeasure>

<idRequirement>"2014GR06RDNP001\_M6.1\_R26"</idRequirement>

<DescriptionOfRequirement>"standard farm performance >= 8000 AND standard farm performance <= 100000 (euros)"

</DescriptionOfRequirement>

</FarmHoldingRequirement>

```

    <FarmHoldingRequirement>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R27"</idRequirement>

            <DescriptionOfRequirement>"The agricultural holding must be
located in the wider area of the place of permanent residence of the head of
the holding. Holdings or parts of holdings which are not located in the wider
area of the place of permanent residence of the heads of the holding are not
accepted for the objectives of the programme."
            </DescriptionOfRequirement>

        </FarmHoldingRequirement>

    <FarmHoldingRequirement>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R28"</idRequirement>

            <DescriptionOfRequirement>"The agricultural holding must
have a size of production potential (expressed as typical yield) at least equal
to 8.000 € and up to 100.000 €."
            </DescriptionOfRequirement>

        </FarmHoldingRequirement>

    <FarmHoldingRequirement>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R29"</idRequirement>

            <DescriptionOfRequirement>"The agricultural parcels of the
holding must be: 1. Privately owned or leased or a combination thereof. 2.
Greater than or equal to the minimum area by type of agricultural parcel
eligible for single payment schemes."
            </DescriptionOfRequirement>

        </FarmHoldingRequirement>

    <FarmHoldingRequirement>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R30"</idRequirement>

            <DescriptionOfRequirement>"The livestock and apiculture of
the holding must be privately owned."
            </DescriptionOfRequirement>

        </FarmHoldingRequirement>

    <FarmHoldingRequirement>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <idRequirement>"2014GR06RDNP001_M6.1_R31"</idRequirement>

```

```

        <DescriptionOfRequirement>"The entire agricultural holding
must have been included in the Single Aid Application in the year of submission
of the application for support for inclusion in Sub-measure 6.1 by the
applicant beneficiary."

```

```

        </DescriptionOfRequirement>

```

```

    </FarmHoldingRequirement>

```

```

    <FarmHoldingRequirement>

```

```

<idAssociatedMeasure>"2014GR06RDNF001_M6.1"</idAssociatedMeasure>

```

```

    <idRequirement>"2014GR06RDNF001_M6.1_R32"</idRequirement>

```

```

        <DescriptionOfRequirement>"With regard to family holdings,
the following additionally apply:1. Ownership within the family shall be deemed
to exist in the person of both spouses, irrespective of the actual fact.
Therefore, the agricultural holding belonging to the spouse is also taken into
account in the agricultural area of the applicant beneficiary, provided that it
has been included in the applicant's Single Application for Aid during the year
of submission of the application for support for inclusion in Sub-measure 6.1.
2. Only one of the spouses may be considered as the head of the family holding.
Transfer of the head of an agricultural holding by a spouse who is registered
with the MAAE as a professional farmer or who has the conditions for
designation in the MAAE as a professional farmer is not accepted for inclusion
in Sub-measure 6.1. 3. The entire holding of the applicant must have been
included in the Single Aid Application submitted by the applicant to ОПЕКЕНЕ."

```

```

        </DescriptionOfRequirement>

```

```

    </FarmHoldingRequirement>

```

```

</Requirements>

```

```

    <Commitments>

```

```

        <Commitment>

```

```

            <idCommitment>"2014GR06RDNF001_M6.1_C1"</idCommitment>

```

```

<idAssociatedMeasure>"2014GR06RDNF001_M6.1"</idAssociatedMeasure>

```

```

        <descriptionOfCommitment>"Start the implementation of the
business plan at the latest within nine (9) months from the date of the
accession decision. The start of implementation is considered to be the
commencement of activities at the Tax Office by the head of the agricultural
holding relating to the exercise of an agricultural activity or the management
of the legal person with a main activity in agriculture. These activities
should be maintained until the completion and proper implementation of the
business plan. The delay of the starting the implementation up to nine (9)
months in no case extends the deadline for the completion of the business plan,
i.e. within four (4) years from the decision of
inclusion."</descriptionOfCommitment>

```

```

            <subjectOfCommitment></subjectOfCommitment>

```

```

            <startPeriodOfValidity>" "</startPeriodOfValidity>

```

```

            <endPeriodOfValidity>" "</endPeriodOfValidity>

```

```

        <descriptionOfVerification></descriptionOfVerification> <!--
-Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΟΠΕΚΕΠΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C2"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"To obtain a pre-approval permit
for a facility for poultry farms, where required, within one (1) year from the
date of the integration decision."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>" "</startPeriodOfValidity>

        <endPeriodOfValidity>" "</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
    <!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C3"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"To acquire, within 18 months at
the latest, the status of 'active farmer' (Article 1(δ)) from the date of first
establishment and to maintain it until the completion and proper implementation
of the business plan."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>" "</startPeriodOfValidity>

        <endPeriodOfValidity>" "</endPeriodOfValidity>

```

```

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C4"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"(a) In the case of individual
agricultural holdings, the head of the holding shall, within two years of the
first establishment, acquire the status of 'professional farmer' (Article
1(1δ)) and maintain it until the completion and proper implementation of the
business plan.

        (b) In the case of agricultural holdings belonging to
Legal Persons, the head of the holding shall, within two years of the first
establishment, obtain an employment rate and a percentage of income from the
exercise of a business activity in a legal person with an agricultural activity
equivalent to those defined for the professional farmer and maintain them until
the completion and proper implementation of the business
plan."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>" "</startPeriodOfValidity>

        <endPeriodOfValidity>" "</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C5"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"The head of the agricultural
holding must acquire adequate professional qualifications (Article 1(1δ))
within a period not exceeding 36 months from the date of the decision to join,
if he does not have them."</descriptionOfCommitment>

```

```

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNF001_M6.1_C6"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNF001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"The head of the agricultural
holding (Article 1(ε)) to maintain his status until the completion and proper
implementation of the business plan."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNF001_M6.1_C7"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNF001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"Submit a Single Application for
Aid to ΟΠΕΚΕΠΕ continuously throughout the duration of the business
plan."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

```



```

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Vericator Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C8"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"The applicant's agricultural
holding must be located in the wider area of his/her place of permanent
residence. Parcels outside the wider area are not accepted by the
measure."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Vericator Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C9"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"Maintain at least the initial
production capacity of the holding (in terms of typical return) with which it
was approved for Sub-measure 6.1 until the completion and proper implementation
of the business plan. Therefore, during the course of its business plan, the
typical return of the holding should not fall below that of the year of
accession."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>
    
```

```

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C10"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"The chief of the holding to
maintain his/her place of permanent residence and the seat of the legal person
in an area of application of Sub-measure 6.1 within the same Region until the
completion and proper implementation of the business
plan."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C11"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"Until the completion and proper
implementation of the business plan, keep the marks obtained on the basis of
the selection criteria at a level higher than or at least equal to the level of
the last beneficiary's marks, if there are runners-up. In the absence of
runners-up, keep the marks achieved at a level higher than that of the minimum
eligible score."</descriptionOfCommitment>
    
```

```

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

                <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

                <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

</Commitment>

<Commitment>

        <idCommitment>"2014GR06RDNF001_M6.1_C12"</idCommitment>

<idAssociatedMeasure>"2014GR06RDNF001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"The beneficiary Legal Entity to
maintain as its main activity the agricultural (Group ΚΑΔ 01 except the ΚΑΔ
01.6 and the ΚΑΔ 01.7) until the completion and proper implementation of the
business plan."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

                <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

                <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

</Commitment>

<Commitment>

        <idCommitment>"2014GR06RDNF001_M6.1_C13"</idCommitment>

<idAssociatedMeasure>"2014GR06RDNF001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"To accept and facilitate controls
and actions for the monitoring and control of the proper implementation of the
business plan, the achievement of the relevant objectives and the compliance
with national or Community legislation and in particular to accept and
facilitate on-the-spot checks or visits carried out by National and Community

```

```

institutions, providing any information concerning the implementation of the
operation, if requested."</descriptionOfCommitment>

    <subjectOfCommitment></subjectOfCommitment>

    <startPeriodOfValidity>"</startPeriodOfValidity>

    <endPeriodOfValidity>"</endPeriodOfValidity>

    <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

    <Verifier>

        <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

        <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

    </Verifier>

</Commitment>

<Commitment>

    <idCommitment>"2014GR06RDNP001_M6.1_C14"</idCommitment>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <descriptionOfCommitment>"To inform the responsible
authorities in a timely and correct manner about the progress of the
implementation of the operation, by sending all the relevant documents relating
to the physical and financial implementation of the operation, as well as to
receive the relevant approvals and to comply with the instructions of the
relevant authorities."</descriptionOfCommitment>

    <subjectOfCommitment></subjectOfCommitment>

    <startPeriodOfValidity>"</startPeriodOfValidity>

    <endPeriodOfValidity>"</endPeriodOfValidity>

    <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

    <Verifier>

        <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

        <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

    </Verifier>

</Commitment>

<Commitment>

    <idCommitment>"2014GR06RDNP001_M6.1_C15"</idCommitment>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>
    
```

```

        <descriptionOfCommitment>"Accept an invitation to
        participate in actions carried out for the collection of accounting data on
        incomes and economic operation of agricultural holdings (survey on the
        structure of agricultural holdings) or for the collection of data and other
        information related to the evaluation of the RDP 2014-
        2020."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>"</startPeriodOfValidity>

        <endPeriodOfValidity>"</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
        <!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
            number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C16"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"To accept its inclusion in the
        list of RDP operations published by the ΕΥΔ RDP or the Regional authorities
        with information such as the name of the beneficiary, the start and end date,
        the total expenditure and the Region."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>"</startPeriodOfValidity>

        <endPeriodOfValidity>"</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
        <!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
            number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNP001_M6.1_C17"</idCommitment>
    
```

```

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <descriptionOfCommitment>"The objectives of the business
plan for the development of the agricultural holding shall be measurable and
supplemented (justification, description, values, time and action to be
achieved) on the basis of the standardised business plan in accordance with
Article 5 the official invitation for application
submission."</descriptionOfCommitment> <!--This is a Business plan
goal/commitment-->

    <subjectOfCommitment></subjectOfCommitment>

    <startPeriodOfValidity>"</startPeriodOfValidity>

    <endPeriodOfValidity>"</endPeriodOfValidity>

    <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

    <Verifier>

        <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

        <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

    </Verifier>

</Commitment>

<Commitment>

    <idCommitment>"2014GR06RDNP001_M6.1_C18"</idCommitment>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <descriptionOfCommitment>"The objectives may be one or more
as described in paragraph 5 of this Article. In order for the objectives set or
amended to be acceptable, the minimum thresholds (thresholds) set out in
paragraph 5 of the official invitation for application
submission."</descriptionOfCommitment> <!--This is a Business plan
goal/commitment-->

    <subjectOfCommitment></subjectOfCommitment>

    <startPeriodOfValidity>"</startPeriodOfValidity>

    <endPeriodOfValidity>"</endPeriodOfValidity>

    <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

    <Verifier>

        <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

        <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

    </Verifier>

</Commitment>
    
```

```

<Commitment>

  <idCommitment>"2014GR06RDNP001_M6.1_C19"</idCommitment>

  <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

  <descriptionOfCommitment>"The achievement of the objectives
is a contractual obligation and is a prerequisite for the proper implementation
of the business plan and the payment of the last instalment of support. The
business plan is therefore not accepted as long as the initial situation is
maintained at the time of the application for the last instalment without
achieving at least one objective. In this case the beneficiaries are excluded
and the support paid is recovered in accordance with the penalties laid down in
the Article 23 of the official invitation for application submission. Non-
inclusion in measures relevant to the objectives of the RDP cannot justify
their possible non-achievement."</descriptionOfCommitment> <!--This is a
Business plan goal/commitment-->

  <subjectOfCommitment></subjectOfCommitment>

  <startPeriodOfValidity>"</startPeriodOfValidity>

  <endPeriodOfValidity>"</endPeriodOfValidity>

  <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

  <Verifier>

    <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

    <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

  </Verifier>

</Commitment>

<Commitment>

  <idCommitment>"2014GR06RDNP001_M6.1_C20"</idCommitment>

  <idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

  <descriptionOfCommitment>"The objectives may be modified or
changed (such as, for example, replacement of an objective, deletion of an
additional target) in accordance with the changing conditions of
implementation, after justification and after approval by the competent
authority and in accordance with the provisions of Article 15 of the official
invitation for application submission."</descriptionOfCommitment> <!--This is a
Business plan goal/commitment-->

  <subjectOfCommitment></subjectOfCommitment>

  <startPeriodOfValidity>"</startPeriodOfValidity>

  <endPeriodOfValidity>"</endPeriodOfValidity>

  <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

  <Verifier>

```

```

        <idVerifier></idVerifier> <!--Ideally the license
number of the Verificator Organisation-->

        <nameVerifier>"ΔΑΟΚ/ΠΕΚΕ"</nameVerifier>

    </Verifier>

</Commitment>

<Commitment>

    <idCommitment>"2014GR06RDNP001_M6.1_C21"</idCommitment>

<idAssociatedMeasure>"2014GR06RDNP001_M6.1"</idAssociatedMeasure>

    <descriptionOfCommitment>"The objectives of the Business
Plan are quantitative or qualitative and are characterized by minimum
acceptable thresholds (limits). In particular, they may concern the following:
a) Quantitative objective: Increase of the total production capacity of the
agricultural holding in terms of typical yield with a minimum acceptable
threshold of at least a 10% increase in production capacity (typical
efficiency) in relation to the existing situation at the time of submission of
the application for support.
    (b) Quality objectives:
        (i) Adjustment of the production direction of the
holding towards livestock farming so that in the future situation the sector in
question contributes at least 50% of the typical yield of the holding. Eligible
for this objective are agricultural and livestock farms which in the current
situation are either not active in livestock farming or, if they are active,
this sector does not contribute more than 20%.
        (ii) Production of certified products of organic
production or integrated management so that in the future situation the
percentage of the typical yield contributed by the above certified quality
products is increased compared to that of the existing one by at least 40
percentage points. If in the current situation no certified quality products
are produced then the acceptable contribution rate of certified quality
products to the standard yield in the future situation is 40%. In any case, the
entire area of a particular crop or rearing must be certified. For example, if
the farm produces exclusively oil-producing olives, 100% of the standard yield
of the holding must be certified.
        iii) Improvement of market access through the existence
of contracts for the disposal and sale of the products of the agricultural
holding (contract farming) so that in the future situation the value of the
annual contracts of the last two years (two years average) exceeds by at least
40 percentage points the corresponding value that may exist in the current
situation. If in the current situation there is no contract farming then the
acceptable percentage of contribution of contract farming to the standard yield
in the future situation is 40%.
        iv) Participation of the natural person at the head of
the agricultural holding (beneficiary or legal representative – manager of a
legal person) in vocational training actions related to the direction of the
holding, its environmental sustainability or the increase of the added value of
the agricultural product (with a minimum acceptable threshold for attending
relevant programmes lasting at least 90 hours implemented by recognised public
or private bodies). The above does not take into account the compulsory
training program implemented through Measure 1 of the RDP 2014-2020 for the
training of the beneficiary Young Farmers of sub-measure 6.1 or other training
programs that are mandatory under other measures of the RDP 2014-
20."</descriptionOfCommitment> <!--This is a Business plan goal/commitment-->

    <subjectOfCommitment></subjectOfCommitment>

    <startPeriodOfValidity>"</startPeriodOfValidity>

```



```

        <endPeriodOfValidity>"</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

    <Commitment>

        <idCommitment>"2014GR06RDNF001_M6.1_C22"</idCommitment>

    <idAssociatedMeasure>"2014GR06RDNF001_M6.1"</idAssociatedMeasure>

        <descriptionOfCommitment>"At the end of the business plan,
the achievement of the objectives is verified / certified, depending on the
type and nature of the goal, by presenting the relevant reports and relevant
documents (such as indicatively a Business Plan Completion Report, a
certificate of attendance of training, Documentary documents for Integrated
Management or Organic Production, etc.) and their inspection. This particular
check is deemed successful and therefore the correct implementation the
business plan is decided without the need to submit a request for amendment or
change, provided that:
        1. At least one objective of the business plan, as may
have been amended, shall be achieved, and
        2. The score achieved shall not fall below that of the
beneficiary with the lowest score or less than 45 points if there are no
runners-up."</descriptionOfCommitment> <!--This is a Business plan
goal/commitment-->

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>"</startPeriodOfValidity>

        <endPeriodOfValidity>"</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

            <nameVerifier>"ΔΑΟΚ/ΠΣΚΕ"</nameVerifier>

        </Verifier>

    </Commitment>

</Commitments>
    
```

```

<Budget>

  <idBudget>"Budget_2014GR06RDNP001_M6.1"</idBudget>

  <amountBudget>241.000.000</amountBudget>

  <currency>EUR</currency>

  <Funding>

    <idFunding>"</idFunding> <!--Ideally the code of the item
allocated in the Regional State Budget-->

    <sourceOfFunding>"public expenditure co-financed by
E.G.T.A.A. and national resources"</sourceOfFunding>

    <funder>"E.G.T.A.A. and national resources"</funder>

  </Funding>

</Budget>

<Incompatibilities>

  <Incompatibility>

<idIncompatibility>"2014GR06RDNP001_M6.1_X1"</idIncompatibility>

    <descriptionOfIncompatibility>"Heads of holding of a
natural or legal person who have been engaged in an agricultural professional
activity during the last 5 years preceding the first establishment. The audit
consists of carrying out cross-checks with available databases (ΟΣΔΕ, ΟΓΑ,
etc.)."

    </descriptionOfIncompatibility>

  </Incompatibility>

  <Incompatibility>

<idIncompatibility>"2014GR06RDNP001_M6.1_X2"</idIncompatibility>

    <descriptionOfIncompatibility>"The heads of operation of a
natural or legal person who have an extra-agricultural employment, permanent
dependent or non-dependent. The exercise of management and business activity in
a legal person whose main activity is agricultural is not considered as an
extra-agricultural occupation (Group OF ΚΑΔ 01, except ΚΑΔ 01.6 and ΚΑΔ 01.7)."

```

non-agricultural activities" and 6.3 "Small farm development" of the RDP 2014 - 2020."

</descriptionOfIncompatibility>

</Incompatibility>

<Incompatibility>

<idIncompatibility>"2014GR06RDNP001\_M6.1\_X4"</idIncompatibility>

<descriptionOfIncompatibility>"The heads of operation of a natural or legal person who have previously been beneficiaries of "young farmers" measures of the RDP 2007-2013 or of the ΕΠΑΑ-ΑΥ 2000-2006."

</descriptionOfIncompatibility>

</Incompatibility>

<Incompatibility>

<idIncompatibility>"2014GR06RDNP001\_M6.1\_X5"</idIncompatibility>

<descriptionOfIncompatibility>"Heads of operation of a natural or legal person who have a spouse who is either a professional farmer registered with the MAAE or who has the conditions to be appointed as a professional farmer by the MAAE, with the exception of the spouses of professional farmers in the fisheries sector."

</descriptionOfIncompatibility>

</Incompatibility>

<Incompatibility>

<idIncompatibility>"2014GR06RDNP001\_M6.1\_X6"</idIncompatibility>

<descriptionOfIncompatibility>"The heads of exploitation of a natural or legal person who are students from the beginning of the study until the completion of the number of planned years of study for each school."

</descriptionOfIncompatibility>

</Incompatibility>

<Incompatibility>

<idIncompatibility>"2014GR06RDNP001\_M6.1\_X7"</idIncompatibility>

<descriptionOfIncompatibility>"The heads of operation of a natural or legal person who receive disability benefits with a disability rate equal to or greater than 67% and are judged by the competent body (ΚΕΠΑ) as incapable of work (livelihood)."

</descriptionOfIncompatibility>

</Incompatibility>

<Incompatibility>

<idIncompatibility>"2014GR06RDNP001\_M6.1\_X8"</idIncompatibility>

```

        <descriptionOfIncompatibility>"The heads of operation of a
natural or legal person who are immediately retired from any fund in Greece or
abroad. Disability pensions are judged on a case-by-case basis."
    </descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

<idIncompatibility>"2014GR06RDNP001_M6.1_X9"</idIncompatibility>

        <descriptionOfIncompatibility>"The operating leaders of a
natural or legal person who are serving prison sentences."
    </descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

<idIncompatibility>"2014GR06RDNP001_M6.1_X10"</idIncompatibility>

        <descriptionOfIncompatibility>"Natural persons who do not
have the conditions to be appointed as new entrants to the agricultural sector
professional farmers in the MAAE, in accordance with the terms and conditions
applicable each time."
    </descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

<idIncompatibility>"2014GR06RDNP001_M6.1_X11"</idIncompatibility>

        <descriptionOfIncompatibility>"Those who do not obtain the
minimum overall score in terms of the grading criteria of Sub-measure 6.1
decided by the Monitoring Committee of the RDP 2014-2020."
    </descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

<idIncompatibility>"2014GR06RDNP001_M6.1_X12"</idIncompatibility>

        <descriptionOfIncompatibility>"The legal persons under
establishment."
    </descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

<idIncompatibility>"2014GR06RDNP001_M6.1_X13"</idIncompatibility>

        <descriptionOfIncompatibility>"Groups or producer
organisations or other joint partnership (and legal representative or main
partner thereof) funded by other measures of the RDP 2014 - 2020 for a joint
business plan."
    </descriptionOfIncompatibility>

```

```

        </Incompatibility>

        <Incompatibility>

        <idIncompatibility>"2014GR06RDNP001_M6.1_X14"</idIncompatibility>

                <descriptionOfIncompatibility>"Those who do not accept the
cross-checking of the declared data with the official data of the State and
other Public Services, especially with the data of the Integrated
Administration and Control System and the other registries of the Ministry of
Rural Development and Food, TAXIS, insurance organizations, the National
Municipal Registry, the National municipal register, the public utilities
organizations."
                </descriptionOfIncompatibility>

        </Incompatibility>

        <Incompatibility>

        <idIncompatibility>"2014GR06RDNP001_M6.1_X15"</idIncompatibility>

                <descriptionOfIncompatibility>"Those who declare in the
application form - application file false or untrue information."
                </descriptionOfIncompatibility>

        </Incompatibility>

        <Incompatibility>

        <idIncompatibility>"2014GR06RDNP001_M6.1_X16"</idIncompatibility>

                <descriptionOfIncompatibility>"Those who do not submit in
writing and /or electronically together with the application for support the
required supporting documents within the required time limits in accordance
with the provisions of the official invitation for application submission of
the Sub-Measure."
                </descriptionOfIncompatibility>

        </Incompatibility>

        </Incompatibilities>

</Measures>

</PublicPolicy>

```

## Polish “Agri-environment-climate commitments” M10.1 measure

Measure “aims to preserve and promote the necessary changes to agricultural practices that make a positive contribution to the environment and climate.” Its inclusion in Rural Development Programs (RDPs) is compulsory at national and / or regional level.

Agri-environment-climate payments are granted to farmers and land-managers who, on a voluntary base, commit their farming activities to one or more specific agri-environment-climate practices. According to the regulation payments shall be granted annually, for a period of five-to-seven years, and consist of a compensation, “for all or part of the additional costs and income foregone resulting from the commitments made.”

M10.1 was planned as one of the components implementing strategic EU and national environmental objectives, taking into account the economic and social importance of agriculture in the context of growing demand for agricultural raw materials and the still great importance of agricultural activity for employment and territorial development in Poland.

After the analysis of the Polish “Agri-environment-climate commitments” M10.1 measure [21], the necessary values were extracted and fitted in the proper XML tags. Following is the resulted XML text.

```

<?xml version="1.0" encoding="UTF-8" ?>

<PublicPolicy="RDP PL" namePolicy="Rural Development Program for 2014-2020 (PL:
Program rozwoju obszarów wiejskich)" idPolicy="2014PL06RDNP001">

    <idUpperPolicy>"1305/2013"</idUpperPolicy> <!--Transposed from the UE
Reglament 1305/2013-->

    <geoPoliticalScope="PL" NUTS2=""></geoPoliticalScope>

    <policyMaker = "Minister of Agriculture and Rural Development"
policyMakerNativeName = ""></policyMaker>

    <policyImplementator = "The Agency for Restructuring and Modernisation of
Agriculture (ARMA)" policyImplementatorNativeName = ""></policyImplementator>

    <dateOfApproval>"15/12/2014"</dateOfApproval>

    <dateOfEffect>"15/12/2014"</dateOfEffect>

    <publicationDocument>"18/06/2018"</publicationDocument>

    <startAmendmentPeriod>"28/04/2016"</startAmendmentPeriod>

    <endAmendmentPeriod>"10/02/2022"</endAmendmentPeriod>

    <amendments>10</amendments>

    <Budget>

        <idBudget>"Budget_2014PL06RDNP001"</idBudget>

        <amountBudget>13.612.211.428,00</amountBudget>

        <currency>EUR</currency>

        <Funding>

            <idFunding>""</idFunding> <!--Ideally the code of the item
allocated in the Regional State Budget-->

            <sourceOfFunding>"The European agricultural fund for rural
development (EAFRD) and national co-financing"</sourceOfFunding>

            <funder>"EAFARD and national resources"</funder>

        </Funding>

    </Budget>

    <Evaluator="" nameEvaluator="Common monitoring and evaluation system
(Institute of Agricultural and Food Economics; Institute of Soil Science and
Plant Cultivation (IUNG); ECORYS Polska Sp. z o.o. ; EVALU Sp. z o.o.
https://www.gov.pl/web/rolnictwo/ewaluacja)" idEvaluator=""></Evaluator>

    <ImpactAssessment>

        <idImpactAssessment>"IA_2014PL06RDNP001"</idImpactAssessment>

        <descriptionOfAssessment> </descriptionOfAssessment>
    
```

```

        <KPIs>

        <KPI="Area (ha) covered by agri-environment-climate measures
(10.1)" ">

            <idKPI> </idKPI>

            <objectiveKPI> 1.135.000 (ha) </objectiveKPI>

            <targetKPI> </targetKPI>

            <scopeKPI> </scopeKPI>

        </KPI>

    </KPIs>

</ImpactAssessment>

<Measures>

    <Measure="RDPPL-M10.1" nameMeasure="Agri-environment-climate
commitments" idMeasure="2014PL06RDNP001_M10.1">

        <idLinkedPublicPolicy>"2014PL06RDNP001"</idLinkedPublicPolicy>

        <descriptionOfMeasure> </descriptionOfMeasure>

        <dateOfApproval>" "</dateOfApproval>

        <geoPoliticalScope="PL" NUTS2=""></geoPoliticalScope>

        <temporalScope>" "</temporalScope>

        <dateFirstCall>2014</dateFirstCall>

        <periodicityOfCalls>"1 year"</periodicityOfCalls>

        <CapPayment>

            <idCAPPayment>"2014PL06RDNP001_M10.1_P1"</idCAPPayment>

            <descriptionCAPPayment>"differs depending on the M10 action
packages"</descriptionCAPPayment>

        </CapPayment>

    <Intruments>

        <Subsidy>

            <idInstrument>"2014PL06RDNP001_M10.1_I1"</idInstrument>

            <nameInstrument>"Sustainable agriculture"</nameInstrument>

            <Ranges>

                <Range>

                    <Amount> 400 </Amount>

```



```

        <Unit> PLN per cultivated Ha </Unit>

        <Range_Limits> 0.1 to 50 Ha</Range_Limits>

    </Range>

</Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"2014PL06RDNF001_M10.1_I2_a"</idInstrument>

    <nameInstrument>"Soil and water protection (for catch
crops) "</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 543 </Amount>

            <Unit> PLN per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 10 Ha</Range_Limits>

        </Range>

        <Range>

            <Amount> 0.5*543 </Amount>

            <Unit> PLN per cultivated Ha </Unit>

            <Range_Limits> 10 to 20 Ha </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"2014PL06RDNF001_M10.1_I2_b"</idInstrument>

    <nameInstrument>"Soil and water protection (for protective
strips on slopes with a slope of more than 20%)"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 450 </Amount>

            <Unit> PLN per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 10 Ha</Range_Limits>

        </Range>
    
```

```

        <Range>
            <Amount> 0.5*450 </Amount>
            <Unit> PLN per cultivated Ha </Unit>
            <Range_Limits> 10 to 20 Ha </Range_Limits>
        </Range>

    </Ranges>

</Subsidy>

<Subsidy>
    <idInstrument>"2014PL06RDNF001_M10.1_I3"</idInstrument>
    <nameInstrument>"Preserving orchards with traditional
varieties of fruit trees"</nameInstrument>
    <Ranges>
        <Range>
            <Amount> 1964 </Amount>
            <Unit> PLN per cultivated Ha </Unit>
            <Range_Limits> 0.1 to 10 Ha</Range_Limits>
        </Range>

        <Range>
            <Amount> 0.5*1964 </Amount>
            <Unit> € per cultivated Ha </Unit>
            <Range_Limits> 10 to 20 Ha </Range_Limits>
        </Range>
    </Ranges>
</Subsidy>

<Subsidy>
    <idInstrument>"2014PL06RDNF001_M10.1_I4_a"</idInstrument>
    <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas (extensive use in the SPA)"</nameInstrument>
    <Ranges>
        <Range>
            <Amount> 589 </Amount>
            <Unit> € per cultivated Ha </Unit>

```

```

        <Range_Limits> 0.1 to 50 Ha </Range_Limits>
    </Range>

    <Range>
        <Amount> 0.5*589 </Amount>

        <Unit> € per cultivated Ha </Unit>

        <Range_Limits> 50 to 100 Ha </Range_Limits>
    </Range>

    <Range>
        <Amount> 0.25*589 </Amount>

        <Unit> € per cultivated Ha </Unit>

        <Range_Limits> 100 to 150 Ha </Range_Limits>
    </Range>
</Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"2014PL06RDNP001_M10.1_I4_b"</idInstrument>

    <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas(the occurrence of bird species, such as: black-
tailed shrew (as well as common snipe, redshank, lapwing))"</nameInstrument>

    <Ranges>

        <Range>
            <Amount> 842 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 50 Ha </Range_Limits>
        </Range>

        <Range>
            <Amount> 0.5*842 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 50 to 100 Ha </Range_Limits>
        </Range>

        <Range>
            <Amount> 0.25*842 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 100 to 150 Ha </Range_Limits>
        </Range>
    </Ranges>

</Subsidy>
    
```

```

        <Subsidy>

            <idInstrument>"2014PL06RDNP001_M10.1_I4_c"</idInstrument>

            <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas (aquatic warbler)"</nameInstrument>

            <Ranges>

                <Range>
                    <Amount> 1169 </Amount>

                    <Unit> € per cultivated Ha </Unit>

                    <Range_Limits> 0.1 to 50 Ha </Range_Limits>

                </Range>

                <Range>
                    <Amount> 0.5*1169 </Amount>

                    <Unit> € per cultivated Ha </Unit>

                    <Range_Limits> 50 to 100 Ha </Range_Limits>

                </Range>

                <Range>
                    <Amount> 0.25*1169 </Amount>

                    <Unit> € per cultivated Ha </Unit>

                    <Range_Limits> 100 to 150 Ha </Range_Limits>

                </Range>
            </Ranges>

        </Subsidy>

        <Subsidy>

            <idInstrument>"2014PL06RDNP001_M10.1_I4_d"</idInstrument>

            <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas (great snipe (and also the great curlew
))"</nameInstrument>

            <Ranges>

                <Range>
                    <Amount> 1048 </Amount>

                    <Unit> € per cultivated Ha </Unit>

                    <Range_Limits> 0.1 to 50 Ha </Range_Limits>

                </Range>

                <Range>
                    <Amount> 0.5*1048 </Amount>

                    <Unit> € per cultivated Ha </Unit>

                    <Range_Limits> 50 to 100 Ha </Range_Limits>
    
```

```

        </Range>
        <Range>
            <Amount> 0.25*1048 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 100 to 150 Ha </Range_Limits>

        </Range>
    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"2014PL06RDNF001_M10.1_I4_e"</idInstrument>

    <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas(habitat type: variable wet
meadows)"</nameInstrument>

    <Ranges>

        <Range>
            <Amount> 1277 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 50 Ha </Range_Limits>

        </Range>

        <Range>
            <Amount> 0.5*1277 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 50 to 100 Ha </Range_Limits>

        </Range>

        <Range>
            <Amount> 0.25*1277 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 100 to 150 Ha </Range_Limits>

        </Range>
    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"2014PL06RDNF001_M10.1_I4_f"</idInstrument>

    <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas(habitat type: celeriac floodplain meadows and
salt vegetation)"</nameInstrument>

    <Ranges>

```

```

        <Range>
            <Amount> 1209 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 50 Ha </Range_Limits>
        </Range>

        <Range>
            <Amount> 0.5*1209 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 50 to 100 Ha </Range_Limits>
        </Range>

        <Range>
            <Amount> 0.25*1209 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 100 to 150 Ha </Range_Limits>
        </Range>
    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"2014PL06RDNP001_M10.1_I4_g"</idInstrument>

    <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas (habitat type: grasslands)"</nameInstrument>

    <Ranges>

        <Range>
            <Amount> 1300 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 50 Ha </Range_Limits>
        </Range>

        <Range>
            <Amount> 0.5*1300 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 50 to 100 Ha </Range_Limits>
        </Range>

        <Range>
            <Amount> 0.25*1300 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 100 to 150 Ha </Range_Limits>
        </Range>
    </Ranges>

```

```

        </Ranges>

    </Subsidy>

    <Subsidy>

        <idInstrument>"2014PL06RDNF001_M10.1_I4_h"</idInstrument>

        <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas (habitat type: semi-natural wet
meadows)"</nameInstrument>

        <Ranges>

            <Range>
                <Amount> 874 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> 0.1 to 50 Ha </Range_Limits>
            </Range>

            <Range>
                <Amount> 0.5*874 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> 50 to 100 Ha </Range_Limits>
            </Range>

            <Range>
                <Amount> 0.25*874 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> 100 to 150 Ha </Range_Limits>
            </Range>
        </Ranges>

    </Subsidy>

    <Subsidy>

        <idInstrument>"2014PL06RDNF001_M10.1_I4_i"</idInstrument>

        <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas (habitat type: semi-natural fresh
meadows)"</nameInstrument>

        <Ranges>

            <Range>
                <Amount> 1072 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> 0.1 to 50 Ha </Range_Limits>
            </Range>

            <Range>
                <Amount> 0.5*1072 </Amount>
            </Range>
        </Ranges>
    </Subsidy>

```

```

        <Unit> € per cultivated Ha </Unit>

        <Range_Limits> 50 to 100 Ha </Range_Limits>

    </Range>

    <Range>
        <Amount> 0.25*1072 </Amount>

        <Unit> € per cultivated Ha </Unit>

        <Range_Limits> 100 to 150 Ha </Range_Limits>

    </Range>
</Ranges>

</Subsidy>
<Subsidy>

    <idInstrument>"2014PL06RDNF001_M10.1_I4_j"</idInstrument>

    <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas (habitat type: peatlands (mandatory
requirements))"</nameInstrument>

    <Ranges>

        <Range>
            <Amount> 600 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 50 Ha </Range_Limits>

        </Range>

        <Range>
            <Amount> 0.5*600 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 50 to 100 Ha </Range_Limits>

        </Range>

        <Range>
            <Amount> 0.25*600 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 100 to 150 Ha </Range_Limits>

        </Range>
    </Ranges>

</Subsidy>
<Subsidy>

    <idInstrument>"2014PL06RDNF001_M10.1_I4_k"</idInstrument>

    <nameInstrument>"Valuable habitats and endangered species
of birds in Natura 2000 areas (habitat type: peatlands (mandatory and
supplementary requirements))"</nameInstrument>

    <Ranges>

```



```

        <Range>
            <Amount> 1206 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 50 Ha </Range_Limits>
        </Range>

        <Range>
            <Amount> 0.5*1206 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 50 to 100 Ha </Range_Limits>
        </Range>

        <Range>
            <Amount> 0.25*1206 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> 100 to 150 Ha </Range_Limits>
        </Range>
    </Ranges>
</Subsidy>

<Subsidy>
    <idInstrument>"2014PL06RDNP001_M10.1_I5_a"</idInstrument>
    <nameInstrument>"Valuable habitats outside Natura 2000
areas (type of habitat: variable damp meadows)"</nameInstrument>

    <Ranges>
        <Range>
            <Amount> 1277 </Amount>

            <Unit> PLN per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 10 Ha</Range_Limits>
        </Range>

        <Range>
            <Amount> 0.5*1277 </Amount>

            <Unit> PLN per cultivated Ha </Unit>

            <Range_Limits> 10 to 20 Ha </Range_Limits>
        </Range>
    </Ranges>

```

```

        </Subsidy>

        <Subsidy>

            <idInstrument>"2014PL06RDNF001_M10.1_I5_b"</idInstrument>

            <nameInstrument>"Valuable habitats outside Natura 2000
areas (type of habitat: celeriac floodplain meadows and salt
vegetation)"</nameInstrument>

            <Ranges>

                <Range>

                    <Amount> 1209 </Amount>

                    <Unit> PLN per cultivated Ha </Unit>

                    <Range_Limits> 0.1 to 10 Ha</Range_Limits>

                </Range>

                <Range>

                    <Amount> 0.5*1209 </Amount>

                    <Unit> PLN per cultivated Ha </Unit>

                    <Range_Limits> 10 to 20 Ha </Range_Limits>

                </Range>

            </Ranges>

        </Subsidy>

        <Subsidy>

            <idInstrument>"2014PL06RDNF001_M10.1_I5_c"</idInstrument>

            <nameInstrument>"Valuable habitats outside Natura 2000
areas (type of habitat: grasslands)"</nameInstrument>

            <Ranges>

                <Range>

                    <Amount> 1300 </Amount>

                    <Unit> PLN per cultivated Ha </Unit>

                    <Range_Limits> 0.1 to 10 Ha</Range_Limits>

                </Range>

                <Range>

                    <Amount> 0.5*1300 </Amount>
    
```

```

        <Unit> PLN per cultivated Ha </Unit>

        <Range_Limits> 10 to 20 Ha </Range_Limits>

    </Range>

</Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"2014PL06RDN001_M10.1_I5_d"</idInstrument>

    <nameInstrument>"Valuable habitats outside Natura 2000
areas (type of habitat: semi-natural wet meadows)"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 874 </Amount>

            <Unit> PLN per cultivated Ha </Unit>

            <Range_Limits> 0.1 to 10 Ha</Range_Limits>

        </Range>

        <Range>

            <Amount> 0.5*874</Amount>

            <Unit> PLN per cultivated Ha </Unit>

            <Range_Limits> 10 to 20 Ha </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"2014PL06RDN001_M10.1_I5_e"</idInstrument>

    <nameInstrument>"Valuable habitats outside Natura 2000
areas (type of habitat: semi-natural fresh meadows)"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 1072 </Amount>

            <Unit> PLN per cultivated Ha </Unit>
    
```

```

        <Range_Limits> 0.1 to 10 Ha</Range_Limits>
    </Range>

    <Range>
        <Amount> 0.5*1072 </Amount>
        <Unit> PLN per cultivated Ha </Unit>
        <Range_Limits> 10 to 20 Ha </Range_Limits>
    </Range>

</Ranges>

</Subsidy>

<Subsidy>
    <idInstrument>"2014PL06RDNF001_M10.1_I5_f"</idInstrument>
    <nameInstrument>"Valuable habitats outside Natura 2000
areas (type of habitat: peatlands (mandatory requirements))"</nameInstrument>
    <Ranges>
        <Range>
            <Amount> 600 </Amount>
            <Unit> PLN per cultivated Ha </Unit>
            <Range_Limits> 0.1 to 10 Ha</Range_Limits>
        </Range>

        <Range>
            <Amount> 0.5*600 </Amount>
            <Unit> PLN per cultivated Ha </Unit>
            <Range_Limits> 10 to 20 Ha </Range_Limits>
        </Range>
    </Ranges>
</Subsidy>

<Subsidy>
    <idInstrument>"2014PL06RDNF001_M10.1_I5_g"</idInstrument>
    <nameInstrument>"Valuable habitats outside Natura 2000
areas (type of habitat: peatlands (mandatory and supplementary
requirements))"</nameInstrument>

```

```

        <Ranges>
            <Range>
                <Amount> 1206 </Amount>
                <Unit> PLN per cultivated Ha </Unit>
                <Range_Limits> 0.1 to 10 Ha</Range_Limits>
            </Range>

            <Range>
                <Amount> 0.5*1206 </Amount>
                <Unit> PLN per cultivated Ha </Unit>
                <Range_Limits> 10 to 20 Ha </Range_Limits>
            </Range>

        </Ranges>
    </Subsidy>
</Instruments>

<Requirements>
    <GeneralRequirements>

<idAssociatedMeasure>"2014PL06RDNP001_M10.1"</idAssociatedMeasure>
    <idRequirement>"2014PL06RDNP001_M10.1_R1"</idRequirement>
    <DescriptionOfRequirement>
        <Req_1>must have an agri-environmental activity
plan</Req_1>
        <Req_2>must keep a register of agri-environmental
activities</Req_2>
        <Req_3>cannot transform existing permanent grassland on
the farm</Req_3>
        <Req_4>must keep on the farm elements agricultural
landscape not used in agriculture, which are the mainstay of nature</Req_4>

    </DescriptionOfRequirement>
</GeneralRequirements>

    <InstrumentRequirements>

        <package>
    
```

```

<idAssociatedMeasure>"2014PL06RDNP001_M10.1"</idAssociatedMeasure>

<idRequirement>"2014PL06RDNP001_M10.1_R2"</idRequirement>

<idAssociatedInstrument>2014PL06RDNP001_M10.1_I1</idAssociatedInstrument>

  <DescriptionOfRequirement>

    <Req_1>Obligation to have an agri-environmental
activity plan;</Req_1>

    <Req_2>The obligation to maintain all permanent
grasslands and landscape elements not used for agriculture, constituting
refuges of wild nature</Req_2>

    <Req_3>The use of a minimum of 4 crops in the main
crop per year on the farm, including the share of the main crop and the total
of cereals in the sown structure, may not exceed 65% and the share of each crop
may not be less than 10%.</Req_3>

    <Req_4>Double chemical soil analysis (pH, P, K, Mg
and organic carbon) - performed in the first (or preceding) and in the fifth
(or preceding) year of the package implementation;</Req_4>

    <Req_5>Obligation to develop and follow a
fertilizer plan annually, based on a nitrogen balance and chemical soil
analysis, specifying the doses of N, P, K, Mg and the need for liming</Req_5>

    <Req_6>Application of, inter alia in order to
obtain a positive balance of organic matter on an agricultural plot:
      • of a minimum of 3 crop groups in rotation
within the 5-year commitment;
      • use of catch crops (sown by October 1, with a
ban on resuming agrotechnical treatments before February 15) at the latest in
the 4th year of the commitment period, in two different years; and
      • using catch crops (as above) or plowing in
straw or plowing in manure
    </Req_6>

    <Req_7>Mowing or grazing on permanent grassland;
8. The use of sewage sludge is prohibited;.
      • 2. Soil and water protection.
      • 3. Preservation of orchards with traditional
varieties of fruit trees.
      • 4. Valuable habitats and endangered species of
birds in Natura 2000 areas.
      • 5. Valuable habitats outside Natura 2000 areas.
    </Req_7>

  </DescriptionOfRequirement>

</package>

<package>

<idAssociatedMeasure>"2014PL06RDNP001_M10.1"</idAssociatedMeasure>

<idRequirement>"2014PL06RDNP001_M10.1_R3"</idRequirement>

```

```

<idAssociatedInstrument>2014PL06RDNP001_M10.1_I2</idAssociatedInstrument>

    <DescriptionOfRequirement>

        <Req_1>Obligation to have an agri-environmental
activity plan</Req_1>

        <Req_2>The obligation to maintain all permanent
grasslands and landscape elements not used for agriculture, constituting
refuges of wild nature</Req_2>

        <Req_3>Sowing intercrop crops by September
15th</Req_3>

        <Req_4>A ban on resuming agrotechnical operations
before March 1</Req_4>

        <Req_5>Using as catch crops only a mixture composed
of at least 3 plant species, the dominant plant species in the mixture or the
cereal species used in the mixture must not exceed 70% of its composition;
Prohibition of using a mixture consisting exclusively of different types of
cereals

        </Req_5>

        <Req_6>Prohibition of fertilization</Req_6>

        <Req_7>The use of pesticides and herbicides in
catch crops is prohibited</Req_7>

        <Req_8>The use of sewage sludge is prohibited
        </Req_8>

        <Req_9>Plowing of the biomass of the catch crop,
excluding soil cultivation in a no-plow system</Req_9>

        <Req_10>It is forbidden to cultivate a mixture of
the same plants in the main crop (in the case of winter catch crops, also
spring forms)</Req_10>

    </DescriptionOfRequirement>

</package>

<package>

<idAssociatedMeasure>"2014PL06RDNP001_M10.1"</idAssociatedMeasure>

<idRequirement>"2014PL06RDNP001_M10.1_R4"</idRequirement>

<idAssociatedInstrument>2014PL06RDNP001_M10.1_I3</idAssociatedInstrument>

    <DescriptionOfRequirement>

        <Req_1>Obligation to have an agri-environmental
activity plan</Req_1>

        <Req_2>The obligation to maintain all permanent
grasslands and landscape elements not used for agriculture, constituting
refuges of wild nature</Req_2>

        <Req_3>Obligation to maintain an orchard of
traditional varieties of fruit trees, which includes at least 12 trees,

```

propagated on vigorously growing rootstocks and kept as tall-stemmed trees, from the age of 15, representing not less than 4 varieties or species spaced not less than 4 x 6 m apart not larger than 10 x 10 m, and at the same time the number of these trees per 1 ha of the orchard area is not less than 90</Req\_3>

<Req\_4>The minimum height of the tree trunk should be 1.20 m</Req\_4>

<Req\_5>  
Ban on the use of herbicides  
</Req\_5>

<Req\_6>Obligation to perform basic nursing treatments in the orchard, i.e. :  
• shaping and sanitary cutting of trees and thinning of thickened tree crowns;  
• removal of roots and self-seeding;  
• whitewashing trunks of older trees and preventing the trunks of young trees against being gnawed by rodents and hares  
</Req\_6>

<Req\_7>Mowing and removing grass or grazing</Req\_7>

</DescriptionOfRequirement>

</package>

<package>

<idAssociatedMeasure>"2014PL06RDNP001\_M10.1"</idAssociatedMeasure>

<idRequirement>"2014PL06RDNP001\_M10.1\_R5"</idRequirement>

<idAssociatedInstrument>2014PL06RDNP001\_M10.1\_I4</idAssociatedInstrument>

<DescriptionOfRequirement>

>

<Req\_1>Obligation to have an agri-environmental activity plan</Req\_1>

<Req\_2>Obligation to have documentation regarding nature prepared by an expert of nature (exception: extensive use in SPAs); SPAs - areas of special bird protection</Req\_2>

<Req\_3>Obligation to preserve all permanent grasslands and landscape elements not used for agricultural purposes, constituting refuges of wild nature</Req\_3>

<Req\_4>In the area covered by Package 4 it is prohibited to:

- a) plowing, rolling, application of sewage sludge, application of undersown and mechanical destruction of soil structure;
- b) drifting in the period:
  - from April 1 to September 1 in lowland areas (up to 300 m above sea level),
  - from April 15 to September 1 in upland and mountain areas (over 300 m above sea level);
- c) application of plant protection products except for selective and local destruction of nuisance invasive species with the use of appropriate equipment (e.g. weed wipers);
- d) creating new, expanding and restoring the existing drainage systems, except for the construction of devices aimed



at adjusting the water level using the existing drainage systems to the habitat requirements of the species/habitats being protected in the package, if such activities are described in detail by an expert of nature in the nature documentation ;

e) storage of biomass among clusters of trees and shrubs, in ditches, ravines and other depressions of the area (located on the plots declared in the application).

</Req\_4>

</DescriptionOfRequirement>

</package>

<package>

<idAssociatedMeasure>"2014PL06RDNP001\_M10.1"</idAssociatedMeasure>

<idRequirement>"2014PL06RDNP001\_M10.1\_R6"</idRequirement>

<idAssociatedInstrument>2014PL06RDNP001\_M10.1\_I5</idAssociatedInstrument>

<DescriptionOfRequirement>

>

<Req\_1>Obligation to have an agri-environmental activity plan</Req\_1>

<Req\_2>Obligation to have documentation regarding nature prepared by an expert of nature</Req\_2>

<Req\_3>The obligation to maintain all permanent grasslands and landscape elements not used for agriculture, constituting refuges of wild nature</Req\_3>

<Req\_4>In the area covered by Package 5, it is prohibited to:

a) plowing, rolling, application of sewage sludge, application of undersown and mechanical destruction of soil structure;

b) drifting in the period:  
• from April 1 to September 1 in lowland areas (up to 300 m above sea level),  
• from April 15 to September 1 in upland and mountain areas (over 300 m above sea level);

c) use of plant protection products, except for the selective and local destruction of nuisance invasive species with the use of appropriate equipment (e.g. weed wipers);

d) creating new, expanding and restoring the existing drainage systems, except for the construction of devices aimed at adjusting the water level using the existing drainage systems to the habitat requirements of the species / habitats being protected in the package, if such activities will be described in detail by a natural expert in the nature documentation;

e) storage of biomass among clumps of trees and shrubs, in ditches, ravines and other depressions (located on the plots declared in the application).

</Req\_4>

<Req\_5>

</Req\_5>

<Req\_6></Req\_6>

```

        <Req_7></Req_7>

    </DescriptionOfRequirement>

</package>

</InstrumentRequirements>

</Requirements>

<Commitments>

    <Commitment>

        <idCommitment>""</idCommitment>

        <idAssociatedMeasure>""</idAssociatedMeasure>

        <descriptionOfCommitment>
            <Com_1>Farmer has been assigned an identification
            number pursuant to the provisions on the national system records of producers,
            records of farms and records of applications for an award that can be used to
            claim granting this payment</Com_1>

            <Com_2>implements a 5-year or 2-year agri-environment-
            climate commitment</Com_2>

            <Com_3>meets the conditions for granting agri-
            environment-climate payment in within specific packages or their variants as
            defined in the M10 agri-environment-climate regulation</Com_3>
        </descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
        <!--Description of proofs and tests to be demonstrated-->

        <Verifier>

            <idVerifier></idVerifier> <!--Ideally the license
            number of the Verifier Organisation-->

            <nameVerifier>"The Agency for Restructuring and
            Modernisation of Agriculture (ARMA)"</nameVerifier>

        </Verifier>

    </Commitment>

</Commitments>

<Budget>

    <idBudget>"Budget_2014PL06RDNP001_M10.1"</idBudget>

    <amountBudget>1.366,700,00</amountBudget>
    
```

```

        <currency>EUR</currency>

        <Funding>

            <idFunding>""</idFunding> <!--Ideally the code of the item
allocated in the Regional State Budget-->

            <sourceOfFunding>""</sourceOfFunding>

            <funder>""</funder>

        </Funding>

    </Budget>

    <Incompatibilities>

        <Incompatibility>

            <idIncompatibility>""</idIncompatibility>

            <descriptionOfIncompatibility>""</descriptionOfIncompatibility>

        </Incompatibility>

        <Incompatibility>

            <idIncompatibility>""</idIncompatibility>

            <descriptionOfIncompatibility>""</descriptionOfIncompatibility>

        </Incompatibility>

        <Incompatibility>

            <idIncompatibility>""</idIncompatibility>

            <descriptionOfIncompatibility>""</descriptionOfIncompatibility>

        </Incompatibility>

    </Incompatibilities>

</Measure>

</Measures>

</PublicPolicy>
    
```

## Andalusian Eco-scheme

The measure described in this section is the Complementary Subsidy for Young Farmers. This measure belongs to Pillar I, and it is a direct dissociated payment compatible with the Basic Payment Scheme.

This subsidy is intended for farmers under 40 years of age who are applying for the first time for the Basic Payment and who are setting up a farm for the first time. The aid can be received for a maximum of 5 years, and the amount depends directly on the number of payment entitlements held by the applicant farmer.

Furthermore, the instrument here described belongs to the reform of the Rural Development Programme, which will enter into force on 1 January 2023. This reform increases the number of eligible hectares up to 100 hectares and the subsidy amount from 50% to 100% of the farmer's payment entitlements value. In addition, the reform provides for an additional 15% premium if the applicant is a female farmer.

After the analysis of the Andalusian Eco-schemes measure [22], the necessary values were extracted and fitted in the proper XML tags. Following is the resulted XML text.

```

<?xml version="1.0" encoding="UTF-8" ?>

<PublicPolicy="YFP" namePolicy="Young Farmer Payment" idPolicy="2015ESCAP001"> <!--
-The policy has not associated ID. This ID is not real-->

<idUpperPolicy>"32013R1307"</idUpperPolicy> <!--Transposed from the UE
Reglament 1307/2013-->

    <geoPoliticalScope="Spain" NUTS0="ES"></geoPoliticalScope>

    <policyMaker = "Ministry of Agriculture, Fisheries and Food"
policyMakerNativeName = "Ministerio de Agricultura, Pesca y
Alimentación"></policyMaker>

    <policyImplementator = "Ministry of Agriculture, Fisheries and Food"
policyImplementatorNativeName = "Ministerio de Agricultura, Pesca y
Alimentación"></policyImplementator>

    <dateOfApproval>"2013/12/17"</dateOfApproval>

    <dateOfEffect>"2015/01/01"</dateOfEffect>

    <publicationDocument> </publicationDocument>

    <startAmendmentPeriod>2015</startAmendmentPeriod>

    <endAmendmentPeriod>2020</endAmendmentPeriod>

    <amendments>"Extension to 2027"</amendments>

    <Budget>

        <idBudget>"Budget_"</idBudget>

        <amountBudget>97.120.000</amountBudget>

        <currency>EUR</currency>

        <Funding>

            <idFunding>"Funding_2015"</idFunding> <!--This ID is not real-->

            <sourceOfFunding>"The European Commission is promoting the aid with
the aim of giving a real and effective boost to generational
change"</sourceOfFunding>

            <funder>"European Union via the Spanish government"</funder>

        </Funding>

    </Budget>

    <Evaluator="UE" nameEvaluator="European Parliament and the Council"
idEvaluator="EU0001"></Evaluator>

    <ImpactAssessment>

        <idImpactAssessment>"IA_2015ESCAP001"</idImpactAssessment>

        <descriptionOfAssessment> </descriptionOfAssessment>

        <KPIs>

            <KPI="Generational change">
    
```

```

        <idKPI> </idKPI>

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

    ...

    <KPI="Competitiveness of the agricultural sector">

        <idKPI> </idKPI>

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

</KPIs>

</ImpactAssessment>

<Measures>

    <Measure="YFP" nameMeasure="Supplementary payment for young farmers"
idMeasure="2015ESCAP001">

        <idLinkedPublicPolicy>"2015ESCAP001"</idLinkedPublicPolicy>

        <descriptionOfMeasure> </descriptionOfMeasure>

        <dateOfApproval>"2013/12/17"</dateOfApproval>

        <geoPoliticalScope="Spain" NUTS0="ES"></geoPoliticalScope>

    <temporalScope>"2015;2016;2017;2018;2019;2020;2021;2022"</temporalScope>

        <dateFirstCall>2015</dateFirstCall>

        <periodicityOfCalls>"1 year"</periodicityOfCalls>

        <CapPayment>

            <idCAPPayment>"2015ESCAP001_P1"</idCAPPayment>

            <descriptionCAPPayment>"Single annual
payment"</descriptionCAPPayment>

        </CapPayment>

    <Intruments>

        <Subsidy>
    
```

```

        <idInstrument>"2015ESCAP001_I1"</idInstrument>

        <nameInstrument>"Subsidies to young
farmers"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 100 % of the average value of the payment
entitlements </Amount>

                <Unit> € per activated payment entitlement </Unit>

                <Range_Limits> Up to a maximum of 100 payment
entitlements </Range_Limits>

            </Range>

            <Range>

                <Amount> 115 % of the average value of the payment
entitlements </Amount>

                <Unit> € per activated payment entitlement </Unit>

                <Range_Limits> Up to a maximum of 100 payment
entitlements </Range_Limits>

            </Range>
        </Ranges>

    </Subsidy>

</Instruments>

<Requirements>

    <FarmOwnerRequirement>

        <idAssociatedMeasure>"2015ESCAP001"</idAssociatedMeasure>

        <idRequirement>"2015ESCAP001_R1"</idRequirement>

        <DescriptionOfRequirement>

            <ageRange>"Not be over 40 years of age in the year in
which you first apply for the basic payment" </ageRange>

            <gender>"Female to access the higher subsidy amount
(115 % of the average value of the payment entitlements)"</gender>

            <familySituation> </familySituation>

            <studyLevel> </studyLevel>

            <laborSituation>"Active Farmer"</laborSituation>

            <workExperience>"Setting up for the first time on a
farm"</workExperience>

            <previousSubsidies> "Not have received the subsidy
during the 5 previous years" </previousSubsidies>
        </DescriptionOfRequirement>
    
```

```

</FarmOwnerRequirement>

<FarmHoldingRequirement>

    <idAssociatedMeasure>"2015ESCAP001"</idAssociatedMeasure>

    <idRequirement>"2015ESCAP001_R2"</idRequirement>

    <DescriptionOfRequirement>

        <economicDimension> </economicDimension>

        <TEO> </TEO>

        <maximumUAA>100 Ha</maximumUAA>

        <staffSize> </staffSize>

        <agriculturalActivity>"Agricultural activities must be
        carried out on the parcels declared in the application"</agriculturalActivity>

        <propertyRegime>"Ownership, usufruct, lease,
        sharecropping or assignment by a management entity of a communal
        property"</propertyRegime>

        <fallowState>"A parcel cannot be declared fallow during
        3 consecutive years"</fallowState>

    </DescriptionOfRequirement>

</FarmHoldingRequirement>

</Requirements>

<Commitments>

    <Commitment>

        <idCommitment>"2015ESCAP001_C1"</idCommitment>

        <idAssociatedMeasure>"2015ESCAP001"</idAssociatedMeasure>

        <descriptionOfCommitment>"Activate the corresponding
        payment entitlements"</descriptionOfCommitment>

        <subjectOfCommitment>Beneficiary
        Holding</subjectOfCommitment>

        <startPeriodOfValidity>"The same year in which the farmer
        applies for the aid and meets the requirements."</startPeriodOfValidity>

        <endPeriodOfValidity>"startPeriod + 5
        years"</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
        <!--Description of proofs and tests to be demonstrated-->

        <Verificator>

            <idVerificator>"ES_VF"</idVerificator> <!--This ID is
            not real-->
    
```



```

        <nameVerifier>"NUTS2 Regional
Gouvernement"</nameVerifier>

        </Verifier>

    </Commitment>

</Commitments>

<Incompatibilities>

    <Incompatibility>

        <idIncompatibility>"</idIncompatibility>

<descriptionOfIncompatibility>"</descriptionOfIncompatibility>

        </Incompatibility>
    </Incompatibilities>

</Measure>

</Measures>

</PublicPolicy>
    
```

## Greek Eco-scheme 31.8

Eco-scheme 31.8 “Conservation of organic methods in farming and animal husbandry”, part of the CAP strategic plan of Greece 2023-2027, aims to support the preservation of both organic farming methods, and organic methods in animal husbandry.

The organic farming support targets the following plants:

Olive, Raisin, Pome fruits, Stone fruits, Table grapes, Citrus fruit, Wine grapes, Pomegranates, Kiwi, Fig, Small fruited/Forest, Avocado, Tree nut, Prickly pear, Maize edible, Fodder maize, Lucerne, Clover, Winter cereals, Cotton, Tobacco, Rice, Other Arable crops (flax, oilseed rape, sunflower, quinoa, camellia, chia, Aromatic herbs, grain legumes, Fodder legumes, Leafy vegetables-cruciferous/bulb/carrot/potato/cucurbits, tomato/aubergine/pepper.

The organic methods in animal husbandry targets the following animal: sheep/goats (ovine/caprine), Beef cattle/mixed cattle, Dairy cattle.

The intervention consists in strengthening the continuation of the application of organic farming methods and animal husbandry, with a budget of 605.910.400,00 Euros, in the form of single annual payments.

After the analysis of the Greek Eco-schemes measure [23], the necessary values were extracted and fitted in the proper XML tags. Following is the resulted XML text.

```

<?xml version="1.0" encoding="UTF-8" ?>

<PublicPolicy="APDR" namePolicy="CAP STRATEGIC PLAN OF GREECE 2023-2027"
idPolicy="2023EL06AFSP001">

    <idUpperPolicy>""</idUpperPolicy> <!--Transposed from the UE Reglamente
1305/2013-->

    <geoPoliticalScope=="Greece" NUTS0="EL"></geoPoliticalScope>

    <policyMaker = "Ministry of Rural Development and Food" policyMakerNativeName
= "Υπουργείο Αγροτικής Ανάπτυξης και Τροφίμων"></policyMaker>

    <policyImplementator = "Ministry of Rural Development and Food"
policyImplementatorNativeName = "Υπουργείο Αγροτικής Ανάπτυξης και
Τροφίμων"></policyImplementator>

    <dateOfApproval>""</dateOfApproval>
    <dateOfEffect>"2023-2027"</dateOfEffect>

    <publicationDocument> CAP STRATEGIC PLAN OF GREECE 2023-
2027 </publicationDocument>

    <startAmendmentPeriod></startAmendmentPeriod>

    <endAmendmentPeriod></endAmendmentPeriod>
    <amendments>""</amendments>

    <Budget>

        <idBudget>"Budget_2023EL06AFSP001"</idBudget>

        <amountBudget></amountBudget>
        <currency>EUR</currency>

        <Funding>
            <idFunding>""</idFunding> <!--Ideally the code of the item
allocated in the Regional State Budget-->

            <sourceOfFunding>"EAFRD"</sourceOfFunding>
            <funder>"EU"</funder>

        </Funding>

    </Budget>

    <Evaluator="EU" nameEvaluator="EU" idEvaluator=""></Evaluator>

    <ImpactAssessment>

        <idImpactAssessment>"IA_2023EL06AFSP001"</idImpactAssessment>

        <descriptionOfAssessment> Number of hectares or of livestock units
benefitting from ecoschemes </descriptionOfAssessment>

        <KPIs>

            <KPI="R.13 Share of livestock units (LU) under support to reduce
emissions of greenhouse gases and/or ammonia, including manure management">

                <idKPI> </idKPI>
    
```

```

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

    <KPI="R.14 Share of utilised agricultural area (UAA) under
    supported commitments to reduce emissions or to maintain or enhance carbon
    storage (including permanent grassland, permanent crops with permanent green
    cover, agricultural land in wetland and peatland)">

        <idKPI> </idKPI>

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

    <KPI="R.19 Share of Utilised Agricultural Area (UAA) under
    supported commitments beneficial for soil management to improve soil quality
    and biota (such as reducing tillage, soil cover with crops, crop rotation
    included with leguminous crops)">

        <idKPI> </idKPI>

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

    <KPI="R.21 Percentage of utilized agricultural area (UAA) covered
    by commitments supported for the quality of water bodies">

        <idKPI> </idKPI>

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

    <KPI="R.22 Percentage of utilized agricultural area (UAA) covered
    by supported commitments related to improved nutrient management">

        <idKPI> </idKPI>

        <objectiveKPI> </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>
    
```

```

    <KPI="R.24 Share of Utilised Agricultural Area (UAA) under
    supported specific commitments which lead to a sustainable use of pesticides in
    order to reduce risks and impacts of pesticides, such as pesticides leakage">

```

```

        <idKPI> </idKPI>

```

```

        <objectiveKPI> </objectiveKPI>

```

```

        <targetKPI> </targetKPI>

```

```

        <scopeKPI> </scopeKPI>

```

```

    </KPI>

```

```

    <KPI="R.25 Percentage of livestock units subject to supported
    commitments to improve environmental sustainability" >

```

```

        <idKPI> </idKPI>

```

```

        <objectiveKPI> </objectiveKPI>

```

```

        <targetKPI> </targetKPI>

```

```

        <scopeKPI> </scopeKPI>

```

```

    </KPI>

```

```

    <KPI="R.29 Percentage of the utilized agricultural area (CAP) that
    benefits from support from the PAC for organic farming, discriminated between
    maintenance and conversion">

```

```

        <idKPI> </idKPI>

```

```

        <objectiveKPI> </objectiveKPI>

```

```

        <targetKPI> </targetKPI>

```

```

        <scopeKPI> </scopeKPI>

```

```

    </KPI>

```

```

    <KPI>

```

```

    <KPI="0.8. Number of hectares or of livestock units benefitting
    from eco-schemes"> <!--this is a common commonOutputIndicator-->

```

```

        <idKPI> </idKPI>

```

```

        <objectiveKPI> </objectiveKPI>

```

```

        <targetKPI> </targetKPI>

```

```

        <scopeKPI> </scopeKPI>

```

```

    </KPI>

```

```

</KPIs>

```

```

</ImpactAssessment>

```

```

<Measures>

```

```

    <Measure="Π1-31.8" nameMeasure="Conservation of organic methods in
    farming and animal husbandry." idMeasure="2023EL06AFSP001_Π1-31.8">

```

```

        <idLinkedPublicPolicy>"2023EL06AFSP001"</idLinkedPublicPolicy>

        <descriptionOfMeasure> </descriptionOfMeasure>

        <dateOfApproval>" "</dateOfApproval>

        <geoPoliticalScope="Greece" NUTS0="EL"></geoPoliticalScope>

        <temporalScope>"2023;2024;2025;2026;2027"</temporalScope>

        <dateFirstCall></dateFirstCall>

        <periodicityOfCalls>" "</periodicityOfCalls>

        <CapPayment>

            <idCAPPayment>"22023EL06AFSP001_Π1-31.8_P1"</idCAPPayment>

            <descriptionCAPPayment>"Single annual
payment"</descriptionCAPPayment>

        </CapPayment>

        <Instruments>

            <Subsidy>

                <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_1"</idInstrument>

                <nameInstrument>"Support for the preservation of organic
farming methods - Olive"</nameInstrument>

                <Ranges>

                    <Range>

                        <Amount> 505 </Amount>

                        <Unit> € per cultivated Ha </Unit>

                        <Range_Limits> </Range_Limits>

                    </Range>

                </Ranges>

            </Subsidy>

            <Subsidy>

                <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_2"</idInstrument>

                <nameInstrument>"Support for the preservation of organic
farming methods - Raisin"</nameInstrument>

                <Ranges>

                    <Range>

                        <Amount> 636 </Amount>
    
```

```

        <Unit> € per cultivated Ha </Unit>

        <Range_Limits> </Range_Limits>

    </Range>

</Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_3"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Pome fruits"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 532 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_4"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Stone fruits"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 941 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>
    
```

```

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_5"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
farming methods - Table grapes"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 1440 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

            </Range>

        </Ranges>

    </Subsidy>

<Subsidy>

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_6"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
farming methods - Citrus fruit"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 334 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

            </Range>

        </Ranges>

    </Subsidy>

<Subsidy>

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_7"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
farming methods - Wine grapes"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 657 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

```



```

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_8"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Pomegranates"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 1120 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_9"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Kiwi"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 870 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_10"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Fig"</nameInstrument>

```

```

        <Ranges>
            <Range>
                <Amount> 1015 </Amount>
                <Unit> € per cultivated Ha </Unit>
                <Range_Limits> </Range_Limits>
            </Range>
        </Ranges>
    </Subsidy>
    <Subsidy>
        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_11"</idInstrument>
        <nameInstrument>"Support for the preservation of organic
farming methods - Small fruited/Forest"</nameInstrument>
        <Ranges>
            <Range>
                <Amount> 940 </Amount>
                <Unit> € per cultivated Ha </Unit>
                <Range_Limits> </Range_Limits>
            </Range>
        </Ranges>
    </Subsidy>
    <Subsidy>
        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_12"</idInstrument>
        <nameInstrument>"Support for the preservation of organic
farming methods - Avocado"</nameInstrument>
        <Ranges>
            <Range>
                <Amount> 1050 </Amount>
                <Unit> € per cultivated Ha </Unit>
                <Range_Limits> </Range_Limits>
            </Range>
        </Ranges>
    </Subsidy>

```

```

        </Subsidy>

        <Subsidy>

            <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_13"</idInstrument>

            <nameInstrument>"Support for the preservation of organic
farming methods - Tree nut"</nameInstrument>

            <Ranges>

                <Range>

                    <Amount> 616 </Amount>

                    <Unit> € per cultivated Ha </Unit>

                    <Range_Limits> </Range_Limits>

                </Range>

            </Ranges>

        </Subsidy>

        <Subsidy>

            <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_14"</idInstrument>

            <nameInstrument>"Support for the preservation of organic
farming methods - Prickly pear"</nameInstrument>

            <Ranges>

                <Range>

                    <Amount> 1266 </Amount>

                    <Unit> € per cultivated Ha </Unit>

                    <Range_Limits> </Range_Limits>

                </Range>

            </Ranges>

        </Subsidy>

        <Subsidy>

            <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_15"</idInstrument>

            <nameInstrument>"Support for the preservation of organic
farming methods - Maize edible"</nameInstrument>

            <Ranges>

                <Range>

```

```

        <Amount> 544 </Amount>

        <Unit> € per cultivated Ha </Unit>

        <Range_Limits> </Range_Limits>

    </Range>

</Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_16"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Fodder maize"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 644 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_17"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Lucerne, Clover"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 574 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>
    
```

```

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_18"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
farming methods - Winter cereals"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 120 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

            </Range>

        </Ranges>

    </Subsidy>

    <Subsidy>

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_19"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
farming methods - Cotton"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 516 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

            </Range>

        </Ranges>

    </Subsidy>

    <Subsidy>

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_20"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
farming methods - Tobacco"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 660 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

```

```

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_21"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Rice"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 446 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_22"</idInstrument>

    <nameInstrument>"Support for the preservation of organic
farming methods - Other Arable crops (flax, oilseed rape, sunflower, quinoa,
camellia, chia"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 493 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_23"</idInstrument>

```

```

        <nameInstrument>"Support for the preservation of organic
        farming methods - Aromatic herbs"</nameInstrument>
    
```

```

        <Ranges>
    
```

```

            <Range>
    
```

```

                <Amount> 1295 </Amount>
    
```

```

                <Unit> € per cultivated Ha </Unit>
    
```

```

                <Range_Limits> </Range_Limits>
    
```

```

            </Range>
    
```

```

        </Ranges>
    
```

```

    </Subsidy>
    
```

```

    <Subsidy>
    
```

```

        <idInstrument>"22023EL06AFSP001_Π1-
        31.8_I1_24"</idInstrument>
    
```

```

        <nameInstrument>"Support for the preservation of organic
        farming methods - grain legumes"</nameInstrument>
    
```

```

        <Ranges>
    
```

```

            <Range>
    
```

```

                <Amount> 491 </Amount>
    
```

```

                <Unit> € per cultivated Ha </Unit>
    
```

```

                <Range_Limits> </Range_Limits>
    
```

```

            </Range>
    
```

```

        </Ranges>
    
```

```

    </Subsidy>
    
```

```

    <Subsidy>
    
```

```

        <idInstrument>"22023EL06AFSP001_Π1-
        31.8_I1_25"</idInstrument>
    
```

```

        <nameInstrument>"Support for the preservation of organic
        farming methods - Fodder legumes"</nameInstrument>
    
```

```

        <Ranges>
    
```

```

            <Range>
    
```

```

                <Amount> 491 </Amount>
    
```

```

                <Unit> € per cultivated Ha </Unit>
    
```

```

                <Range_Limits> </Range_Limits>
    
```

```

            </Range>
    
```

```

        </Ranges>

    </Subsidy>

    <Subsidy>

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_26"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
farming methods - Leafy vegetables-
cruciferous/bulb/carrot/potato/cucurbits"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 635 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

            </Range>

        </Ranges>

    </Subsidy>

    <Subsidy>

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I1_27"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
farming methods - tomato/aubergine/pepper"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 1140 </Amount>

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

            </Range>

        </Ranges>

    </Subsidy>

    <Subsidy>

        <idInstrument>"22023EL06AFSP001_Π1-
31.8_I2_1"</idInstrument>

        <nameInstrument>"Support for the preservation of organic
methods in animal husbandry - sheep/goats (ovine/caprine)"</nameInstrument>

        <Ranges>

```



```

        <Range>

            <Amount> 247 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-31.8_I2_2"</idInstrument>

    <nameInstrument>"Support for the preservation of organic methods in animal husbandry - Beef cattle/mixed cattle"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 280 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>

</Subsidy>

<Subsidy>

    <idInstrument>"22023EL06AFSP001_Π1-31.8_I2_3"</idInstrument>

    <nameInstrument>"Support for the preservation of organic methods in animal husbandry - Dairy cattle"</nameInstrument>

    <Ranges>

        <Range>

            <Amount> 347 </Amount>

            <Unit> € per cultivated Ha </Unit>

            <Range_Limits> </Range_Limits>

        </Range>

    </Ranges>
    
```

```

</Instruments>

<Requirements>

    <FarmOwnerRequirement>

        <idAssociatedMeasure>"22023EL06AFSP001_Π1-
31.8"</idAssociatedMeasure>

        <idRequirement>"</idRequirement>

        <DescriptionOfRequirement>

            <ageRange> </ageRange>

            <gender> </gender>

            <familySituation> </familySituation>

            <studyLevel> </studyLevel>

            <laborSituation>"</laborSituation>

            <minimumCropIncome></minimumCropIncome>

            <registredIn>"</registredIn>

            <registredIn>"</registredIn>

        </DescriptionOfRequirement>

    </FarmOwnerRequirement>

    <FarmHoldingRequirement>

        <idAssociatedMeasure>"22023EL06AFSP001_Π1-
31.8"</idAssociatedMeasure>

        <idRequirement>"22023EL06AFSP001_Π1-
31.8_R1"</idRequirement>

        <DescriptionOfRequirement>

            The intervention consists in strengthening the
            continuation of the application of organic farming methods and animal
            husbandry. Producers must have plots of land and/or pasture and/or farms, which
            are included in the organic farming system according to Regulation (EC) no.
            834/2007 of the Council, of June 28, 2007, "on organic production and labeling
            of organic products and the repeal of Regulation (EEC) no. 2092/91", which
            inclusion is documented by a contract with a Control and Certification
            Organization. Additionally producers must have a certificate of conformity from
            the Organization with which they are contracted

        </DescriptionOfRequirement>

    </FarmOwnerRequirement>

</Requirements>
    
```

```

<Commitments>

  <Commitment>

    <idCommitment>""</idCommitment>

    <idAssociatedMeasure>""</idAssociatedMeasure>

    <descriptionOfCommitment>""</descriptionOfCommitment>

    <subjectOfCommitment></subjectOfCommitment>

    <startPeriodOfValidity>""</startPeriodOfValidity>

    <endPeriodOfValidity>""</endPeriodOfValidity>

    <descriptionOfVerification> </descriptionOfVerification>
    <!--Description of proofs and tests to be demonstrated-->

    <Verifier>

      <idVerifier></idVerifier> <!--Ideally the license
number of the Verifier Organisation-->

      <nameVerifier>""</nameVerifier>

    </Verifier>

  </Commitment>

</Commitments>

<Budget>

  <idBudget>"Budget_22023EL06AFSP001_Π1-31.8"</idBudget>

  <amountBudget>605.910.400,00</amountBudget>

  <currency>EUR</currency>

  <Funding>

    <idFunding>""</idFunding> <!--Ideally the code of the item
allocated in the Regional State Budget-->

    <sourceOfFunding>"EU"</sourceOfFunding>

    <funder>"EU"</funder>

  </Funding>

</Budget>

<Incompatibilities>

  <Incompatibility>

    <idIncompatibility>""</idIncompatibility>
    
```

```

<descriptionOfIncompatibility>"</descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

        <idIncompatibility>"</idIncompatibility>

<descriptionOfIncompatibility>"I"</descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

        <idIncompatibility>"</idIncompatibility>

<descriptionOfIncompatibility>"</descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

        <idIncompatibility>"</idIncompatibility>

<descriptionOfIncompatibility>"</descriptionOfIncompatibility>

    </Incompatibility>

</Incompatibilities>

</Measure>

</Measures>

</PublicPolicy>
    
```

## Polish Eco-schemes I.4.14

### I.4.14 Eco-scheme - Biological protection of crops

The planned intervention consists in supporting the production of plants from the use of biological methods of protection, which will contribute to the reduction of use chemical plant protection products and will have a positive effect on the balance biological. It is planned that approximately 5,000 people will be supported each year. ha.

After the analysis of the Polish I.4.14 Eco-scheme measure [24], the necessary values were extracted and fitted in the proper XML tags. Following is the resulted XML text.

```

<?xml version="1.0" encoding="UTF-8" ?>

<PublicPolicy="APDR" namePolicy="Strategic plan for the Common Agricultural
Policy for the years 2023-2027" idPolicy="">

    <idUpperPolicy>""</idUpperPolicy> <!--Transposed from the UE Reglament
1305/2013-->

    <geoPoliticalScope==" NUTS0=""></geoPoliticalScope>

    <policyMaker = "" policyMakerNativeName = ""></policyMaker>

    <policyImplementator = "" policyImplementatorNativeName =
""></policyImplementator>

    <dateOfApproval>""</dateOfApproval>
    <dateOfEffect>"2023-2027"</dateOfEffect>

    <publicationDocument> Strategic plan for the Common Agricultural Policy for
the years 2023-2027 </publicationDocument>

    <startAmendmentPeriod></startAmendmentPeriod>

    <endAmendmentPeriod></endAmendmentPeriod>
    <amendments>""</amendments>

    <Budget>

        <idBudget>""</idBudget>

        <amountBudget></amountBudget>
        <currency>EUR</currency>

        <Funding>
            <idFunding>""</idFunding> <!--Ideally the code of the item
allocated in the Regional State Budget-->

            <sourceOfFunding>""</sourceOfFunding>
            <funder>"EU"</funder>

        </Funding>

    </Budget>

    <Evaluator="EU" nameEvaluator="EU" idEvaluator=""></Evaluator>

    <ImpactAssessment>

        <idImpactAssessment>""</idImpactAssessment>

        <descriptionOfAssessment> </descriptionOfAssessment>

        <KPIs>

            <KPI="R.4 Support dependency income from the application of
standards and good practices (The percentage of used agricultural area eligible
for income support, and subject to conditionality)">

                <idKPI> </idKPI>

                <objectiveKPI> 97,66 % </objectiveKPI>

                <targetKPI> </targetKPI>
    
```

```

        <scopeKPI> </scopeKPI>

    </KPI>

    <KPI="R.6 Redistribution to smaller farms (Percentage of additional
    payments direct per hectare for eligible farms agricultural smaller than
    medium-sized farms (in compared to the average))">

        <idKPI> </idKPI>

        <objectiveKPI> 100,73 % </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

    <KPI="R.7 Enhancing support for farms in areas with specific needs
    (The percentage of additional support on hectare in areas with larger needs
    (compared to average))">

        <idKPI> </idKPI>

        <objectiveKPI> 104,01 % </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

    <KPI="R.24 Sustainable and restricted use pesticides Share of
    Utilised Agricultural Area (UAA) under supported specific commitments which
    lead to a sustainable use of pesticides in order to reduce risks and impacts of
    pesticides, such as pesticides leakage">

        <idKPI> </idKPI>

        <objectiveKPI> 10,52 % </objectiveKPI>

        <targetKPI> </targetKPI>

        <scopeKPI> </scopeKPI>

    </KPI>

</KPIs>

</ImpactAssessment>

<Measures>
    <Measure="" nameMeasure="Eco-scheme (31) - Systems for the climate and
    environment" idMeasure="">

        <idLinkedPublicPolicy>""</idLinkedPublicPolicy>

        <descriptionOfMeasure> </descriptionOfMeasure>

        <dateOfApproval>""</dateOfApproval>

        <geoPoliticalScope="" NUTS0=""></geoPoliticalScope>

        <temporalScope>"2023;2024;2025;2026;2027"</temporalScope>
    
```

```

<dateFirstCall></dateFirstCall>

<periodicityOfCalls>""</periodicityOfCalls>

<CapPayment>

    <idCAPPayment>""</idCAPPayment>

    <descriptionCAPPayment>""</descriptionCAPPayment>

</CapPayment>

<Instruments>

    <Subsidy>

        <idInstrument>""</idInstrument>

        <nameInstrument>"I.4.14 Eco-scheme - Biological protection
of crops"</nameInstrument>

        <Ranges>

            <Range>

                <Amount> 89,98 </Amount> <!-- Amount: 89,98
€ (planned) 98,88 (maximum) -->

                <Unit> € per cultivated Ha </Unit>

                <Range_Limits> </Range_Limits>

            </Range>

        </Ranges>

    </Subsidy>

</Instruments>

<Requirements>

    <FarmOwnerRequirement>

        <idAssociatedMeasure>""</idAssociatedMeasure>

        <idRequirement>""</idRequirement>

        <DescriptionOfRequirement>

            <ageRange> </ageRange>

            <gender> </gender>
    
```



```

        <familySituation> </familySituation>

        <studyLevel> </studyLevel>

        <laborSituation>""</laborSituation>

        <minimumCropIncome></minimumCropIncome>

        <registredIn>""</registredIn>

        <registredIn>""</registredIn>

    </DescriptionOfRequirement>

</FarmOwnerRequirement>

<FarmHoldingRequirement>

    <idAssociatedMeasure>""</idAssociatedMeasure>

    <idRequirement>""</idRequirement>

    <DescriptionOfRequirement>

    </DescriptionOfRequirement>

</FarmOwnerRequirement>

</Requirements>

<Commitments>

    <Commitment>

        <idCommitment>""</idCommitment>

        <idAssociatedMeasure>""</idAssociatedMeasure>

        <descriptionOfCommitment>"Application of plant protection
treatment with the use of biological plant protection at using microbiological
preparations in accordance with the label. /The intervention consists in
applying a treatment with the use of a specific crop biological plant
protection using microbiological preparations (i.e. containing fungi, bacteria,
viruses). The support will cover those crops for which plant protection
products have been registered based on microorganisms. The use of these agents
must comply with their labeling."</descriptionOfCommitment>

        <subjectOfCommitment></subjectOfCommitment>

        <startPeriodOfValidity>""</startPeriodOfValidity>

        <endPeriodOfValidity>""</endPeriodOfValidity>

        <descriptionOfVerification> </descriptionOfVerification>
<!--Description of proofs and tests to be demonstrated-->

        <Verificator>

            <idVerificator></idVerificator> <!--Ideally the license
number of the Verificator Organisation-->
    
```

```

        <nameVerifier>""</nameVerifier>

    </Verifier>

</Commitment>

</Commitments>

<Budget>

    <idBudget>""</idBudget>

    <amountBudget>2.197.550,00 </amountBudget>

    <currency>EUR</currency>

    <Funding>

        <idFunding>""</idFunding> <!--Ideally the code of the item
allocated in the Regional State Budget-->

        <sourceOfFunding>"EU"</sourceOfFunding>

        <funder>"EU"</funder>

    </Funding>

</Budget>

<Incompatibilities>

    <Incompatibility>

        <idIncompatibility>""</idIncompatibility>

        <descriptionOfIncompatibility>""</descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

        <idIncompatibility>""</idIncompatibility>

        <descriptionOfIncompatibility>"I"</descriptionOfIncompatibility>

    </Incompatibility>

    <Incompatibility>

        <idIncompatibility>""</idIncompatibility>

        <descriptionOfIncompatibility>""</descriptionOfIncompatibility>

    </Incompatibility>
    
```

```
<Incompatibility>
  <idIncompatibility>"</idIncompatibility>
<descriptionOfIncompatibility>"</descriptionOfIncompatibility>
</Incompatibility>
</Incompatibilities>

</Measure>

</Measures>
</PublicPolicy>
```