



# DEVELOPMENT OF A FRAMEWORK TO DEFINE CROP SPECIFIC RULES THAT SUPPORT IPM PRACTICES WITHIN EU CROP PRODUCTION

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## Compilation and Documentation of Existing Policy Instruments

Report for: Teagasc

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# 1. INTRODUCTION

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## 1.1 AGROWISE PROJECT

The Agrowise project is a part of the EU "LIFE Program" and aims at developing guidelines for farm-specific rules or crop-specific guidelines for mitigating pesticide impacts while ensuring sustainable agriculture. Developed by a consortium of 10 research organisations from 8 EU countries, this project will contribute to achieve the EU Farm to Fork strategy objectives of a 50% reduction in chemical pesticide use by 2030.

This project contains two strategic pillars related to enhanced Integrated Pest Management (IPM) implementation: information on plant protection practices and information on policy instruments and their efficiency.

The Work Package (WP4) aims at defining the criteria to support the delivery of tangible guidelines for the Member States to define crop-specific rules. This will be achieved by first compiling and characterising the policy instruments related to pest management and pesticide reduction from the 8 EU partners countries (Task 1), then analysing the strengths and weaknesses associated with each type of instrument (Task 2) to identify specific types of rules and formalise them into guidelines (Task 3).

## 1.2 AIM OF THIS REPORT

Task 1 of WP4 consists of the compilation and categorisation of policy instruments related to pest management and pesticide reduction in EU. These policy instruments have been compiled in a MS Excel Database. This report details the structure and content of the database.

# 2. METHODOLOGY

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## 2.1 DATABASE SETTING

### 2.1.1 Functioning of the database

The database compiles relevant existing policy instruments related to pest management and pesticide reduction within partner countries of Agrowise. The database has been designed to meet the following three requirements:

- Right level of information: The data fields have been selected to gather enough information to understand the scope of the policy instrument, its main mechanism and how it contributes to IPM or pesticide reduction. The information on each mechanism was kept brief on purpose, to allow the user to have an overview of the different instruments per type or per country. A more in-depth analysis will be performed during Task 2, which will analyse the strengths and weaknesses associated with each type of instrument.
- Compatibility with the other deliverables: This database was designed to allow for an operational link with the deliverable of the Work Package 2 (WP2), the taxonomy with harmonised nomenclature on IPM practices. This link has been made by integrating the 8 IPM principles as defined in Directive 128/2009/EC in both databases.
- User friendliness: the spreadsheet editor Excel has been preferred to compile the information. The labels chosen to describe the instruments have been clearly defined for all data fields, drop-down menus and data validation ensured accurate data entry and a clean interface to make navigation easy, even for those with limited Excel experience. Currently the database is intended for internal use by the project team and as an input to Task 2. Further refinements to improve the user friendliness can be made following review and comment by Agrowise project partners.



## 2.1.2 Structure of the database

### 2.1.2.1 Categorisation of the instruments

The database consists of two tabs. An “introduction” tab, which provides information to the user on the Agrowise project, the purpose of the database and the definition of the terms used in the “database” tab. The “database” tab is the inventory of the policy instruments related to PM, pest management and pesticide reduction. The following data fields have been chosen and are explained below.

- Scope: the country of origin and the geographic scope (national, regional other) are specified. The information as to whether or not the policy instrument is linked to an EU policy is also captured.
- Description of the instrument: The policy instruments are classified according to the categorisation in Table 1.

Main policy instrument	Details
National action plan (NAP)	Policy instrument included in the countries’ National Action Plan according to Directive 2009/128/CE.
CAP instrument - enhanced conditionality	Policy instruments included in the set of basic rules farmers must respect to receive EU income support under the Common Agricultural Policy (CAP) Member States must implement relevant GAECs – Good Agricultural and Environmental Condition.
CAP instrument - Eco schemes	Eco-schemes are CAP intervention types (Direct Payment – Decoupled) which support farmers who voluntarily adopt or maintain farming practices that contribute to EU environmental and climate goals (as defined by Article 31 Regulation (EU) 2021/2115).
CAP instrument - AECM	Agri-environment-climate measures are CAP intervention types (for ‘Rural Development’) incentivize farmers to adopt sustainable agricultural practices that protect the environment, enhance biodiversity, and mitigate climate change impacts (as defined by Article 70 Regulation (EU) 2021/2115).
CAP instrument - sectoral	‘Sectoral’ interventions aim to strengthen farmers’ resilience and competitiveness via producer organisations and associations of producer organisations. (various articles for fruit and vegetables, wine, apiculture, hops, olive oil and table olives and ‘other’ sectors.)
CAP instrument - risk management tool	CAP risk management tools are intervention types (for ‘Rural Development’) that support farmers in managing income instability and production risks such as plant diseases, through instruments like insurance schemes, mutual funds, and income stabilization tools(as defined by Article 76 Regulation (EU) 2021/2115)
CAP instrument – coupled income support	CAP coupled income support are payments tied to the production of specific crops to support farmers (as defined by subsection 1 Regulation (EU) 2021/2115).
Other European instrument	Policy instrument related to European instrument other than the NAP or the CAP.
National instrument	National law, rule, or initiative from the public sector
Regional instrument	Regional law, rule, or initiative from the public sector
National non-public schemes	Private labels or certifications or other initiatives run primarily by actors outside the public-sector (only included where there is tangible interaction with public policy e.g. the certification is required or accepted as an eligibility criteria for public funded subsidy).
Supportive action	Policy instrument from public or non-public actors which is generally supportive but the specific instrument is unclear.

Table 1: policy instruments main categories

The policy instruments are described (name in English, name in local language and description). They are then classified according to 4 categories: regulatory, economic, informative<sup>1</sup> or related to research. The instruments are further classified according to sub-categories, as detailed in Table 2.

Category	Type	Details
Regulatory	Financial penalty	Financial charge resulting from failure to comply with the law, rule, or initiative
	Prescription	Requirement to implement a specific practice, method or action
	Bans	Constraining use
	Zoning	Constraining or promoting use on a specific area
Economic	Subsidies	Financial incentive or compensation
	Taxes	Financial charge, levy
	Other economic instrument	Other type of financial incentive or disincentive
Informative	Certification	Process to gain a certificate of compliance with requirements of a specification or standard
	Direct advisory services	Direct information and advice on practices, usually aimed at farmers
	Information campaign	Wider communication of information
	Guidelines	Best management practices
	Knowledge transfer	Sharing of knowledge and practices, including from scientific research into practical application.
	Other	Other type of information sharing
Research	Funding	Funds provided for a research purpose
	Monitoring	Activity of regular surveillance

Table 2: Policy instruments categories and types

For each policy instrument, the following are also specified:

- Binding or optional nature
- Direct (Mechanism's aim is directly targeting at least 1 IPM principle) or indirect action (Mechanism with another direct aim, but with side effect on at least 1 IPM principle).
- Actors involved: information on the main actor targeted by the instrument policy (farmer, technical advisor, consumer, plant protection product retailer, plant protection product registration holder, agrifood business, other) and the leading actor responsible for the implementation of the policy instrument (farmer, national government, private companies, NGOs, industry body, other) are included in the dataset.
- Crop targeted: this data field specifies if the policy instrument targets all type of crops, arable crops (cereals or non-cereals), horticulture crops (fruit and nut trees, fruit or vegetables) or permanent crops (viticulture or grasslands).
- IPM principles: This data field indicates the IPM principles the policy instrument refers to, as defined in the Directive 128/2009/EC<sup>2</sup>. It could be one, several, or all of them ("General IPM"). A column also indicates whether the instrument is considered "counterproductive" regarding the implementation of IPM principles or not, for example a tax reduction for PPPs which may have the effect of increasing PPP use
- Timeframe: The year of implementation of the policy instrument has been reported when the information was available. The year the policy instrument was or will be ended is also reported when relevant. The timeframe necessary to implement the instrument is also indicated, according to the following criteria:
  - Short: immediate implementation (>1 year)

<sup>1</sup> Lee, Rhiannon & Den Uyl, Roos M. & Runhaar, Hens. (2019). Assessment of policy instruments for pesticide use reduction in Europe; Learning from a systematic literature review. Crop Protection. 126. 104929. 10.1016/j.cropro.2019.104929

<sup>2</sup> [Integrated Pest Management \(IPM\) - European Commission \(europa.eu\)](https://ec.europa.eu/eip/agriculture/)

- Medium: mid-term implementation (1-2 years)
- Long: long implementation (< 3 years)
- Other information: These fields contain other relevant information, such as information on any interactions with other policy instruments or voluntary measures, URL link to get more information and additional comments if any.

It is likely that this database will be complemented with additional data fields and some small refinement made to the categories while carrying out Task 2, the analysis of the policy instruments' strengths and weaknesses.

### 2.1.2.2 Information gathering process

- Desk-based research

The policy instruments from the 8 Agrowise partners countries (Croatia, France, Germany, Ireland, Italy, Poland, Romania, Sweden) have been collected from the following national and EU sources:

- National Action Plans (NAP)<sup>3</sup> and some NAP implementation reports<sup>4567</sup>
- The EU Catalogue of CAP interventions<sup>8</sup>. The interventions compiled in the database are the ones targeting the result based indicator 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), R.29 (Share of utilised agricultural area (UAA) supported by the CAP for organic farming, with a split between maintenance and conversion) and R.5 (Share of farms with supported CAP risk management tools).
- The Farmers' Toolbox for Integrated Pest Management report<sup>9</sup>, which provides background knowledge on IPM practices uptake and lists several IPM policy instruments in EU countries.
- Additional search has been performed with a Rapid Evidence Assessment (REA). A search strategy with search strings and exclusion criteria has been defined to identify existing public policy instruments in the 8 partners countries.
- Interviews: Interviews were held with EU representatives and some national experts to consolidate the public policy instruments compiled in the database. Some national representatives in the Agrowise project also provided some written input such as examples of instruments in their country. More interviews will be conducted during Task 2, which will provide further consolidation to the Excel database.

## 3. OUTPUTS

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### 3.1 DATABASE

#### 3.1.1 Presentation

286 existing policy instruments have been identified in the 8 Agrowise partner countries (excluding instruments labelled as "supportive action"). 43% of the instruments are binding, and 57% are optional. The vast majority of the instruments (79%) are targeting farmers, and most (86%) of the instruments' implementation are led by national authorities.

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<sup>3</sup> [National Action Plans - European Commission \(europa.eu\)](https://ec.europa.eu/eip/agriculture/national-action-plans)

<sup>4</sup> [German NAP implementation report, 2021](#)

<sup>5</sup> "Završni izvještaj o provedbi nacionalnog akcijskog plana za postizanje održive uporabe pesticida, za razdoblje 2013.-2019", 2021, republika Hrvatska ministarstvo poljoprivrede

<sup>6</sup> [Polish NAP implementation report 2018-2022](#)

<sup>7</sup> [Swedish NAP implementation report 2019-2022](#)

<sup>8</sup> [Catalogue of CAP interventions \(europa.eu\)](https://ec.europa.eu/eip/agriculture/cap-interventions)

<sup>9</sup> [Farmer's toolbox for integrated pest management - Publications Office of the EU \(europa.eu\)](https://ec.europa.eu/eip/agriculture/farmers-toolbox)

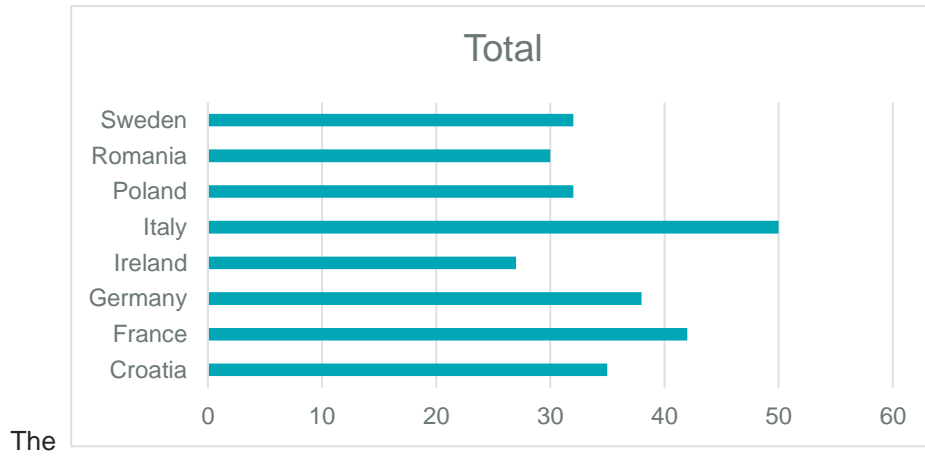


Figure 1: Number of instruments per country

below shows the number of policy instruments per country, and the Figure 2 provides an overview of the number of policy instruments per category. More details on the instrument types per country is available in Appendix 1.

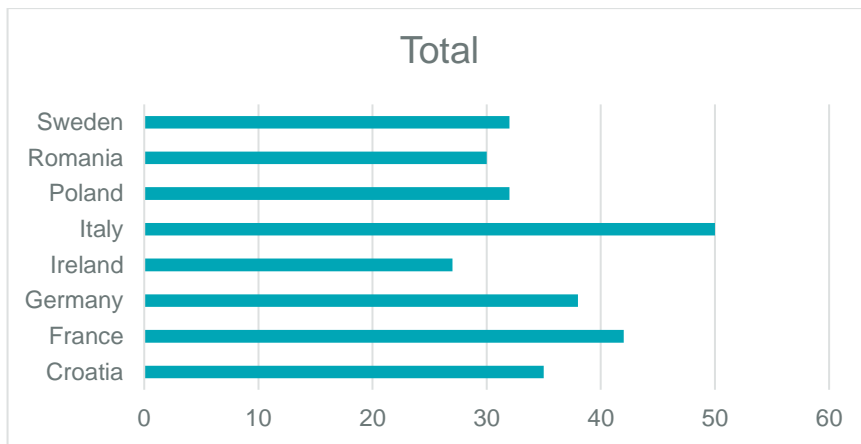




Figure 1: Number of instruments per country

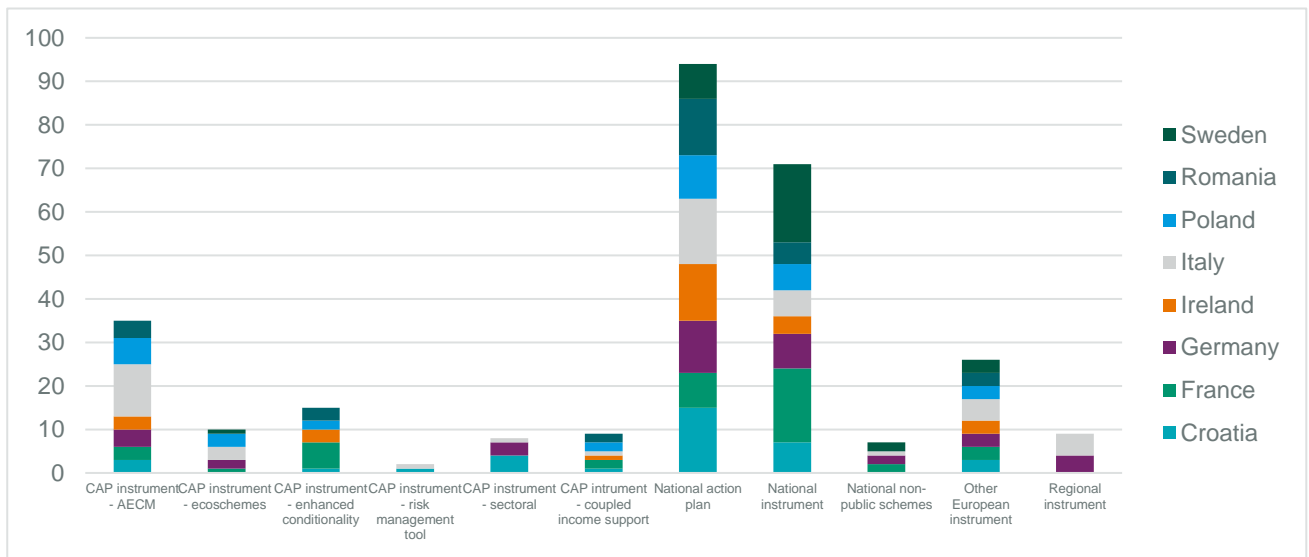


Figure 2: Number of instruments per category and per country

### 3.1.2 Limitations

The aim of this database is to provide the best possible representation of the diversity of public policy instruments used in different countries, but it may not be an exhaustive compilation, and the granularity of this database does not allow all regional or local specificities to be taken into account – these are included where information was available, but it was often unclear.

There are a few limitations that the reader must bear in mind when using this database:

- Focus on existing public policies: this database primarily focuses on public policy instruments as specified in the terms of reference for the project. Some national private and/or voluntary schemes are listed where they interact significantly with public policy instruments but are otherwise excluded from scope. In 2010, a study identified 427 certified schemes existing, of which 56 voluntary schemes relate to integrated crop and integrated pest management principles<sup>10</sup>.
- This database is focused on the 8 Agrowise partners countries.
- Grouping of policy instruments: The main policy instruments have been listed, and sometimes grouped when similar interventions were targeting the same action with a different regional or crop type scope for example.
- The funding and research projects list is not exhaustive: some fundings targeting IPM projects, or monitoring programmes are listed in the database. We captured the existence of such funding in some countries or in EU at a high level, but this did not perform an extensive review of the national and European IPM research & monitoring landscape.

Interviews will be conducted to assess strengths and weaknesses of these compiled public policy instruments for Task 2 of this WP4, as well as to check for any omissions or improvements. This database should be considered a “living document” and the list of policy instruments will be amended based on the insights gathered during this work.

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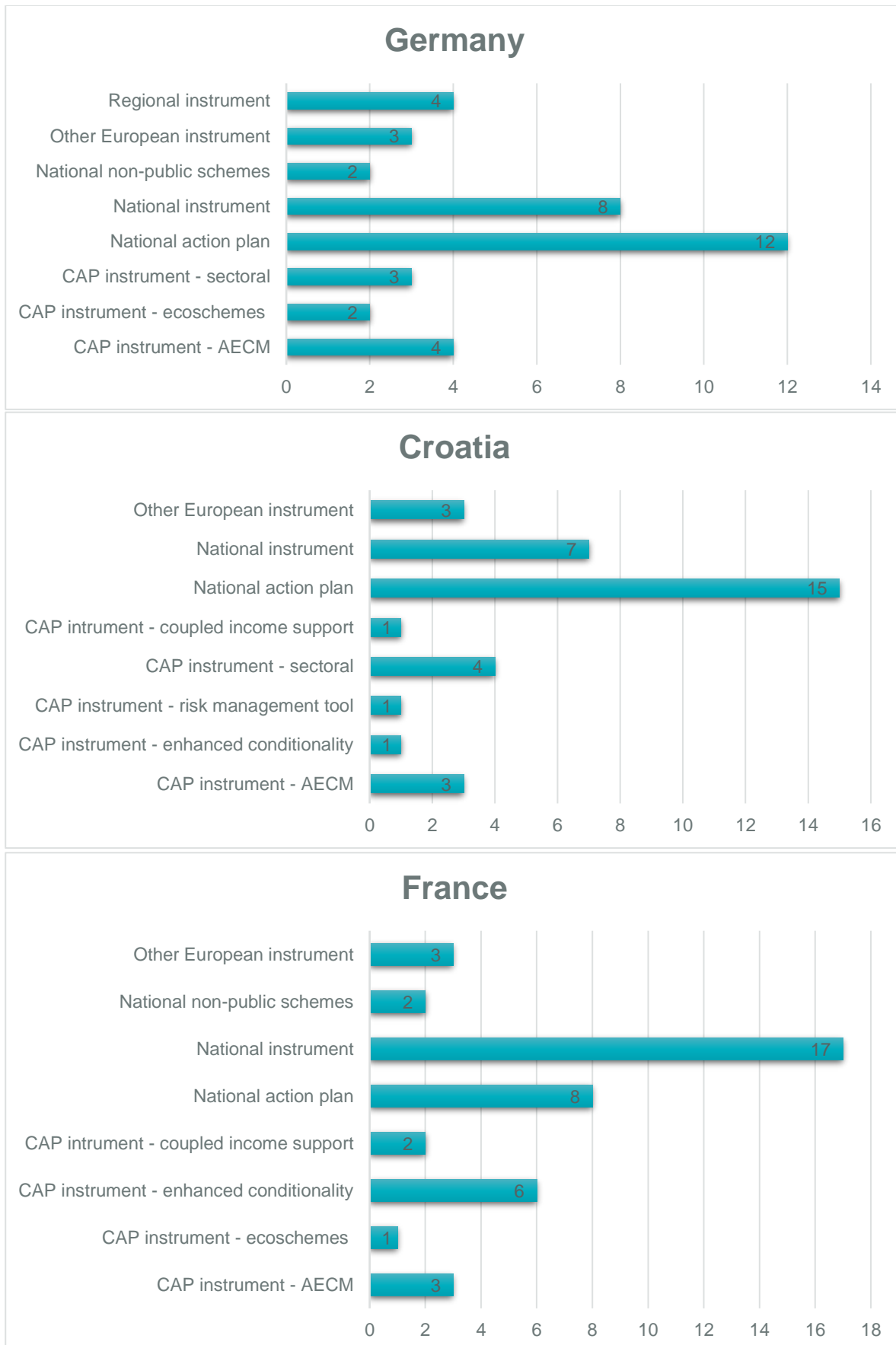
<sup>10</sup> [Inventory of certification schemes for agricultural products and foodstuffs marketed in the EU Member States - Areté - Bologna \(areteagrifood.com\)](http://areteagrifood.com)

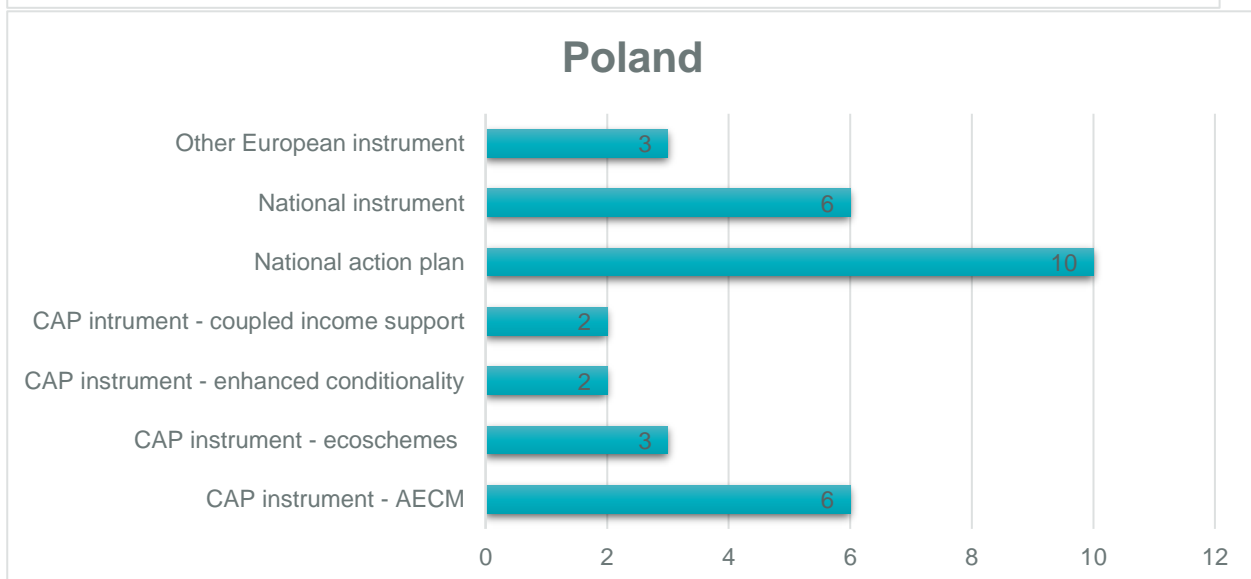
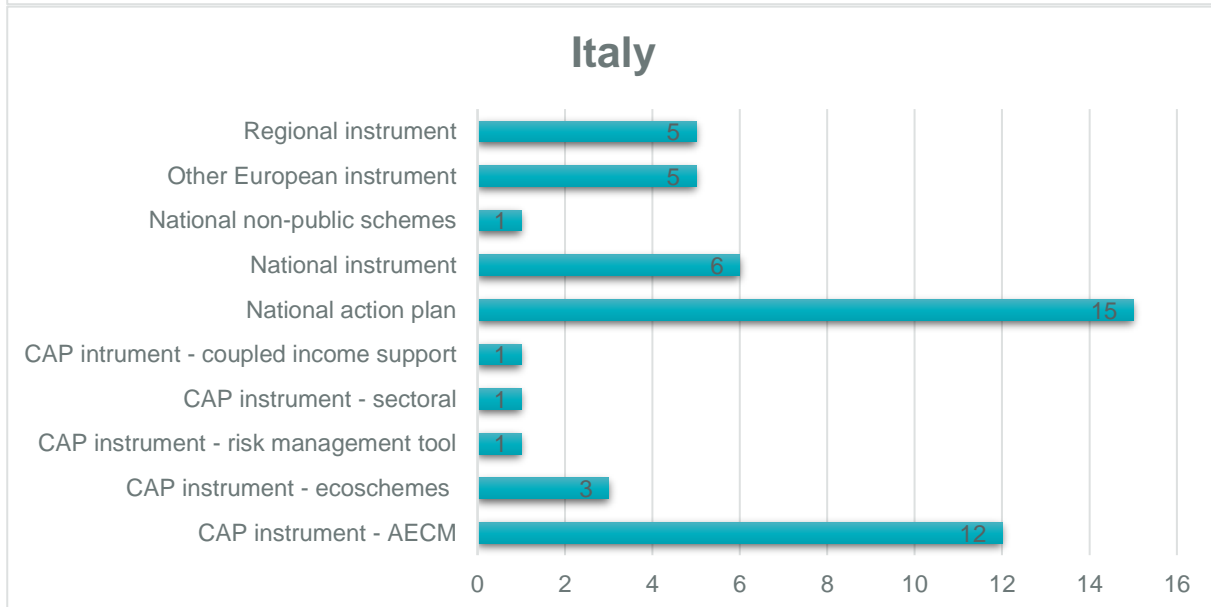
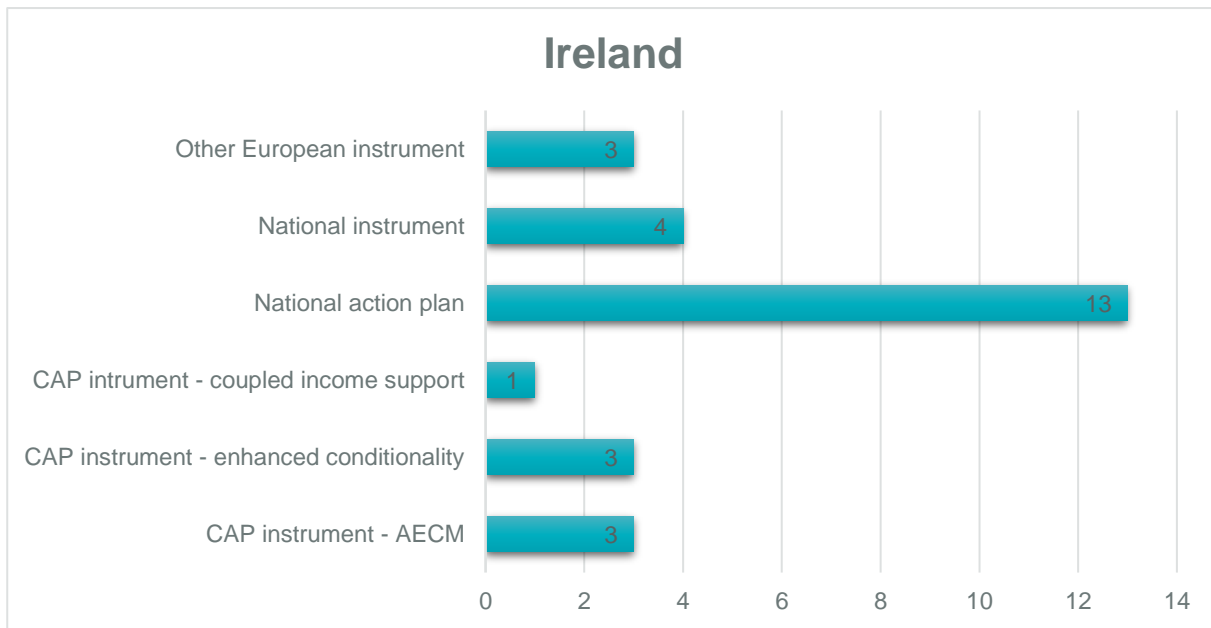
## 4. NEXT STEPS

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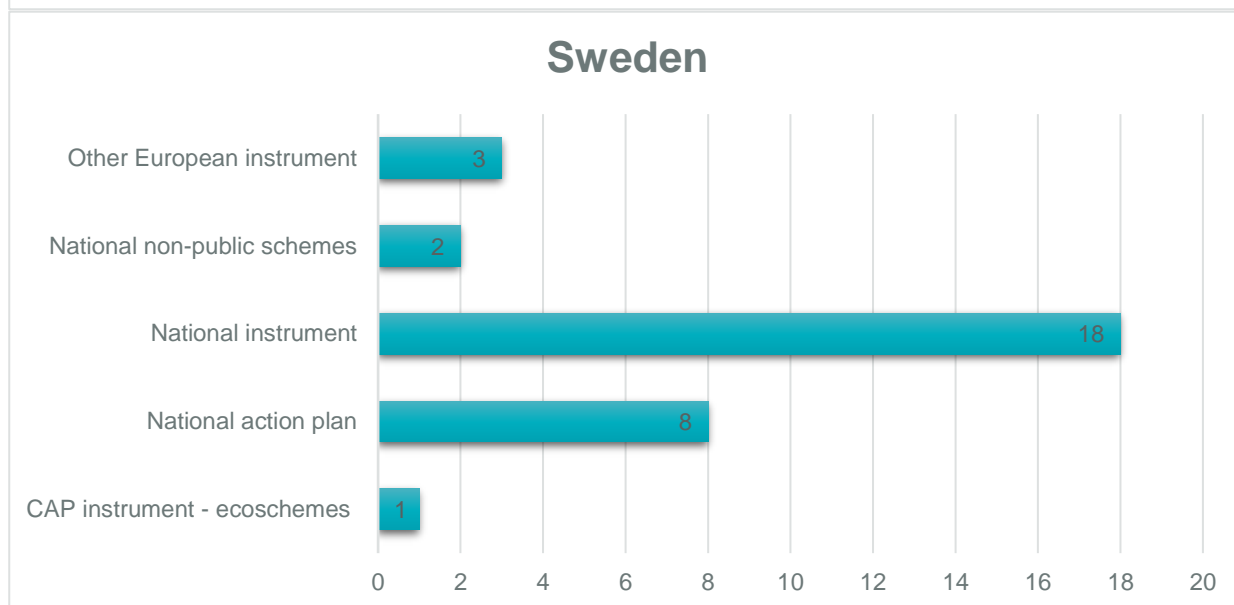
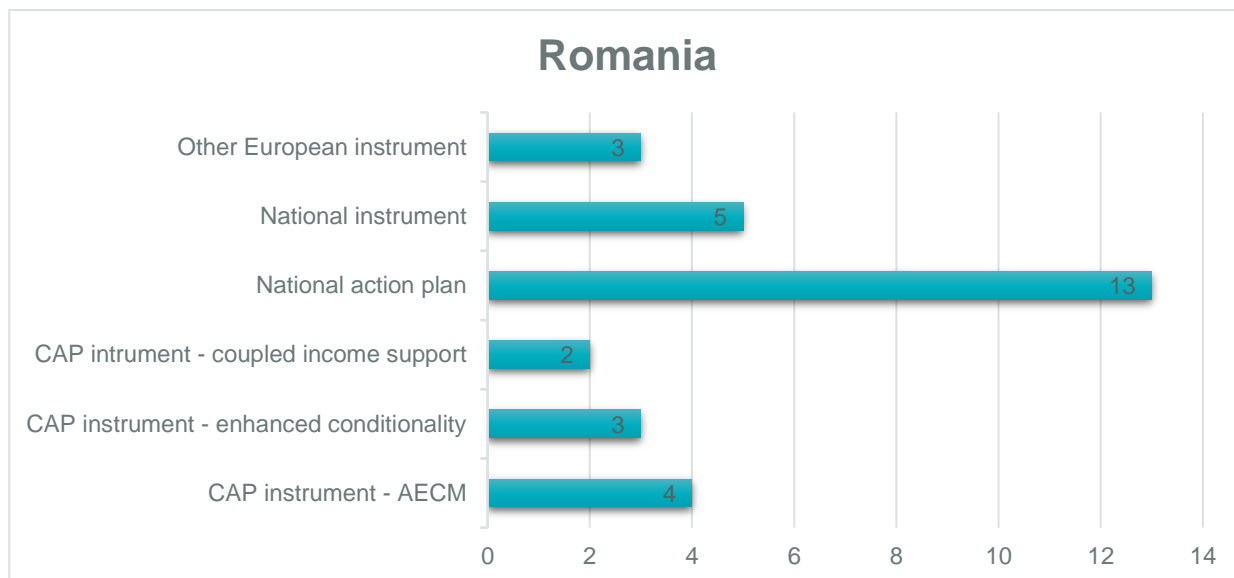
Two tasks remain for the WP4. The task 2 will aim at systematically gather insights into the advantages and disadvantages of the instruments which were catalogued in Task 1, drawing on both expert stakeholder interviews and supplementary literature reviews. Task 3 will aim at developing guidelines to improve the uptake and impact of the policy instruments which were identified, evaluated, and ranked in Tasks 1 and 2.

## 5. APPENDIX 1 – VISUALISATION OF THE MAIN INSTRUMENT TYPES PER COUNTRY











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