

ÉCOPHYTO II



Liberty • Equality • Fraternity
FRENCH REPUBLIC

PLAN

The Government

ÉCOPHYTO II+ PLAN

READING NOTES:

In order to make your reading experience easier, significant changes introduced by the Écophyto II+ plan are in blue.

Some of the other elements of the Écophyto II plan have also been updated to take into account progress achieved with the activities decided upon in October 2015 but without their being called into question or changed fundamentally. Phrases, expressions, abbreviations, dates and statistics have also been updated.

A certain number of obsolete provisions have also been removed. A glossary of acronyms can be found at the end of this document.



FOREWORD

From ÉCOPHYTO II TO ÉCOPHYTO II+

L The *États généraux de l'alimentation* (EGA) held over the second half of 2017, confirmed the objectives and ambitions of the *Écophyto II* plan. The conclusions of workshop 11 in particular stressed the importance of obligations of result through contractual undertakings with stakeholders and called for their deployment to be speeded up, in particular the goal of reaching a figure of 30 000 farms engaged in agro-ecology.

In line with the Government's announcement at the closure of the *États généraux de l'alimentation*, based on the recommendations drawn up in that context, those in the Inra report on alternatives to glyphosate published on 1 December 2017¹ and the report of the three inspectorates (IGAS (Inspectorate General of Social Affairs), CGAAER (General Council on food, agriculture and rural spaces), CGEDD (General Council for the Environment and Sustainable Development)) on the use of plant protection products in France² published on 19 January 2018, the Ministry of Agriculture and Food, the Ministry of Ecological and Inclusive Transition, the Ministry of Solidarity and Health and the Ministry of Higher Education, Research and Innovation launched a stakeholder consultation in the spring of 2018 on a draft government plan of action on plant protection products and agriculture less dependent on pesticides. Based on the contributions received, the Government plan of action on plant protection products and agriculture less dependent on pesticides was published on 25 April 2018.

Furthermore, the Government made the decision to ban the main uses of glyphosate within three years and all uses within five years, whilst stressing that farmers would not be left in the lurch. On the basis of an Inra report of December 2017 on the existing alternatives, the Ministry of Agriculture and Food and the Ministry of Ecological and Inclusive Transition set out the arrangements for ending glyphosate use in France on 22 June 2018, based on a task force run by an inter-ministerial coordinator to coordinate the activities and mobilise all those involved. [A resources centre](#) was created in 2018 to make existing alternatives to glyphosate accessible to the entire agricultural sector.

The *Écophyto II+* plan was drawn up, complementing and adapting the *Écophyto II* plan in order to incorporate measures set out in both the plan of action on plant protection products and agriculture less dependent on pesticides of 25 April and the plan for ending the use of glyphosate announced on 22 June 2018.

The other elements of the *Écophyto II* plan have also been updated to take into account progress achieved with the activities decided upon in October 2015 but without their being called into question or changed fundamentally. Phrases, expressions, abbreviations, dates and statistics have been updated. A certain number of obsolete provisions have also been removed.

¹ <http://institut.inra.fr/Missions/Eclairer-les-decisions/Etudes/Toutes-les-actualites/Usages-etalternatives-au-glyphosate>

² <http://agriculture.gouv.fr/utilisation-des-produits-phytopharmaceutiques-rapport-tome-1-annexestome-2>



SOME KEY FIGURES

France has more utilised agricultural land than any other EU country: 28.72 million hectares, ahead of Spain (23.65 million hectares) and Germany (16.70 million hectares). French soil is used primarily for the production of cereals, sugar beets, oilseeds and potatoes, but is also used for perennial crops (vines and fruit trees in particular). France is the European leader in cereal crops, accounting for 9.5 million hectares and 67.3 million tonnes, of which wheat accounts for 5.3 million hectares and 38.6 million tonnes. Germany dedicates 6.5 million hectares to cereal crops, while Spain dedicates 6.2 million hectares. France is Europe's second largest wine producer, accounting for a third of European production.

French agricultural production is the largest in Europe, at EUR 71 billion (of which EUR 40.4 billion is in the crop sector) and placing France ahead of Germany (EUR 53 billion, of which EUR 25 billion is in the crop sector) and Italy (EUR 50 billion, of which EUR 29 billion is in the crop sector).

The gross value added of the French agricultural sector is thus EUR 25.5 billion, behind Italy (EUR 29.3 billion) and ahead of Spain (EUR 23.3 billion) and Germany (EUR 18.9 billion). Consequently, France's contribution accounts for 15.5 % of the gross agricultural value added of the European Union.

France earns a profit of some EUR 3 billion a year (averaged over the past five years) on its raw agricultural products, mainly plant-based products (cereals, wines and spirits in particular).

France is ranked second in the agro-food industry sector with turnover of EUR 180 billion, behind Germany with EUR 187 billion but ahead of Italy, with EUR 124 billion.

In terms of the quantity of active plant protection substances sold, France is Europe's second-largest seller at 72 035 tonnes, behind Spain (76 940 tonnes) and ahead of Italy (59 963 tonnes). In terms of use, France is ranked ninth in Europe for the number of kilograms of active substances sold per hectare, at 3.7 kg/ha, behind Spain, Italy and Germany.



The Écophyto Plan I, launched in 2008, aimed to reduce the use of plant protection products by 50 % within ten years, if possible. *It falls under the framework of European Directive 2009/128 on the sustainable use of plant protection products, which calls for Member States to apply 'national action plans aimed at setting quantitative objectives, targets, measures, timetables and indicators to reduce risks and impacts of pesticide use on human health and the environment and at encouraging the development and introduction of integrated pest management and of alternative approaches or techniques in order to reduce dependency on the use of pesticides.'*

Between 2009 and 2014, a number of structural actions were implemented as a result of active engagement among the agricultural community and recognised by the plan's various stakeholders. The initial results from the DEPHY network of pilot farms supported the idea that reduced dependence on plant protection products could go hand-in-hand with good economic performance for farms. The 6.6 % of utilised agricultural land and 8.3 % of organic farms at the end of 2017 (these figures continue to rise) serve as both reference and testament to this.³ . At national level, however, the plan has not delivered the desired results, as the use of these products rose slightly (5 %) over the three-year periods 2009-2010-2011 and 2011-2012-2013.

In line with Directive 2009/128, and having identified that the results of the plan had not been satisfactory, a parliamentary mission was delegated to MP Dominique Potier in 2014⁴. She concluded that, although certain conditions necessary for reducing the use of plant protection products (PPPs) were already in place, other necessary conditions were still absent.

On the basis of this, the Écophyto II plan was published on 26 October 2015, confirming the objective of reducing the use of PPPs by half over ten years (by 2025). It reinforced certain fundamental measures in the first Écophyto plan of 2008, while providing for new measures such as the CEPP (low-plant protection product certification scheme) or the 30 000 farms scheme.

The key challenge is now showcasing and deploying the low-use and high-performance techniques and systems that have been tried and tested by a small number of farms to as many people as possible – disseminating these techniques from the pioneers, whether local authorities or individuals, to all stakeholders. Because, even if the initial benefits are being seen on a small scale, the challenge will be to reverse current trends at national level.

In the light of discoveries that have emerged since 2008 as to their effects on human health, particularly the health of users and their families, those living in agricultural areas, the population in general and also on the environment, including biodiversity and the ecosystem services dependent on it, for example pollinators, it remains essential that the use, risks and impacts of plant protection products be reduced.

Furthermore, if the future competitiveness of our agricultural sector is to be assured, it will be necessary to break away from our dependence on plant protection products in order to preserve agriculture's productive capacity and limit increases in operating costs, but also because the assessment of these products is becoming ever more rigorous, complex and costly. This objective must be pursued, while limiting differences between countries, which lead to distortion of competition.

Public action must be continued in order to meet the objective of reducing the use of plant protection products and the risks and impacts relating to that use, while continuing to ensure high-quality and high-yield production and good economic and technical performance.

The target of a 50 % reduction in the use of plant protection products in France within ten years has been reaffirmed, with a two-phase timeframe. The first phase aims for a 25 % reduction by 2020 through

³ Source: Agence BIO

⁴ <http://agriculture.gouv.fr/rapport-de-dominique-potier-pesticides-et-agro-ecologie-les-champs-du-possible>

mainstreaming and optimising currently available techniques. Then a reduction of 50% by 2025, based on far-reaching changes to production systems and sectors, supported by medium- and long-term policy determinants and by scientific and technical advances. The transition between these two periods, in five years, will offer an opportunity to review the plan, in accordance with the requirements of Directive 2009/128.

The plan will be monitored at national level through the use of a set of indicators for use intensity (number of unit doses, treatment frequency index), quantity (amount of active substances sold), risk, impact, and changing practices. **The indicators and targets in terms of results will be established by priority and/or by action under the Plan.**

Écophyto II consolidates certain structural actions from the first period of the plan, such as the DEPHY farm and trial network, the Certiphyto individual certification mechanism, information sharing tools, such as crop health bulletins or the EcophytoPIC integrated pest management portal, and user safety measures. It also reinforces the necessary conditions for upscaling the project and disseminating the principles of integrated protection more broadly: Enhanced deployment of the 30 000 farms measure, **deployment and then sustainability of the certification mechanism for low plant protection product use.**

Funds allocated for research and innovation will be enhanced, particularly with regard to the development of innovative solutions that have a lower impact on health and the environment and alternatives to plant protection products and impacts linked to their use, with a focus on economic, environmental, health and social performance.

Écophyto II+ also aims to support local authorities and other public stakeholders, as well as amateur gardeners, in applying the use restrictions prescribed by law.

In terms of governance, the Écophyto II+ plan reinforces the inter-ministerial element of the plan's management and broadens the composition of the strategic orientation and monitoring committee.

Greater emphasis will be placed on courses of action at regional level with a view to promoting the development of collective dynamics and sectors and supporting professional investment in high-performance agricultural equipment. Herbicides will be a territorial action priority. **Regional road maps will be updated in line with Écophyto II+, targeting certain priorities still insufficiently taken into account: alternatives to herbicides and to glyphosate in particular, protection of local populations, territorial dialogue, etc.**

Particular focus will be given to aligning all public policies that, whether directly or indirectly, serve as drivers in fulfilling the objective to reduce the dependence of production systems on plant protection products.

Écophyto II+ is therefore consistent with the following key public policies:

- the Common Agricultural Policy,
- **the national public health policy,**
- the national environmental health plan (PNSE3)
- the occupational health plan (PST3)
 - other plans supporting agro-ecology, in particular:
 - - the Ambition Bio [Organic Ambition] 2022 programme
 - - the seeds and plants for sustainable agriculture plan
 - - the bio-gas energy plan
 - - the plan for the sustainable development of apiculture
 - - the plant proteins plan
 - the Enseigner à produire autrement [Learning to produce differently] plan
- the national food programme
- the national plan for actions to promote wild bees and pollinators
- **the biodiversity plan.**

There will be enhanced exposure monitoring and increased measuring of the impact of plant protection

products, contributing to the implementation of a pharmacovigilance mechanism so as to better target risk-reduction and prevention actions. The funding for implementation of Écophyto II+ has been significantly increased. Following the extension of the assessment basis for the diverse pollution levy (RPD) to include all category 2 active substances categorised as carcinogenic, mutagenic and reprotoxic (CMR2) by decree of 6 October 2014, **the arrangements for calculating the RPD have been reviewed in order to make it more effective and incentivised by targeting the products which are most dangerous to health and environment.**

The first increase meant that the financial envelope for the Plan increased from EUR 41 million to approximately EUR 71 million per year as of 2016. The additional EUR 30 million a year will be used primarily to provide financial support to farmers to enable a significant reduction in the use of plant protection products and the risks and impacts associated with their use. **A second increase will provide another EUR 50 million a year for the funding of organic agriculture.**

The agro-ecology project as a whole will seek to create a leveraging effect, in addition to mobilising tools such as financing available under the rural development programmes (RDPs) or the Fund for Agricultural and Rural Development (CASDAR), as well as other mechanisms for funding research and innovation. It should be noted that, over the period 2008-2018, the funding of research and innovation had a significant leveraging effect, as the EUR 22 million brought by Écophyto led to the mobilisation of EUR 42 million of other sources of funding (in particular CASDAR : EUR 22 million).

To meet the target of a 50 % reduction in the use of plant protection products by 2025, and thereby ensure greater containment of the risks linked to these products, in keeping with the objectives of the European framework as set out under Directive 2009/128/EC of 21 October 2009, and a decrease in the dependence of the agricultural sector on these products, it is important that all stakeholders be fully engaged. Écophyto II+ forms part of France's agro-ecology project; in this spirit, its governance must be consistent with governance of the agro-ecology plan.



Écophyto II+ will commit to observing the following principles:

- **Stay on course for a 50% reduction by means of a two-phase approach:**
 - a 25% reduction by 2020, based primarily on optimising production systems through the transfer and dissemination of currently available solutions;
 - a 50% reduction by 2025, made possible by far-reaching changes to production systems and sectors, supported by medium- and long-term policy determinants, by an ambitious training policy, and by scientific and technical progress.
- **360° impact monitoring**

All risks linked to plant protection products (on human health, not just that of users, and on the environment) must be controlled under a holistic and comprehensive approach.
- **Form the backbone of the agro-ecological project**

The objective of reducing the dependence, risks and impacts related to plant protection products has been incorporated into the agro-ecology project. This approach aims to bring about a gradual paradigm shift that brings together all stakeholders across sectors and territories, with a focus on economic, environmental and social performance.
- **Identifying, documenting, disseminating and making use of alternatives**

The entire panoply of public and private research, training and agricultural development must be mobilised: higher education and research establishments, technical institutes, chambers of agriculture, development and consultancy bodies, initial and vocational training, etc.
- **Placing business at the heart of the mechanism**

The plan will focus on drivers that promote the use of alternative practices by businesses, while taking account of the factors that play a part in the use of plant protection products (production system focus, crop rotation, work organisation, available equipment, economic performance determinants etc.) and allowing business managers to choose the development trajectory that is right for them.
- **Working together**

Preference will be given to group approaches, actions undertaken on a wider scale than land parcel or farm level, and sectoral projects.

- **Working at local level**

Greater focus will be placed on guidance and implementation at regional level. The number of actions will be increased, with particular attention being given to consideration of issues relating to the use, risks and impacts of plant protection products across all relevant regional action plans and strategies.

- **Creating a positive ethos**

Developing agricultural production and area management methods based on synergies between agronomy and ecology is a positive and modern challenge. As such, it centres on technical progress and on the mobilisation of all stakeholders: awareness-raising among the general public will showcase the timely and essential role of this issue in the shift within French agriculture towards systems that offer good economic, environmental and social performance.

- **Commitment**

The success of the Écophyto plan requires public commitment from all stakeholders to realistic and verifiable objectives.



Écophyto II+ is built around six priority areas, which aim to:

1. **bring about change in practices and systems;**
2. **scale up research, development and innovation efforts;**
3. **reduce the risks and impacts of plant protection products on human health and the environment;**
4. **phase out the use of plant protection products wherever possible in gardens, planted areas and infrastructures;**
5. **support, through the promotion of stakeholder involvement, the territorial application of the plan in line with local limitations and opportunities; boost ownership of the plan among local stakeholders and sectors and ensure consistency across public policies;**
6. **centre on dynamic communication and a participatory approach to open up constructive public discussion around the issue of plant protection products, and establish a more streamlined method of governance.**

The plan will be implemented in collaboration with all relevant stakeholders within the committee for strategic direction and monitoring (COS). Working groups will also be established for actions that require them (priority area 6).

Some stakeholders with specific skills in the areas of network management or agricultural development may be involved in coordinating actions.

These priority areas identify the policies that may contribute to the objectives of Écophyto II+ and certain actions that are specific to the plan.

Contracts engaging stakeholders (higher education and research establishments, development actors, local authorities, economic operators, etc.) and the arrangements for monitoring them will also be

associated with the plan as the need arises. Funding under Écophyto will take into account compliance with these undertakings.

A glossary of acronyms can be found at the end of this document.



PRIORITY

AREA 1

ACT TODAY AND BRING ABOUT A CHANGE IN PRACTICES

After an initial phase dedicated to exploring and benchmarking crop practices and systems with low plant protection product use, Écophyto II+ will endeavour to encourage farms to adopt systems and drivers that promote the reduced use of plant protection products. As part of a holistic and systemic approach, all drivers that support this objective may be mobilised, from seed quality to crop diversification to alternative weeding techniques.

The trial certification mechanism for low plant protection product use (Action 1.1) will help to ensure the widespread dissemination of methods and investments that support a reduction in the use, risks and impact of plant protection products. Incentives to use high-performance agro-equipment (Action 1.2) and alternative solutions such as bio-control and natural, low-risk preparations (Action 1.3) will be improved. **The separation of distribution, application and consultancy activities, pursuant to Article 88 of the Law of 30 October 2018, will ensure that strategic and specific high-quality advice promoting the principles of integrated crop protection is provided (Action 1.4).** Resource and reference capitalisation systems and technique testing networks will also be consolidated and utilised to showcase the opportunities for a shift towards low-use practices and systems to as many people as possible (Action 2). Support will be provided for trials of alternatives to the use of plant protection products (Action 3). The dissemination and general implementation of low-use practices and systems will be based on the deployment of groups of farmers supported in their transition towards low-PPP-use agriculture, the “30 000 groups” (Action 4).

Fulfilment of these objectives will require reform of the crop health newsletter in order to enhance its predictive capacity (Action 5), and a renewed focus on teaching, ongoing vocational training and the overhaul of Certiphyto to secure and reduce the use, risks and impacts of plant protection products (Actions 6.1 and 6.2).

These actions should be undertaken in synergy, and their interaction should enable the completion of the highest possible number of these actions.

1. Encourage farmers to adopt practices that help to reduce the use of plant protection products

1.1 Low PPP use certification

The aim of low plant protection product use certification (CEPP) is to reduce the use of these substances by forcing sellers of such products to encourage farmers to put in place recognised standardised measures to reduce plant protection product use or at least to reduce the potential impact of these products on the environment.

Pursuant to the provisions of the Rural and Maritime Fishing Code established by the Law on combating arable land grabbing and the development of bio-control of 20 March 2017, a pilot CEPP scheme was established in mainland France for five and a half years, starting July 2016.

In June 2017, almost 1 200 distributors of plant protection products to professional users, known as 'obligated parties', were notified by the authorities of their obligations for the 2021 campaign. The notified obligations amounted to almost 17 million certifications to be obtained by rolling out standardised actions.

The draft law on balance in trade relations in the agricultural and food sectors, and healthy, sustainable food provides for the Government to be empowered to amend the Rural and Maritime Fishing Code in order to extend this pilot project, establish an interim objective by 2021, and roll it out in the overseas departments, too.

With regard to the standardised actions proposed, progress has been observed – 20 actions and 185 references were proposed when the project started in July 2016, and, by July 2018, 36 actions and 553 references had been recognised. However, there are drivers which are still used seldom if at all: for example, agricultural equipment or the establishment of low-pesticide crop systems. Efforts should therefore be made with all stakeholders to step up the proposed actions and ensure that all potential drivers are being well used.

1.2 Enhance the use of new generation agro-equipment and decision-making tools

Agricultural equipment and decision-making tools have a key role to play in fulfilling the objective of reducing the use, risks and impacts of plant protection products. Support will be provided for equipment or tools for assistance under Écophyto II+ to facilitate their proper use by farmers.

- Écophyto II+ will help farmers to invest in agro-equipment that has been proven, through independent testing, to offer good economic, environmental and social performance.

To this end, funding will be made available to support farmers wishing to invest, in particular by means of the competitiveness and adaptation plan for farmers in the context of the agriculture strand of the Grand plan d'investissement.

This funding will prioritise equipment to replace plant protection products and investments in the transition and transformation of production systems.

A reference framework of crop-production equipment known to offer added environmental value has been developed in partnership with the National Institute for Scientific and Technological Research for Agriculture and the Environment (IRSTEA) and technical institutions. Additional financing under Écophyto II+, implemented at regional level, will, in conjunction with the regional managing authorities responsible for the regional rural development programmes, be set aside for equipment that has been clearly identified as potentially reducing the use of plant protection products, in connection with actions recognised under the certification scheme (e.g. mechanical weeding equipment, arboriculture nets,

decision-making tools etc.).

- **Significant resources will also be allocated to supporting the development of innovative equipment offering low plant protection product use that also responds to environmental challenges and to the issue of protecting operators, plot re-entrants and local residents.**

Efforts will be continued, in the context of action 13 of priority area 3, on the design of machinery and collective and personal protective equipment (better understanding by work equipment manufacturers of regulatory and compliance requirements), and in supporting innovation in high-precision agro-equipment.

This will be the objective of the research and innovation programme for agro-equipment provided for under priority area 2. **The agriculture strand of the Grand plan d'investissement, thanks to the mobilisation of measures from the Programme des investissements d'avenir 3 (PIA3 - Programme of investments for the future), will support the development and placing on the market of new technological solutions for agro-equipment.**

- **Decision-making tools offer great development potential and could contribute to reducing the use of plant protection products (insecticides, fungicides and herbicides) with a net saving for farms.**

Special focus will be placed on system-based decision-making tools that take account of considerations above plot level.

- **Spraying optimisation will be a focus area**

Support tools will be developed to encourage all farmers to consider adjusting the doses to be administered in line with the growth status of crops.

In parallel, controls on sprayers will be made more rigorous, ensuring more effective adjustments to and maintenance of spraying equipment, with a three-pronged objective to limit drift and optimise administration quality and user safety. **Training for users will also be stepped up.**

1.3 Promoting and developing bio-control solutions and facilitating the use of natural, low-risk preparations

Existing bio-control solutions in France and in other Member States and the obstacles impeding the mainstreaming of these solutions will be identified for each sector. To this end, greater assistance will be provided for marketing authorisation requests that concern innovative bio-control product applications.

Support for micro-enterprises and SMEs will be stepped up, and innovation in these enterprises supported, in particular, by means of measures under PIA3 integrated in the agricultural strand of the Grand plan d'investissement. The process for the approval of bio-control products will be improved (in particular, by means of shorter deadlines compared to other products).

The EU-level recognition of bio-control products will be proposed in the context of the update of Regulation (EC) No 1107/2009, and appropriate procedural simplifications are envisaged, as long as the same level of health and environmental protection can be ensured.

Pilot projects to extend the use of existing bio-control solutions will be encouraged.

Steps will be taken with stakeholders as soon as possible to identify and authorise other natural biostimulants of agricultural interest presenting a low risk to health and the environment.

The coordinated mobilisation of the ITAB (Organic Food and Farming Institute) and other technical institutes will be continued for the compilation of files with a view to the approval of new basic substances.

EXPE sites and DEPHY network farms will be put forward to trial, present and undertake the large-scale dissemination and integration of innovative or emerging bio-control solutions into crop systems and natural, low-risk preparations on a voluntary basis.

Agronomic and plant protection advice on the move to agro-ecology will incorporate the use of bio-control solutions in an overarching strategy for systemic change wherever possible.

Support will be provided for the development of bio-control solutions for high-input consumption sectors, and to contribute to facilitating 'orphan' treatments and identifying bio-control solutions – of which there are currently few – for weed management, including invasive species of concern to agriculture, biodiversity and health.

Use of these solutions will be encouraged through their recognition as entitling the user to low plant protection product certification. All these areas will be set out in the context of the National strategy for the deployment of bio-control solutions established during the first half of 2019.

1.4 Separating advice and sales activities

An order under the 'Law on balance in trade relations in the agricultural and food sectors, and healthy, sustainable food' will require the separation of the sale of plant protection products from advice services, pursuant to Article 88 of the Law of 30 October 2018, in order to limit the risk of conflicts of interest between sellers, appliers and consultants in this area.

The objectives and content of strategic and specific advice on the use of plant protection products will be laid down more precisely so that they contribute effectively to lower use and a reduction in the associated risks and impacts, and promote the principle of integrated crop protection. They will also have to be linked to a systematic support process.

Plant protection product sales practices will also be further restricted, with a ban on discounts, special offers and refunds in particular.

2. Highlighting the 3000 DEPHY farms linked to the 30 000, economic and environmental interest groups and organic farming

The DEPHY network, which has grown since it was created in 2010, now has more than 3 000 farms divided into 250 groups, each led by a network engineer, and 40 or so pilot projects over some 200 sites.

It can be found throughout France, covers all types of production and involves a wide range of rural and agricultural development stakeholders. The network has already identified close to one hundred crop systems that use small amounts of plant protection product and that are economically competitive, demonstrating that it is possible to combine a significant decrease in the dependence, risks and impacts linked to plant protection products with continued, and even enhanced, economic performance.

By promoting an approach centred on learning and change, it helps to encourage farmers to innovate and endeavour to develop systems that are both efficient and low in plant protection product use. It capitalises on and shares knowledge and resources that support that objective.

The network should be strengthened by:

- **helping DEPHY farmers in their move towards reducing the use of plant protection products, in accordance with an approach consisting of the rethinking of their systems;**
- **stepping up demonstration and communication activities for the broad dissemination of the results of the network;**
- **improving the processing of data from the DEPHY network, taking advantage of experience gained;**
- **participating in the dynamic of the 30 000 farms and creating links with other collectives involved in agro-ecology, such as the economic and environmental interest groups, in order to promote the transfer of knowledge;**
- **integrating all the farms run by agricultural training centres, and focusing on informing students about cultivation techniques that reduce the use, risks and impacts of plant protection products;**
- **building stronger relationships between the DEPHY networks and the downstream links of supply chains, in order to promote the measure all the way to retail, i.e. consumer, level.**

3. Support for trials

Trials, conducted in various conditions that reflect as closely as possible the conditions in which they are used by farmers and using different technical alternatives that help to reduce the use, risks and impacts of plant protection products, remain essential.

To this end, the DEPHY Expé network, launched in 2010, was completely overhauled in 2017 and 2018. The level of ambition of the projects has been raised, in particular with the notion of 'plant protection products as a last resort' in the title of calls for projects. The system approach has been generalised, and priority has been given to drastically reducing the use of herbicides, including glyphosate.

The principles of this network are the following:

- to step up interaction with the 3000 DEPHY farms and the 30 000 groups in order to encourage implementation of any technical solutions developed;
- to better use and disseminate the results obtained from the research and innovation community and from all farmers.

Pilot projects are also conducted under the research priority.

4. PRIORITY AREA 30 000: BY 2021, MULTIPLY BY 10 THE NUMBER OF FARMS SUPPORTED IN THE TRANSITION TO AGRO-ECOLOGY WITH A LOW USE OF PLANT PROTECTION PRODUCTS

The dissemination of innovative, low-plant protection product practices will depend in large part on providing support, by 2021, to 30 000 holdings as they move over to agro-ecological systems that make little use of plant protection products.

The DEPHY mechanism will serve as an initial foundation, by sharing knowledge gained on supporting farmers in reducing the use, risks and impacts of plant protection products and on the engineering aspect of the role of the network engineer. The 3000 DEPHY farms will provide points of reference and resources for designing low-use, high-performance systems. They will propose tools for monitoring the impact of changing practices on the environment (for example, biodiversity and water quality). Learning and change will be prominent focus areas within these groups. Mentoring activities based on the experience of these 3000 farms, in particular by DEPHY farmers and structures including network engineers, committing to the utilisation and ownership of the results of the DEPHY network project, will be encouraged. The emergence of new collectives will be further supported. **Any bodies providing consultancy services, in particular the chambers of agriculture and the national agricultural and rural bodies (ONVAR - Organismes nationaux à vocation agricole et rurale) will have to commit to the performance targets in terms of supported collectives, the training of their staff and the reorganisation of their consultancy services.**

The 30 000 farms moving towards agro-ecology, with a specific ambition to reduce their use of plant protection products, may be drawn from other farming networks connected to the DEPHY networks, from economic and environmental interest groups interested in reducing the use of plant protection products or from farms that have formalised agro-environmental and climatic measures that include a target for the reduced use of plant protection products.

To this end, the legibility and effectiveness of the support measures for groups, including DEPHY farms, the 30 000 farms and economic and environmental interest groups, will be stepped up.

Support for farmers will also be geared to reducing the use of herbicides and stopping the use of glyphosate, by means of targeted funding in this area.

Priority will be given to the exploitation and dissemination of positive experiences gained. A tool to

exploit the results will be defined, and the utilisation of the results will be organised, in particular on the **ÉcophytoPIC portal and the website of the economic and environmental interest groups.**

5. Improve the crop health newsletter

Under *Écophyto I*, an observation network of more than 3 500 observers across more than 15 000 plots was established across France. The crop health newsletter offers each region objective, reliable and regular information on crop health, making it possible to target treatments more effectively. The crop health newsletter should help producers or readers to make their decision or recommendations, particularly on non-treatment: zero or insignificant risk or non-dominant bio-pest on the crop (limited detrimental effect as regards treatment cost).

The crop health newsletter should classify and rank risks, disregarding minor risks (where treatment is unnecessary), while consistently encouraging the reader to go out and observe the situation in the field. It will therefore be improved with a view to boosting its forecasting capabilities.

The sectoral and inter-sectoral approach to the crop health newsletter, observer networks and the assessment and dissemination of information will be adapted to align with any future territorial restructuring to ensure that this regional information continues to be shared. In the autumn of 2018, the Ministry of Agriculture and the Ministry of Ecology ordered a survey of the General Council on food, agriculture and rural spaces (CGAAER) and of General Council for the Environment and Sustainable Development (CGEDD). The aim is to review the crop health newsletter in terms of its governance, contribution to official surveillance, the functioning of the network and the content of the newsletter, in the light of the objective of reducing the use of plant protection products. The recommendations are expected in the summer of 2019, on the basis of which the newsletter may be overhauled.

- **Position the crop health newsletter as an information source**

Up-to-date crop health newsletters are intended to be taken into account or even quoted by any body providing consultancy services to farmers. If technically feasible, the ability to access the most up-to-date newsletters with respect to any message or technical advice bulletin should be made generally available. The crop health newsletter will be promoted as an information source, and supplemented by the presentation of alternative control methods and prophylactic measures **or provide alerts on the appearance of any resistance phenomena.**

The crop health newsletter will highlight methods that have already proven successful, as well as those for development. Publication will coincide with requirements on the ground, in an effort to maximise the operational, pedagogical and decision-making message.

In addition, a risk assessment will provide an operational indication of the non-systematic nature of crop protection treatments that can be used by farmers.

- **Enhance the observation networks and gear them to emerging requirements**

Biological territorial monitoring is an advantage in maintaining our export potential. Furthermore, the network needs to make more effective contributions to the monitoring of regulated and emerging harmful organisms, both from third countries and within the European Union. To do this, a degree of consistency will be sought between biological monitoring and the official monitoring plans for regulated harmful organisms.

In order to gear the networks to local needs and the funding allocated at regional level, the distribution of the plots to be monitored may prioritise the monitoring of those pests which lead to the greatest use of plant protection products, and emerging pests. In addition, efforts will be made to increase the number of farmers participating in observations.

It will also be necessary to study the introduction of a formalised and measured assessment, or at least a qualitative assessment, of the harmfulness of various bio-pests on the quality and quantity of harvests (e.g. based on a treated/untreated plot-type network) at the end of the campaign.

Given the dominant proportion of herbicide treatments in the number of dosage units (NODU), the monitoring of weeds is generalised in all the regions. The crop health newsletters will clearly encourage professionals to go and systematically observe their plots in order to make decisions based on each individual weed situation. Those involved in this process will receive training, and fact sheets that allow for easier and more accurate weed identification will be disseminated.

- **Formalise the involvement of agricultural college farms and DEPHY network farms in observations**

It is essential that all local public learning and vocational training establishments in the farming sector (EPLEFPA) that offer training and awareness-raising to future farm leaders and future agricultural advisors on changes to the agricultural production system be involved. The link between agronomy and crop systems will thus be reinforced: impact of rotations on weeds, observation and optimisation of the use of beneficial organisms, and the use of resistant varieties and varietal diversity. In this context, learners will take part in observations (initial and ongoing training).

DEPHY observations, both on farms and within EXPE, will be made available to crop health newsletter networks, thereby contributing to the biological territorial monitoring mechanism. Likewise, as part of its work on the assessment of low-use systems, the DEPHY network will be able to access the Epiphyt database.

- **Enhance the forecasting capacity of the crop health newsletters and make epidemiological models for bio-pest development forecasting sustainable in the long term**

A mechanism for the recognition of epidemiological models to enhance the predictive accuracy of the crop health reports may be implemented. The design and maintenance of such models may be supported. These models or the results drawn from them will be made available to the crop health newsletter editors.

The reading and interpretation of these models (which may require ongoing training if there is a change in the agents responsible for these areas within the region) are key drivers for fungicide and insecticide treatments in sectors with high plant protection product use, particularly in viticulture, fruit farming, vegetables for industrial processing, and potatoes.

Furthermore, the option of improving the conditions for obtaining the meteorological data required for the use of the models and for risk prevention will be considered. In general, better sharing of epidemiological modelling will be sought with partners in the network in order to facilitate and systematise the publication of more predictive plant health bulletins.

6. Build on initial training and vocational training for active farmers

6.1 Renew professional certification: knowledge of how to use plant protection products more safely and avoid their use

- **The individual certification issuance scheme will change over time to allow for knowledge assessment.**

The content of training courses will consequently be adapted and updated with a view to, inter alia, creating stronger links with other Écophyto II+ actions (the DEPHY networks, the promotion of integrated pest management and alternative methods, links with agro-ecology, agro-environmental and climate methods etc.). All professionals involved in application, sales and consultancy services are affected, irrespective of their role or area of activity. Nevertheless, the granting of a certificate that covers a diverse activity sector, such as application, will be based on context-dependent training.

Training aims to reduce the use of plant protection products and ensure their safe use in order to protect human beings and preserve the environment by promoting alternative methods drawn from research and development, and in tandem with other plan actions, particularly observation through the crop health newsletter and the DEPHY pilot farms.

- **The general mechanism, in its new configuration, will be more streamlined and transparent**

This took effect in early January 2016, coinciding with the first wave of certificate renewals. It is structured in reference to the three professional activity areas:

- Guidance on the use of plant protection products;
- Use of plant protection products for professional purposes, under the 'decision-maker' and 'operator' categories;
- Marketing and sale of plant protection products.

This certificate may be awarded through:

- training tailored to the relevant professional sectors, activities and categories, with assessment of acquired skills;
- skills assessment;
- the holding of a diploma.

Under the 'decision-maker' category, the procedures for the award of a certificate differ depending on whether the applicant has the status of 'operator' or 'contractor'.

- **The certificate will be renewed every five years, by means of a streamlined renewal process to be established on the basis of the certificate activity sector.**

The holding of certification for the application and distribution of and providing guidance on the use of plant protection products, valid for a period of five years, indicates an adequate level of knowledge on the part of the holder, in accordance with European Directive 2009/128 on the sustainable use of pesticides.

Access to assessed training is established by bodies authorised to that end by the Regional Directorates for Food, Agriculture and Forestry and the Directorates for Food, Agriculture and Forestry (DRAAF-DAAF). The award of the accreditation satisfies the requirements of a national specification, in an effort to standardise territorial implementation by contractors. The names of accredited training and assessment bodies can be accessed by all parties. This enhanced regional coordination reaffirms the desire for this training to be local in nature and context-centred.

Knowledge to be acquired is set out in Annex 1 to Directive 2009/128, consolidated by the transfer of knowledge gained through recent research in the field. The plan's scientific and technical committee will ensure its adaptation.

The development of new skills tailored to technical and scientific changes falls under ongoing vocational training, which can be accessed by all professionals in accordance with French labour law. Training of this kind complements the certification, and its priority aim is to bring about a reduction in the use, risks and

impacts of plant protection products; it may, if approved, give rise to renewal of the certificate.

6.2 Develop a pilot teaching programme and optimise training courses

The use of plant protection products is central to professional and societal considerations. Training in the controlled use of these products and in alternative practices is a critical challenge for agriculture, alongside environmental and health concerns. It is much more than a set of techniques; it is also a fresh approach to the production system, which should be understood early on in initial training and developed further as part of ongoing training. Ongoing training should also go deeper than regulatory adjustments alone.

The new strategic areas of Écophyto II+, with their focus on the intersections between research, development and training, focus on the mobilisation of scientific and technological knowledge and the transfer of that knowledge to individuals working on the ground, to support synergies between agronomy and ecology and promote a sustainable reduction in the use, risks and impacts of plant protection products.

The integration of Écophyto II+ into the agro-ecological plan for France is an attempt to move the agricultural sector towards a new balance for production systems and to contribute to the creation of reference points to support this. This involves technical and regulatory training, a reviewed approach to production systems from an economic, social and environmental perspective, and a greater focus on teaching.

- **Diploma-centred teaching**

The target audience is young: the vast majority of them will be undergoing initial training, whether in school-based education or through an apprenticeship.

The reference baseline has taken account of issues relating to health and safety for several years now, including the use of plant protection products. This reference baseline was drafted in collaboration with the Agricultural Social Insurance Fund (MSA), under the national convention for the incorporation of workplace health and safety into teaching activities (10 January 2012, Ministers for Agriculture and Labour and the Central Agricultural Social Insurance Fund).

To take this work further, and specifically to provide training in the development of alternative practices and integrated pest management, targeted and optional modules have been offered, including diploma-centred training designed for adults.

The action plan entitled 'Teaching Alternative Production' now encourages the review of the reference baseline and teaching practices with a view to:

- tailoring training and teaching practices to the complexity of farms' production and decision-making systems;

- adapting the reference baseline at all training levels for diplomas relating to the agricultural production sector to take account of the 'Produisons autrement' [Production: Another Way] process and incorporate agro-ecology into training courses.

Another of these priority areas aims to redefine the pedagogical role of farms in agricultural teaching, but also their role as centres for trials and demonstrations, while contributing fully to the development of alternative solutions.

- **Ongoing vocational training**

Training undertaken following initial training and intended for working adults and young people centres on developing and upgrading skills to respond to changes in the profession. Training funds ensure that ongoing vocational training can be accessed by individuals working either as part of an enterprise or independently.

The OPCA and OCA training funds contribute, through their strategic direction plans and the priorities set by their boards of directors and as a supplement to mandatory certification training, to sustainably reducing the use, risks and impacts of plant protection products, through changes to production systems in particular. The primary aim of this training is to help farmers and agricultural business leaders consolidate their strategic skills with a focus on advancing production systems and implementing innovative technical processes. These ongoing training actions, supported by training funds (notably those supporting systemic changes and the reduced use of plant protection products) may be subject to calls for projects by the Ministries for Agriculture and the Environment.

Some of these training courses, subject to prior recognition of their contribution to the objectives of Écophyto II+, may be taken into account for certificate renewal.





PRIOR ITY AREA 2

IMPROVE SKILLS AND TOOLS FOR THE FUTURE AND STIMULATE RESEARCH AND INNOVATION

Responding to knowledge and innovation needs is a key issue for Écophyto II+, specifically with regard to the formulation of effective alternative solutions that offer good technical, environmental, health and economic performance, and as regards support for the gradual replacement of the products that are most damaging to human health and to the environment, including biodiversity.

Today, research – alongside training and development – is one of the three pillars in bringing about change within the French agricultural and agro-food economy. There is a clear engagement on the part of the research and development communities around the issues associated with the plan, which extends beyond agricultural circles. Écophyto II+ pursues research that has already been undertaken in this area, builds on research on the environmental and health impacts of plant protection products, and launches research and development programmes with a strong emphasis on operational considerations. **The research and innovation area is also responsible for achieving greater consistency between the ongoing work and the various national and European research programmes.**

A national research and innovation strategy (Action 7) has been drafted and will be regularly updated to identify priority research and innovation areas requiring support, which will be set down in an operational roadmap.

On the basis of these priorities, actions will be implemented to organise, guide and coordinate research projects to promote a multi-disciplinary approach and cooperation between all stakeholders (Action 8). These

actions will endeavour to boost integrated pest management research initiatives in France and in Europe, to launch operational research and development programmes and to reinforce multi-disciplinary research on the environmental and health impacts of plant protection products and alternative strategies. **Actions to transform academic research results into operational innovations will be conducted.**

Knowledge mobilisation and utilisation activities will seek to raise awareness of the results among those working on the ground, public authorities and training sectors (Action 9).

A link will be created between the research and innovation priority and the research and development activities conducted under the priority area 4 for gardens, planted spaces and infrastructure (JEVI) and under priority area 5 for the French overseas departments, alongside the trial schemes referred to under priority area 1.

In order to establish, coordinate and implement these actions, priority area 2 will be supported by the Scientific Advisory Committee for Research and Innovation (CSO R&I) (see action 29.1), a collective framework for orientation, coordination, scheduling and incentivisation. The Committee will be run jointly by the Ministry of Agriculture and Food, the Ministry for Ecological and Inclusive Transition, the Ministry of Health and Social Services and the Ministry of Higher Education, Research and Innovation. In this Committee, skills relating to health and the environment, including biodiversity, for studies and research into the impact of plant protection products and exposure will be reinforced. It will include experts from the agricultural sector.

7. Establish a national research and innovation strategy

The national research and innovation strategy in Écophyto II+, set out in the road map, will be based on a critical review of research conducted and knowledge already obtained on existing, sustainable alternatives, the impacts on health and the environment, including biodiversity, based on a range of research projects and the financing of research into plant protection products.

Inserm (the National Institute for Health and Medical Research) will be called on to update its 2013 report “Pesticides : effects on health”, to take account of new information from the scientific literature, including health impacts insufficiently documented before 2013. The report will also look at the health impacts of glyphosate on those who work with and are exposed to it, local populations and consumers. INRA (the National Institute for Agricultural Research) will supplement it with regard to the impact on biodiversity and alternatives to plant protection products.

The Écophyto II+ national strategy for research and innovation will identify priority actions around four objectives:

- **Guide and support research with a view to promoting integrated pest management; limit dependence on plant protection products; reduce the risks and impacts linked to the use of those products; identify and address socio-technical and economic barriers to a shift in practices and support changes in practices and sectors.**

Drawing on knowledge of interactions between cultivated plants, their bio-pests and other agro-ecosystem components, such as soil biodiversity – knowledge that must be furthered and deepened – innovative and alternative solutions for bio-pest management will be pursued by mobilising drivers for bio-controls, varietal technical innovation, agronomic methods and organisational innovation.

Particular attention will be given to sectors that facilitate the viability of production systems offering low plant protection product use, notably diversification sectors. The same attention will be given to 'minor' and 'orphan' treatments, to identify innovative solutions that offer a lower risk to human health and the environment.

In accordance with integrated pest management principles, the strategy will encourage work that supports bio-pest monitoring, the creation of synergies between control methods and the design of crop or forest stand systems that, through their diverse nature, have a preventive effect. **The systematic approach will be prioritised, and this work will take into account the specific features of tropical crops.** Special efforts will be made in the area of weed control (particularly alternatives to herbicides, and glyphosate in particular) and alternatives to neonicotinoid treatments. The plan will endeavour to assess the sustainability of potential solutions and to develop tools that allow farmers and their advisors to optimise and make sensible use of these methods.

The strategy will target work that brings together the economic, human, social and bio-technical scientific disciplines in an effort to understand and guide the responses of agricultural production system parties towards a shift in practices, and particularly work that supports public policy. This research will also focus on drivers that support the dissemination and adoption of innovation (including collaborative

approaches) and stakeholder networks to be mobilised in the context of territorial governance.

- **Expand multidisciplinary research on the environmental and health risks and impacts of air, soil and water pollution linked to plant protection products.**

One priority will be to boost awareness of the risks related to plant protection products, their environmental and health impacts (including indirect and long-term impacts, the effects of combinations and low doses, their endocrine disrupting properties etc.), the costs to society associated with negative externalities, exposure pathways and determinants and mechanisms involved in regulating their harmful effects. **The aim is to reinforce knowledge in order to protect those working with PPPs and their families, local people and the population in general, as well as the natural environment.**

From an environmental perspective, the strategy will centre on the transfer and future of inter-compartmental products (air, soil, water) on different spatial and temporal scales, solutions based on ecological infrastructures in order to reduce transfers and impacts. **It will support research on the impacts on biodiversity, and particularly** the impacts on target and non-target organisms (including pollinators) and ecosystems (associated, in particular, with phytopharmacovigilance). The search for integrated pest management solutions at catchment or landscape level will endeavour to support the emergence of resilient systems, through the joint management of bio-pest control and the control of all forms of agricultural pollution. Holistic approaches that address the treated zone-regulated/mitigation zone-affected zone continuum, and which study how food webs and communities with a regulatory role respond will be encouraged.

As regards health, exposure pathways and determinants will be addressed with a view to assessing preventive actions and supporting risk reduction public policy. **Research focusing on reducing exposure will be prioritised.** The work will relate to the effects **on those living close to agricultural areas and farmers' families**, the general population and, specifically, the most vulnerable population groups. The strategy will incorporate cross-cutting issues on areas such as metabolites, adjuvants and co-formulants, and product blends (including products that are now prohibited, such as chlordecone). Preference will be given to multi-disciplinary approaches and modelling in order to incorporate the pressure-transfer-exposure and impact chain in its entirety and in its various spatial and temporal scales.

- **Develop research to support the prohibition of the use of plant protection products in gardens, planted spaces and infrastructure.**

The prohibition of the use of plant protection products in public planted spaces since 2017 and in private gardens as of 2019 will require the development of alternative methods (treatment equipment, integrated pest management, a new design for green spaces that features ecologically appropriate botanical resources and bio-pest resistance etc.) and the assessment of their effectiveness, sustainability, their potential impact on health and the environment, and their acceptability. Efforts will be made to find a balance between potential solutions and the management of these spaces that takes account of their social (safety and sustainability of infrastructure) and economic limitations.

- **Improve links between basic research, finalised research projects and innovation across all areas affected by the Pan and promote research networking with the various stakeholders.**

One key driver is ensuring the continuity and coherence of the process, from research through training and innovation through to development, while closing the gap between academic and finalised research and the various agricultural training components.

The second driver is the promotion of innovation through the development of partnership research (public-private partnerships in particular) and more intensive interactions between researchers, experts and innovative practitioners (including DEPHY network farmers). The support of the operational groups of the European Innovation Partnership (EIP) funded under the rural development programmes will be central to this. **The most promising new knowledge generated by the academic research must be developed to produce innovations that farmers can use.** The incorporation of knowledge drawn from

academic research into innovation, up to the pre-marketing or pre-adoption stages is essential in developing new procedures or new practices (e.g. proof of concept, full-scale testing, pilot projects, prototyping etc.). Tools such as feasibility studies and market analysis should be considered at a very early stage of the process. It is essential that competitiveness hubs and clusters play a key role in the interplay between basic research and the application of new concepts arising from it.

Progress made in the context of academic research and its development will be integrated in order to improve the availability of alternative strategies. Research will also continue to support procedures for the risk assessment of low-risk substances and products, in connection with requests for marketing authorisation and for the development of post-marketing authorisation monitoring plans (phytopharmacovigilance).

The DEPHY EXPE network and specific trial platforms will be central to the design, testing and development of action drivers and techniques that can be used by producers, incorporating multidimensional performance criteria. Overall, the focus will be on operational research, including private sector involvement, for the design and testing of action drivers that can be used by producers.

8. Initiate, guide and coordinate research projects to promote a multi-disciplinary approach and cooperation between all parties

France will play a more active role in the development of European research strategy to ensure that these issues feature highly on the agenda. Research initiatives in which France plays a leading role will be enhanced, in particular drawing up the European strategic research agenda on reinforcing research into alternatives to plant protection products, the combined and cumulative effects of plant protection products and taking these effects into account in health and environmental risk assessments, as well as on integrated protection and its implementation. To this end, the governance of priority 2 of Écophyto II+ will support the coordination of large-scale European programmes.

At national level, and in order to achieve the objectives defined in the national research strategy, the Scientific Advisory Committee for Research and Innovation (CSO R&I) will draw up an operational roadmap. This roadmap will mobilise calls for research projects (such as participatory research actions connected with the DEPHY EXPE network and the innovation networks) launched under Écophyto II+ and calls for research projects co-financed under other public research programming mechanisms (the National Research Agency, MTES, MAA-CASDAR, ANSES, etc.). Where applicable, it may take specific studies or expert reports financed by it as its basis.

- **Écophyto II+ calls for research projects**

These proposals will relate to the three actions under priority area 2, built around:

- sectoral research and development programmes with a strong operational focus, aligned with key drivers for reducing and improving the use of plant protection products, both agricultural and non-agricultural: ⁵bio-control, agricultural equipment (including robotics) and personal protective equipment (PPE), innovative new varieties, the sustainable management of weeds, and replacement technical solutions in gardens, planted spaces and infrastructure, as well as support for transition;
- research on the design, testing and development of alternative techniques offering good economic, environmental, health and social performance. This ambition will be realised through specific trial platforms and the reinforcement of the DEPHY EXPE network to highlight key driver combinations, closely linked to priority area 1.

⁵ A public-private bio-control research consortium will be mobilised in connection with priority area 1, with a view to strengthening links between research and its application in the field of bio-control products.

- research on integrated pest management, agro-ecology, changing labour procedures and practices, support for stakeholders, and socio-technical and economic barriers;
- research into the assessment and reduction of the risks to human health and the environment, including biodiversity, posed by the use of plant protection products.

This research will include a social sciences and humanities dimension and will promote approaches that operate at different levels across the French mainland and overseas departments, taking key stakeholders and organisational levels into consideration through regional calls for projects that supplement national calls. The effectiveness and sustainability of such solutions will be studied on the basis of integrated approaches to production and management systems, while analysing drivers to support their adoption. Their impact on health and the environment, including biodiversity, will also be studied.

Furthermore, research will be undertaken on the specific situations of the overseas departments (agricultural systems and sectors, factors that influence environmental and health risks).

- **Co-financed project proposals**

The current situation for finalised research in France is that there are a certain number of programmes coordinated beyond the scope of Écophyto II+ that deal more or less directly with areas relating to plant protection products. They have demonstrated that they complement the objectives of the first Écophyto Plan. Fostering these synergies continues to be a strategic focus for Écophyto II+. These programmes have specific governing bodies. The R&I Scientific Advisory Committee will engage in dialogue with these bodies to incorporate the relevant aspects of the Écophyto II+ national research and innovation strategy roadmap into calls for projects for these programmes. In this context, calls for research projects will be financed or co-financed by the plan.

Partnerships will be established in the following areas:

The assessment and reduction of environmental and human health risks

- National Occupational Health Environment Programme (PNR-EST), coordinated by ANSES.
- National Research Programme for Endocrine Disturbers (PNRPE), coordinated by the Ministry of Ecology.
- The PRIMEQUAL Programme (a cross-body research programme for improved air quality at local level), coordinated by the Ministry of Ecology.

The impact of plant protection products on the environment and changing practices as regards the management of gardens, planted spaces and infrastructure

- Infrastructure Programme for Land Transport, Ecosystems and Rural Areas (ITTECOP), coordinated by the Ministry of Ecology.

Issues relating to agricultural and rural development and innovative control and integrated pest management methods

- CASDAR programmes for 'Innovation and partnership', 'Seeds and plant selection' and 'Technological research', coordinated by the Ministry of Agriculture.

A strategic dialogue will be organised by between the parties managing priority 2, including the R&I Scientific Advisory Committee (CSO R&I) and the research alliance Allenvi, associated with the National Research Agency (ANR). The research and innovation priority may, together with the ANR, finance or co-finance calls for operational research and innovation projects.

In order to enhance knowledge on the effects of professional exposure to plant protection products, the R&I Scientific Advisory Committee may be involved in the coordination of epidemiological surveys and toxicology studies as provided for under priority 3, and particularly cohort studies currently under way or which may be extended.⁶ This action will be performed in conjunction with Action 17 (exposure to substances that are toxic to reproduction within the user population and the general population) and

⁶ The COSET-MSA (agriculture and health status), Agrican (agriculture and cancer) and DéPare (agriculture and fertility disorders) cohorts in particular.

Action 85 (research into pesticides and health) of the 2015-2019 Third National Health and Environment Plan.

9. TAKE AFFIRMATIVE ACTIONS FOR THE MOBILISATION OF KNOWLEDGE AND REFERENCES, UTILISATION AND TRANSFER

In connection with priority 5 of the Plan, the national research and innovation strategy will include an ambitious mobilisation of knowledge and references, utilisation and transfer intended for stakeholders on the ground, **representatives of civil society and business and public policy leaders** (e.g. with a view to improving the assessment of plant protection products or substances prior to placement on the market, post-approval monitoring, the launch and interpretation of the phytopharmacovigilance mechanism, regulatory changes, and the adjustment of non-point pollution reduction incentives (MAEC), as well as taking these elements into account in the advice given to farmers.

To this end, all development bodies, and particularly chambers of agriculture the and National Organisations for Agricultural and Rural Areas (ONVAR), agricultural distribution and groups of farms (the economic and environmental interest groups, the 30 000 farms, the DEPHY farms, etc.) will be closely involved. Wherever relevant, the actions undertaken by these bodies, and particularly those financed by CASDAR, will include actions that contribute to the spread of low-PPP-use production systems and practices

(in particular, reducing the use of herbicides, including glyphosate).

The national research and innovation strategy may comprise the following action types:

- The sharing of research results with stakeholders on the ground and with public decision-makers by means of various tools, including use of the ÉcophytoPIC portal to share documents setting out the results of the plan, the organisation of national or regional events, data sharing and the creation of decision-making tools. To create synergies, links with existing information transfer bodies within research structures, technical institutes and agricultural development will be created at the earliest possible stage.
- Partnerships with training establishments, both technical and higher, that endeavour to share results and expertise drawn from work in this priority area.

The end results of these actions could be the creation of expert groups that are available to support knowledge transfer within the DEPHY and GIEE networks (in connection with the plan's priority area 1). Feedback loops between research and these networks are crucial if research results are to be fully leveraged. These expert groups may also be called upon to develop training provision and to take part in training where appropriate (in conjunction with agricultural training bodies).

Furthermore, the involvement of private partners, including development agencies, in projects should be encouraged; this is an effective way to ensure knowledge transformation and ownership, including in terms of risk-taking for implementation on the ground. The conditions relating to the intellectual property of the results of these research projects, set down collectively by the R&I Scientific Advisory Committee, should facilitate the dissemination of action drivers.





PRIORITY AREA 3

ASSESS AND MANAGE RISKS AND IMPACTS

Management of the risks relating to the use of plant protection products will be at the very heart of Écophyto II+, alongside a desire to reduce the risk to human health, primarily that of users and other exposed populations (children, pregnant women, persons in ill health, elderly people and local residents) with respect to the various environmental compartments, in particular biodiversity.

Greater emphasis will be placed on monitoring these risks and adverse effects. This is one of the most significant issues for the phytopharmacovigilance measures (action 10) introduced under the Law on Agriculture of 13 October 2014. Particular attention will be placed on understanding occupational exposure to plant protection products and to good practices, in particular with respect to collective or personal protective equipment (action 13).

Protection of the population, in particular the most vulnerable and exposed groups (children, pregnant women and local residents) will be stepped up, and knowledge of exposure to pesticides from different sources (food, water, air, soil) will be improved (action 11) in order to make progress in the identification of causal links between effects on health and occupational and non-occupational exposure (local residents and farming families). Moreover, wherever possible, the cocktail and cumulative effects of pesticides, including at low dose, will have to be taken into account in the assessment of risks to health and the environment. This issue will also be tackled at European Union level, in particular through support for ongoing large-scale EU programmes (FP7, H2020, EFSA and JRC) and through involvement in the development of the future regulatory framework.

With a view to reducing these risks and exposures, action will be undertaken at European level to end, as soon as possible, the approval of the most concerning substances for humans and the environment, in particular those meeting an exclusion criterion under Regulation 1107/2009: carcinogenic substances of category 1, mutagenic substances of category 1 or substances toxic for reproduction of category 1, endocrine disrupting substances, persistent bio-accumulating and toxic substances, or substances which are very persistent and very bio-accumulating (action 15).

Moreover, indicators will be required for risk and impact assessments. The use of indicators developed under Écophyto I will be continued, and risk and impact indicators will be finalised. With these indicators, it will be possible to target public actions (public policy assessment, research and innovation priorities, territorial monitoring, communication etc.) to ensure that they align as closely as possible with what professionals require as they move to agro-ecology. **Performance targets will be laid down by priority or by action (action 14).**

In addition, the fight against the fraudulent application and illegal import of plant protection products will be a priority action (Action 16). The aim will be to implement suitable controls, establish collaboration between the relevant departments and apply appropriate sanctions, while also strengthening coordination at European level.

These Écophyto II+ actions are boosted by actions undertaken under other public plans or policies, such as the national public health plan, the national health and environment plan, the ecological transition roadmap, the national strategy for endocrine disruptors, the biodiversity plan, etc.

10. STEP UP THE SURVEILLANCE OF THE UNDESIRABLE EFFECTS OF PLANT PROTECTION PRODUCTS IN THE CONTEXT OF PHYTOPHARMACOVIGILANCE (PPV)

In accordance with the Law on the future of agriculture, food and forestry of 13 October 2014, the phytopharmacovigilance system has, since 2015, been monitoring the undesirable effects of plant protection products on humans, animals, plants and, more generally, all types of environments, as well as resistance to these products. On the basis of an active network of partners, alerts from the ground and collaboration with research teams, its aim is to ensure ongoing monitoring of emerging alerts and to contribute to changing the conditions for the marketing and use of plant protection products.

Decree No 2016-1595 on PPV and the Order of 16 February 2017 establishing a list of bodies taking part in PPV set out the arrangements for the operation of this measure. An inter-ministerial steering committee chaired by the Ministry of Agriculture defines the strategic orientations of PPV. A group of experts from Anses contributes to the interpretation of the data, the identification of subjects for priority studies and the collection of new information. Finally, Anses organises regular exchanges with stakeholders in order to collect any new alerts about plant protection products.

- **An active network of partners producing huge amounts of data every year for the purposes of PPV**

Ever since it was created in 2015, Anses has been surrounded by some fifteen partners contributing on an ongoing basis to PPV on the basis of information collected from the surveillance and vigilance networks which they steer.⁷ These partnerships help to ensure that the issue of the presence of plant protection products in the environment and the potential undesirable effects on human, animal and plant health, as well as the appearance of resistance, is seen from various perspectives. In the event of a risk, Anses is alerted without delay by its partners:

The information collected is regularly summarised, by active substance, in the files available on the Anses sites⁸. The information relates to the use of active substances, their presence in the environment (water, food, air, absorption by human beings), the risks and impacts observed in human, animal and plant populations.

Anses will develop new partnerships, including with participatory science networks, on less well documented subjects (biodiversity, the use of bio-control products, plant protection product degradation products). The generation of new knowledge on mixtures of substances and the accumulation of exposures will be a priority in order to generate new hypotheses using appropriate

⁷ Santé publique France (SpF), the Centre François Baclesse, the Institut technique et scientifique de l'apiculture et de la pollinisation (ITSAP), the Office national de la chasse et de la faune sauvage (ONCFS), the Laboratoire central de surveillance de la qualité de l'air (LCSQA) and the Associations agréées de surveillance de la qualité de l'air (AASQA), the Réseau national de vigilance et de prévention des pathologies professionnelles (RNV3P), the Mutualité sociale agricole (MSA) and the centres anti-poisons et de toxicovigilance (CAP-TV). The Ministries of Agriculture, Health, Ecology and Consumer Affairs also contribute through the provision of data collected in the context of the surveillance of foodstuffs, water in the environment and foodstuffs intended for human consumption.

⁸ <https://www.anses.fr/fr/content/les-fiches-de-phytopharmacovigilance-pour-plus-d%E2%80%99informations-sur-les-substances>

tools such as epidemiology, data mining without bias and non-targeted analyses in the environment.

- **A tool for signally undesirable effects**

The effectiveness of PPV depends on the establishment of tools geared to the collection of alerts about potential undesirable effects associated with plant protection products. Anses's partners in PPV already generate a huge volume of data every year. In addition, Anses and its line ministries want anyone, in particular workers in this field, who notices an undesirable effect relating to a plant protection product to be able to report it easily to Anses or one of its partners. To this end, in the spring of 2017 Anses made forms for communicating undesirable effects available on its website⁹. Reporting this information is obligatory for holders of marketing authorisations, manufacturers, importers, distributors, professional users, consultants and trainers. It can also be communicated on a voluntary basis by other professionals, in particular those in animal and human healthcare, and private individuals. Anses processes the information received in close collaboration with its partners and the declarants.

Anses and its partners will continue their efforts to publicise PPV and to increase the quantity and enhance the quality of the alerts.

- **Studies to consolidate partner measures, generate new knowledge and investigate alerts**

Information available in the context of PPV may need to be supplemented by reinforcing existing measures or generating missing knowledge, for example in the event of a new alert. To this end, Anses is setting up specific studies, to be funded by a tax on the turnover of marketing authorisation holders, as established by the Amending finance law of December 2014. Complementing the studies financed by the Écophyto Plan, they will help to respond to specific issues with a view to reacting rapidly with regard to the conditions of a marketing authorisation or defining transversal management measures. Since the PPV system was set up in 2015, Anses has implemented 27 studies, mainly on human and animal health. These studies are prioritised according to the criteria of the seriousness of the undesirable effect; intensity; the vulnerability of the population concerned; and societal expectations.

For the period 2018-2020, four strategic priorities have been chosen:

- Ambient air for the general population and for specific populations, such as local residents in agricultural areas;
- Exposure and impact among those working in agriculture;
- Bees and other pollinators;
- Biodiversity and environments (soil).

Anses will contribute to publicising this integrated measure at European level, where the legislation on plant protection products is established.

⁹<https://www.anses.fr/fr/content/signalement-deffets-ind%C3%A9sirables-li%C3%A9s-%C3%A0-lutilisation-de-produits-Plant-pharmaceuticaux>

11. BOOST CONTAMINATION MONITORING FOR FOODSTUFFS, WATER, SOIL AND AIR EVALUATE AND REDUCE POPULATION EXPOSURE

- **Reinforce surveillance and protection of the environment**

As a reduction in the use, risks and impacts of herbicides is one of the priorities of Écophyto II+, special attention will be paid to monitoring herbicidal substances in water, in addition to the monitoring of other active substance categories, specifically on the basis of work on water-based monitoring methods for improved water indicator reliability.

The application of the Order of 4 May 2017 on the definition of non-treated zones close to water points and water courses defined by prefectural order will be evaluated. A joint mission of the general councils of the Ministry of Ecological Transition and the Ministry of Agriculture will draw up a progress report within six months, in particular by evaluating the level of protection for water points as a result of these orders.

- **Improving the protection of the population**

Plans for monitoring active substance residues in foodstuffs will be extended, and coordination between the various administrations will be improved. The non-compliance rate for plant foodstuffs will help to estimate the extent to which integrated pest management principles have been implemented by the various sectors. This will also make it possible to monitor the quality of imported plant foodstuffs.

A pilot campaign was conducted at national level in 2018 on the surveillance of air contamination by plant protection products, based on the work of Anses, with the aim of mapping pesticides in the ambient air at national level.

Support will be given to studies aiming to improve our knowledge of levels of exposure to and absorption of pesticides (multi-site study among persons living close to agricultural land, Pesti'home study on the domestic use of pesticides, the ESTEBAN study, the perinatal group of the Elfe cohort, the HBM4EU programme, etc.). The results obtained will be analysed in order to implement adequate and effective prevention measures.

Several actions will be implemented to prevent exposure to pesticides for people living in agricultural areas, in particular reducing the risk of spray drift, thanks to the use of high-performing equipment. Involving and informing local politicians and local authorities will be encouraged in order to take into account the specific characteristics of local areas, in particular on the basis of planning documents. Pursuant to Article 83 of the 'Egalim' law, measures are to be taken so that, as of 1 January 2020, the use of plant protection products close to areas adjacent to inhabited buildings and non-built-up areas for recreational use adjacent to such buildings will be subject to protection measures for persons living in those areas. These measures will be finalised in a charter of commitments at department level.

The prefectural orders will be reviewed by the three inspectorates (CGAAER, CGEDD and IGAS) in order to decide, where necessary, whether there is a need to revise the current legislation on the use of plant protection products close to places and establishments accommodating vulnerable persons (pursuant to Article L. 253-7-1 of the Rural and Maritime Fishing Code).

- **Reinforce information and communication actions between all stakeholders**

The population will be better informed about the risks associated with exposure to pesticides, the conditions for their use (good practice, charters, regulations, etc.) and the means to prevent exposure to these products.

Dialogue and communication between the various actors (farmers, politicians, people living adjacent to agricultural areas, associations, local authorities) will be stepped up, for example through the implementation of voluntary measures for the joint compilation of local management charters or agreements, also with the aim of helping local politicians in a mediation role.

- **Develop the training of healthcare professionals on the risks associated with pesticides**

Initial and continuing training and information for healthcare professionals on the risks associated with exposure to pesticides will be developed with the establishment of training actions on environmental health, in particular the health impact of pesticides, and by the dissemination of recommendations and tools for supporting patients, in particular the most vulnerable, for the purposes of prevention and diagnosis (e.g. in the event of over-absorption).

12. Understand, monitor and reduce side effects relating to the use of plant protection products on the environment (biodiversity, soil, pollinators, water)

Previous work on side effect tracking through the territorial biological monitoring mechanism will be pursued and emphasised. It will be incorporated into the phytopharmacovigilance mechanism.

Greater emphasis will be placed on the quantitative and qualitative monitoring of the use of herbicide-resistant varieties and on the development of resistance to plant protection products among cultivated varieties and among harmful and invasive species, using validated and reliable methods.

Focus will also be placed on the effects of the development of certain harmful or invasive species with health-related consequences (ragweed, rye ergot fungus etc.).

The range of active substances under study as part of the soil quality measurement network will be expanded, as will the study of the impacts of these active substances.

Zones of special ecological interest which should be protected if certain plant protection products are used nearby will be defined.

With regard to pollinating insects, on the basis of an opinion from Anses taking account of harmonised evaluation arrangements and existing issues (domestic and wild pollinating bees, reconciling with the health and safety issues affecting operators), the existing legislative provisions will be stepped up, in particular: the Inter-ministerial Order of 28 November 2003 on the conditions for the use of plant protection products, with a view to protecting domestic and wild pollinating bees during the flowering season, by revising its scope and targeting the periods for derogations; the Order of 7 April 2010 on the use of tank mixes.

Particular efforts will be made with regard to domestic and wild pollinators, primarily the monitoring of the sub lethal effects of active substances, and specifically of the neonicotinoid family.

13. A better understanding of exposure and reducing the risk for professional plant protection product users

¹⁰ Primary risk prevention in relation to the use of plant protection products is a key driver in bringing about change in practices and the bedrock of health policy. Thus, the Écophyto II+ plan, together with the orientations of the national health plan and the third occupational health plan (PST 3), places the emphasis on primary prevention.

Compensation for victims of diseases associated with the use of plant protection products is also a major concern for the Government. It is being implemented in parallel to the Government's commitment to prevent the health impacts of plant protection products, the subject of many scientific projects, in particular associated with the occupational exposure of farmers.

The IGAS/IGF/CGAAER report on the creation of a support fund for victims of plant protection products¹¹, published on 13 February 2018, recommends in particular improving compensation in the context of the occupational accident and occupational illness systems by facilitating the recognition of occupational diseases linked to exposure to plant protection products and by improving how they are dealt with. The Government has decided to follow these recommendations.

The Government has therefore asked the chairs of the specialised committees to launch projects to facilitate the recognition of occupational diseases linked to plant protection products, on the basis of the most up-to-date scientific knowledge. These committees will study the appropriateness of creating or revising the tables of occupational illnesses and extending them to other pathologies linked to occupational exposure to these products. In addition, recommendations will be addressed to the regional committees for the recognition of occupational diseases (CRRMPs) in order to harmonise recognition decisions for occupational illnesses not included in the tables.

On 24 April 2018, the Institut national de la santé et de la recherche médicale was commissioned to provide an up-to-date study on the links between occupational exposure to pesticides and ill health, so that the work of the committees can be based on scientific evidence and the decision-making can be based on the very latest science. The Ministers for Health, Labour and Agriculture have, in the meantime, asked Inserm to start this work by updating the available information on hormonal-dependent cancers, such as prostate cancer, in particular with regard to exposure to chlordecone in banana plantations. This work will be implemented in close cooperation with the health agencies, in particular the National Agency for Food, Environmental and Occupational Health & Safety.

The work will start without delay in order to draw up one or more tables of occupational illnesses or publish recommendations for the CRRMPs by the end of 2018.

Moreover, Article 81 of the law on balance in trade relations in the agricultural and food sectors, and healthy, sustainable food, adopted definitively by the Assemblée Nationale on 2 October 2018, provides that the Government should present to Parliament a report on the financing and the establishment, by 1 January 2020, of a fund for the compensation of victims of illnesses linked to plant protection products.

So everything has been done to allow occupational users of plant protection products to more easily obtain recognition of any occupational illnesses linked to their exposure to those substances.

¹⁰ Primary prevention: reducing risks by taking action as early as possible. This at-source prevention raises questions around design: the design of machines, buildings, chemical products (through product substitution in particular), the design of work processes, the conduct of farm transformations and re-structuring.

¹¹ <http://www.igas.gouv.fr/spip.php?article658>

13.1 Build on knowledge of exposure to plant protection products used for professional purposes

Work in this area must facilitate the continuation of previous efforts to further knowledge around professional exposure to plant protection products. The aim is two-fold: continue to document past exposure, while establishing the tools needed for an individual approach to current exposure, so as to ensure traceability and the most appropriate personal medical monitoring. **Particular emphasis will be given to work to diagnose absorption, develop and validate exposure and early impact markers, and create an archive for the conservation of biological samples (blood, urine, hair, mouth swabs, etc.).**

This work should also allow for the documentation of the exposure of operators and workers in the context of the use of new spraying techniques (robots, drones, etc.).

In conjunction with the directions of the third national plan for health and the environment (PNSE 3), a major study will also be launched to document family exposure (spouses, children etc.) on the farm in connection with the use of various product categories (plant protection products and others) and farm practices.

This new knowledge will be developed alongside research-centred actions (priority area 2) so as to facilitate the conduct of epidemiological surveys and toxicology studies and to better document the potential health effects of this exposure.

13.2 Take concrete steps to reduce the risks connected to the use of plant protection products

- **Improve and support risk assessment**

Primary prevention should be a priority, in conjunction with the guidelines set out for PST 3. For employers – SMEs and micro-businesses in particular, but also farmers – the tools required for risk assessment, including training and support, should be provided as an essential prerequisite for the implementation of any preventive measures and for the development of practices.

The development of tools aimed at improving understanding of the chemical risk, thereby reducing the use, risks and impacts of plant protection products, will be facilitated.

- **Support the substitution of products containing substances of concern to health**

In conjunction with the priorities of the third Cancer and Health/Environment Plans, the substitution of substances that are carcinogenic, mutagenic or toxic to reproduction (CMR) and of endocrine disruptors by less harmful substances, specifically bio-control substances, will be encouraged in micro-enterprises, SMEs and among farmers in particular, through the provision of appropriate tools (training, decision-making tools).

To do this, all those involved in preventive action, such as ANSES, the agricultural social insurance funds and labour inspectorates will be mobilised to improve substitution arrangements overall, with efforts being focused on the most concerned occupational sectors.

Promote innovation for the design and planning of safer work equipment

Firstly, work on the design and planning of solutions for safer agro-equipment should be pursued so that this equipment complies with the objective of good economic, environmental and social performance, and to ensure that it is incorporated into Action 1.2 work activities. The use of new technologies, such as robotics and remote control, will be encouraged with a view to reducing exposure by plot re-entrants.

In addition, work on mixture preparation area planning, product storage areas and spray equipment wash zones should also be continued.

Calls for projects (Action 29.3) will help to identify innovative projects in the areas of warnings for use,

work organisation and collective and personal protective equipment (PPE).

13.3 Promote and roll out tools and knowledge

Ownership by end users of solutions relating to the choice of product, the harmfulness of and possible substitutes for these products, choice of equipment, work organisation, hygiene and, ultimately, the use of PPE must be assured. These solutions will be shared widely with the involvement of health and safety specialists and specifiers and mobilising all stakeholders across sectors on awareness-raising and the provision of information and training.

The awareness raising campaign on the use of personal protective equipment (PPE) started in June 2018 will be continued and expanded in order to raise awareness, in particular, of the importance of wearing the most suitable PPE, in a global approach to reducing risk and the use of PPPs.

Furthermore, the Joint Committees for Health and Safety and Working Conditions (CPHSCT) provide small companies within the agricultural production sector with a forum for reflection and cooperation between employers' and employees' representatives to improve workplace health and safety. At local level, they have an essential role to play among SMEs and micro-enterprises. To further strengthen their dissemination and awareness-raising activities, in particular in the area of training support, specific tools will be developed and made available to provide additional support.

14. Draw on use, impact and changing practice indicators

Pursuant to Article 4 of Directive 2009/128/EC, Member States should adopt National Action Plans to set up their quantitative objectives, targets, measures and timetables to reduce risks and impacts of pesticide use on human health and the environment and to encourage the development and introduction of integrated pest management and of alternative approaches or techniques in order to reduce dependency on the use of pesticides. These targets may cover different areas of concern, for example worker protection, protection of the environment, residues, use of specific techniques or use in specific crops. (...) Timetables and targets for the reduction of use shall also be established, in particular if the reduction of use constitutes an appropriate means to achieve risk reduction with regard to priority items identified under Article 15(2)(c) [Article 15(2)(c) concerns human health and environmental risks and effects and encourages the development and introduction of integrated campaigns to combat pests and come up with substitution methods or techniques]. These targets may be intermediate or final.'

Achievement of the objectives laid down for 2020 and 2025 will be evaluated on the basis of trends in the number of unit doses together with other indicators in order to obtain an overview of the impact and changes in practices.

- **Roll-out of use indicators: Number of unit doses (NUDs), active substance quantity (ASQ), and treatment frequency index (TFI)**

The number of unit doses and active substance quantity indicators will be broken down by how the product works (herbicide, fungicide, insecticide, acaricide etc.) and by category: bio-control, low risk, usable in organic farming, containing substances that are carcinogenic, mutagenic, or toxic to reproduction. Regional NUDs and ASQs will be introduced and supplemented where appropriate by other plant protection product use indicators. Data from the National Bank for Distributor Sales (BNV-D) and all methods and data required to calculate the unit dose number will be made public, while respecting applicable confidentiality requirements.

The treatment frequency indicator (TFI) will be retained as a support and measuring tool with respect to reducing the use of plant protection products at farm and territorial level. **The TFI calculation website was deployed in 2018 to calculate a single, reliable and certified TFI. It provides resources and digital**

services for different types of users (farmers, consultants, certifying and inspection bodies, publishers of farm software, technical and research institutes). The aim is for this website to be kept up-to-date and, where relevant, to further develop it to better meet the needs of users and public policy.

The work of harmonising the conditions for the TFI calculation at farm level within the various public measures using this indicator will be finalised.

Efforts will continue to extend the reference TFI to the sectors requiring it. A collaborative platform for utilising geolocalised TFI data will be created.

Discussions will be launched on the development of the TFI in the medium term and of the references used, so as to better reflect the phytosanitary pressure on the environment, while taking into account the acceptability of the indicator.

Updates on the situation in France as regards the use of plant protection products per hectare will be published on a regular basis and compared against the situation in other Member States.

Indicators that allow the assessment of the health and climatic situation and changes in crop rotation and yields will also be collected in order to place the use of plant protection products in a meaningful context.

- **Calculate impact indicators: product toxicity, health impacts, impacts on biodiversity, impact on water, bio-pest resistance**

The risk and impact indicators developed under Écophyto I will be implemented with a view to better measuring the health impacts of plant protection products, their impact on biodiversity and air quality, the development of bio-pest and weed resistance and the development of harmful or invasive species. **Discussion will be launched to evaluate the relevance of these indicators and, if necessary, to further develop them.**

- **Identify changing practice indicators**

Surveys on farming practices will be continued and, where possible, fleshed out with indicators to follow changes in agricultural practices more efficiently (e.g. utilised agricultural area rate for organic farming, use of PPE, training, use of decision-making tools, ecological focus areas, crop rotations, tillage, crop combinations, cover crops etc.). Socio-economic indicators will also be consolidated and developed in support of these surveys (e.g. work organisation, economic performance of farms, share of plant protection product in the farm's costs, input price index etc.)....).

These data will also be used in the phytopharmacovigilance mechanism.

New indicators may be developed to meet expectations and knowledge requirements around impacts on human health and the environment.

- **Define by priority and/or by action the results-based indicators and targets**

Performance indicators will be defined, in addition to the impact-based indicators mentioned above. These indicators and the associated targets will be proposed in the context of the work of the Technical and Scientific Committee (CST). Progress in this area will be communicated annually in the context of the monitoring note.

15. Accelerate the withdrawal of the most concerning substances and drive change in the approval procedures for active substances

The Government has taken on board the timetable for the gradual elimination of all the substances

mentioned in the CGAAER-IGAS-CGEDD (1) report of December 2017¹².

15.1 Improve the assessment of active substances and plant protection products

France supports the idea of creating a European mechanism and European funding for the national and European assessment agencies to conduct independent studies into the risks associated with the most controversial substances.

It will contribute actively to the updating of EU law on plant protection products, in order to arrive at a safer, more transparent and simpler system, in line with the precautionary principle.

France is in favour of better taking into account existing data (epidemiological studies, environmental and biological exposure data, impacts on biodiversity, phytopharmacovigilance) in the approval of active substances and the placing on the market of plant protection products.

The 'cocktail' and cumulative effects of pesticides will be taken into account where possible, in the context of the assessment of risks to health and the environment, in particular for the determination of maximum residue limits at European level.

15.2 Pay attention to the European release calendar for the most concerning substances and accelerate its implementation

France will be asking the European Commission to end the approval of substances meeting exclusion criteria under EU regulations as soon as possible: carcinogenic substances of category 1, mutagenic substances of category 1 or substances toxic for reproduction of category 1, endocrine disrupting substances, persistent bio-accumulating and toxic substances, or substances which are very persistent and very bio-accumulative. France will systematically object to the extension or renewal of licences for these substances.

Anses has, since 2018, been undertaking a scientific review of the most concerning substances in terms of health and the environment referred to by the CGAAER-IGAS-CGEDD mission, the approval for which will expire post-2018.

France will ask the Commission to look again at the approvals if the studies yield new elements in terms of how dangerous they are, so as to adopt restriction measures if necessary, at both national level via Anses (withdrawal of marketing authorisation, use restrictions) and European level.

France is in favour of European law being developed so as to allow each Member State, for the uses concerned, to replace any concerning substances by safer alternatives where they are accessible to users (in-depth review of the comparative assessment arrangements provided for in Regulation (EC) No 1107/2009).

Anses has been commissioned to identify substances which may be considered concerning with regard to their potential risk to public health or the environment, in order to propose substitutes. This work will be conducted on the basis of risk assessments using data on levels of these substances found in various environments (foodstuffs, water, soil, biodiversity, air) and any negative health or environmental alerts involving them which may have arisen in the context of phytopharmacovigilance.

Where necessary, notably in situations of critical exposure justifying urgent action, the approvals in force will be re-examined. Anses will also draw up risk and health and environmental impact indicators for concerning substances with a view to taking additional measures, in particular in terms of surveillance, and exposure mitigation or reduction.

Law 2016-1087 of 8 August 2016 on regaining biodiversity, nature and landscape bans the use of products from the category of neonicotinoids as of 1 September 2018. However, derogations may be granted up until 1 July 2020 by joint order of the Ministers for Agriculture, the Environment and

¹² <http://agriculture.gouv.fr/utilisation-des-produits-phytopharmaceutiques-rapport-tome-1-annexes-tome-2>

Health. They will have to be based on the Anses report comparing the benefits and the risks associated with the use of plant protection products containing active neonicotinoid substances compared to the use of substitutes or other alternative methods available. Anses published its report on this on 30 May 2018. Any derogations will have to be decided on the basis of the conclusions of this report and developments in the regulatory status of the substances concerned. With the Government's support, the draft law on balance in trade relations in the agricultural and food sectors, and healthy, sustainable food contains a provision on extending this ban to products containing one or more active substances working in the same way as neonicotinoids.

Work should also be conducted in parallel at national and European level by all stakeholders to identify and predict potential 'orphan' treatments and endeavour to establish alternative solutions as early as possible. France undertakes to support the co-financing of the European platform for minor use treatments.

In addition, a review will be conducted into the issuance of marketing authorisations for plant protection products so that marketing authorisations indicate differentiated doses according to crop growth stage.

15.3 Ending the use of glyphosate

On 22 June 2018, the Minister for Agriculture and Food and the Minister for Ecological and Inclusive Transition made the decision to ban the main uses of glyphosate within three years and ban all uses within five years, whilst stressing that farmers would not be left in the lurch.

The INRA report submitted to the Government in December shows that many alternatives to glyphosate are already available in agro-ecology, in particular in large-scale arable, viticulture and arboriculture, the sectors which use most glyphosate. The report also identifies the small number of agricultural uses and practices for which no viable alternatives are yet available. The development of solutions for these sectors must be speeded up, in particular with regard to conservation agriculture, farming on difficult terrain, such as terraces, and sectors with very specific characteristics.

The following activities are being deployed in order to support stakeholders, in particular the sectors concerned but also the supermarkets, in order to ensure that policy-makers and citizens can monitor, in all transparency, the progress achieved towards the goal of eliminating the use of glyphosate:

- a resources centre has been created to make existing alternatives to glyphosate accessible to the entire agricultural sector and to promote the sharing of information on this subject. This resources centre is based on the [ÉCOPHYTOPIC-GECO platform](#) developed by the ACTA.
- Relevant actions to accompany the Écophyto programme are being stepped up in order to disseminate solutions and find new alternatives in areas where no solution has yet been found (in particular via actions 1, 2, 3, 4, 9 and 19 of the Plan).
- The local networks of the chambers of agriculture and agricultural training have been mobilised to provide information about and promote alternatives to glyphosate throughout the country, with the support of the CIVAM and agricultural cooperatives.
- The quantities of glyphosate-containing products sold and used will be monitored so as to provide full transparency on use by means of the regular publication of information and sharing of this information with the public.
- This work will be enhanced by cooperation at European level with certain volunteer Member States wishing, like France, to rapidly end the use of this substance.

This plan of action will be run and monitored by a task force chaired by Prefect Pierre- Etienne Bisch, appointed inter-ministerial coordinator in the plan of 1 December 2018, assisted by the Ministries of Agriculture and Environment, with the support of INRA, ACTA and APCA. This team will draw up a quarterly report on the actions undertaken and progress made, for submission to ministers and parliament.

In parallel, Anses has drawn up specifications for the launch of a new pilot study on the carcinogenicity of glyphosate, INSERM will be drawing up a joint report on the risks it poses to health, and Anses has drawn up specifications with a view to launching a new pilot study on the carcinogenicity of

glyphosate. This work will be concluded by 2020 at the latest.

16. Step up action against fraud and violations and impose appropriate sanctions

In France, counterfeit products account for between 2.5 % and 5 % of the market. This primarily concerns cereals, vines and vegetable crops (source: UIPP).

Controls on the sale, use and tax arrangements for plant protection products will be strengthened and better coordinated, in particular at ports and airports. In particular, anti-fraud strategies will be designed to be consistent with those of neighbouring countries. A targeted action will be undertaken in the key entry points for plant protection products in the European Union.

In addition, improvements will be made to the judicial handling of controls, with enhanced coordination between the Justice Ministry and the departments responsible for inspections. The possibility of issuing fines for minor offences will also be included in the regulation. Company checks relating to regulations around CMR substances will be tightened, and these regulations will be supplemented by the addition of risks relating to endocrine disruptors.

Particular attention will be paid to checks on mail order sales of plant protection products and cross-border purchases.





#4

PRIORITY AREA 4

ACCELERATE THE TRANSITION TO THE NON-USE OF PLANT PROTECTION PRODUCTS IN GARDENS, PLANTED SPACES AND INFRASTRUCTURE (JEVI)¹³

In the context of the application of the law of 6 February 2014, referred to as the Loi Labbé, supplemented by Article 68 of Law No 2015-992 of 17 August 2015 on energy transition for green growth, and of the development of initiatives for the reduced use of plant protection products already launched by various stakeholders, the priority area under Écophyto II+ for Gardens, Planted Spaces and Infrastructure (JEVI - jardins, espaces végétalisés et infrastructures) will support managers of urban spaces and gardeners in dispensing with plant protection products wherever possible.

To achieve this, in line with the application methods set out under Action 20, local connections will be created between gardening associations, distributors, managers of urban spaces with restricted uses and local authorities. The aim of these connections will be to enable the sharing of best practices, from which everyone can benefit. Community tools, such as web exchange platforms, will be mobilised in order to find solutions for, support and motivate stakeholders in this area engaged in moving towards zero pesticide use.

17. Support changes provided for under the Loi Labbé

- **Create a list of bio-control products and ensure its widespread distribution**

The list of products that will remain available for use after the deadlines in the Loi Labbé have passed will be widely distributed and regularly updated.

- **Improve and provide guidance on the correct management of 'pharming' waste during the transition period**

Clear information must be provided to amateur gardeners and relevant local authority staff on existing collection and disposal systems (via EcoDDS and the management of phyto-pharmaceutical waste in particular), with the support of regional authorities and distributors.

These various communication and awareness-raising campaigns for amateurs and professionals will help to make these collection and disposal systems more effective.

¹³ Farmland does not fall under this designation of "planted spaces".

The collection of unusable plant protection products and empty plant protection product packaging from amateur gardeners will also be improved by the organisation of regular collections from sites that can be easily accessed by the general public, e.g. close to product points of sale, and during the periods when plant protection products tend to be bought.

- **Consider the provision of training to plant protection product users for which a qualification would be awarded following knowledge testing, and develop ongoing training in the use of alternative methods**

Training for plant protection product users in gardens, planted spaces and infrastructure (professionals and gardeners) could benefit from a recognition system based on a qualification achieved after successfully sitting an exam.

Furthermore, complementary ongoing training that aims to promote green space redesign, the use of alternative methods and integrated control methods might be developed for professional and amateur JEVI stakeholders, with the award of a qualification where suitable. An inspection programme will assess the training that is currently available and consider potential improvement and qualification possibilities.

18. Involve JEVI stakeholders in reducing plant protection product use and encouraging the dissemination of alternative solutions

- **Promote collective action as the route to changing practices and reducing plant protection product use**

The aim is to raise awareness among professional decision-makers of their regulatory obligations and responsibilities (local authorities, urban space managers, housing managers, brownfield land managers, managers of state-owned spaces such as schools or military land) and changes provided for under the Loi Labbé.

In this case, tightened controls may serve as a driver, particularly in sectors in which the most vulnerable population groups might be exposed.

- Promote the 'Healthy land – Pesticide-free municipalities' process. The Terre Saine [Healthy Land] label, which identifies local communities that no longer use plant protection products, has created a network to showcase model communities and support all local communities in fulfilling the objectives of Law No 2014-110 of 6 February 2014 and Écophyto II+. The approach aims to move all communities towards the substitution of plant protection products, while also promoting the use of bio-control products and local 'Zero-Pesticide' charters as part of the approach, which should also receive support.
 - Produce national shared practical and communications tools and make them available to local communities.
 - Develop the reference online discussion platform on alternative solutions for professional stakeholders. This “Écophyto-pro” website will be improved, in particular by targeting all JEVI sectors, including spaces with specific constraints, in all regions.
- **Promote low-PPP land-use planning and alternative methods by trialling and improving innovation transfer to the various users (from land-use planning to the alternative space management).**

Solutions already in place in certain land areas or in other contexts (e.g. horticulture) should be adjusted and tested in other areas and in other situations to allow for more widespread use. This innovation transfer should be supported by the development of tools or studies that will make it possible to gather additional information and facilitate the use thereof (decision-making tools etc.)....

- Design integrated protection approaches for open landscape spaces, on the basis of pilot data on alternative methods for the protection of plant nursery products: Support beneficial auxiliary insects by means of specific horticultural contexts allowing them to feed and find an appropriate

habitat;

- Identify ways of managing different types of spaces (balconies, gardens, parks, road and rail infrastructure etc.) without the use of herbicides.
- **Inform amateur gardeners of 2019 changes and what they will mean**

The ban on the use of plant protection products by amateur gardeners to take effect in 2019 is the objective underpinning the information-sharing, communication and support actions to be undertaken for these gardeners at national level, where relevant, and in support of local initiatives, such as the preparation of guides for gardeners.

The original Écophyto 'Gardening Differently' platform is the reference baseline for these measures targeting amateur gardeners. Ongoing improvements will be made to the platform's tools and coordination.

In addition, the promotion of alternative and bio-control methods for gardeners will include explaining how these new solutions work by means of training for gardeners around the country, to support local-level training activities for amateur gardeners.

- **Coordinate biological monitoring of the JEVI sector**



#5



Technical coordination for the biological monitoring of this sector should be implemented at national level with a view to helping and supporting local actors (often volunteers), alongside sectoral coordinators tasked with preparing crop health newsletters and other contributors, such as distributors, who are often asked by gardeners to offer diagnoses and suggest plant protection products. This synergy between the national and regional levels will make it possible to apply high-quality oversight methodologies for JEVI, in conjunction with good plant protection practices that promote the use of bio-control methods.

PRIORITY AREA 5

PUBLIC POLICY AT TERRITORIAL AND SECTORAL LEVEL

Greater attention will be given to the territorial application of Écophyto II+. Collective local-level dynamics around the shared target of reducing and securing the use of plant protection products.

Regional governance of Écophyto II+ is organised by the regional prefect as per the arrangements set out under Action 29.2.

Strategic and financial guidelines will be set in keeping with other plans and policies in place locally, with national policy and in line with the local setting (Actions 20 to 24). The agro-ecology committee, on the basis of a national framework, defines the actions to be undertaken and financed using the additional EUR 30 million available from 2016 from non-point pollution fees.

At regional level, structural actions will be pursued, while ensuring that these are adjusted in line with new national guidelines.

Work will begin on ensuring consistency between public policies on reducing the use, risks and impacts of plant protection products, so that public action at local level benefits from a wide range of tools (Action 25).

As the adoption of different practices might be hampered by fears around the economic consequences of such changes, consideration will be given to establishing a mechanism to provide coverage for these risks (Action 26).

In addition, a set of measures will be introduced, specifically tailored to the overseas departments: the development of local partnership-based farming centred on agro-ecology (Actions 27.1, 27.2 and 27.3); managing packaging and plastics (Action 27.5); building on local workplace health and safety expertise (Action 27.4) and knowledge dissemination (Actions 27.6 and 27.7).

19. Roll out the plan at regional level

In line with the guidelines set out at national level for the plan, a roadmap for the implementation of regional policy for plant protection product use reduction has been drafted in each of the regions with the involvement of the various stakeholders. Efforts will be made to link up with the provisions for farm modernisation set out in the regional rural development programmes.

The road maps, drawn up in 2016 and 2017, will be updated in connection with the plan of action on plant protection products and agriculture less dependent on pesticides. Reducing the use of herbicides (notably glyphosate) will be a key focus area. Support will be provided for territorial projects for the development of alternatives to the use of products containing neonicotinoid substances. **Actions promoting local dialogue and the protection of local residents will also be conducted.**

In particular, the regional roadmap will provide for:

- **the application, where appropriate, of the reference baseline documents on integrated pest management for the region and by sector, in conjunction with Action 20. This will reflect the diverse nature of production systems, environmental conditions and local plant protection scenarios. These reference documents will be a key tool in allowing all farmers and space managers to adopt a progress-centred approach;**
- **As a priority, actions may be undertaken in health- and environment-sensitive areas, defined as such under existing planning documents (blueprint for water planning and management (SDAGE), regional blueprint for ecological coherence (SRCE), regional blueprint for climate, air and energy (SRCAE) etc.) and other regional plans (the regional plan for health and the environment (PRSE), harmful organisms plan etc.);**
- **The interface with the regional application of the agro-ecology project, and particularly the agro-ecology development strategy at regional level, the agro-ecology technical lead network, the regional agro-ecology demonstration platform (supported in particular by the DEPHY farms)....).It will also be necessary to ensure that the objectives of Écophyto II+ are incorporated into other plans and programmes (e.g. the national plan for sustainable agriculture (PRAD), the PRSE etc.) and into other existing schemes.**

As regards aid, exchange and discussion are required with the primary finance providers, the State, regions in their roles as managing authorities for regional rural development programmes (PDRR) and department-level councils and water supply agencies to ensure a good level of synergy between the objectives and capacities of the plan and the various aid schemes, particularly the plan for farming competitiveness and adaptation (PCEA), the MAEC and support for organic farming. Additional envelopes corresponding to the 30 million mentioned above will specifically target investments and innovations for farms and economic and environmental interest groups that seek to reduce the use, risks and impacts of plant protection products.

The roadmap will identify those regional indicators that will enable monitoring of any reduction in the use, risks and impacts of plant protection products (regional unit dose numbers and active substance quantity measures, a new regional summary indicator – see Action 14 – regional IFT, impact indicators and changing practice indicators, etc.). An overview table for mobilised financial resources showing reported and estimated amounts for all identified finance sources will be kept updated and will be used in the preparation of the national-level assessment.

20. Prepare a reference baseline document on integrated pest management applied at national, regional and sectoral levels

Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market requires farmers to apply integrated pest management principles, as set out under Annex III of Directive 2009/128/EC of 21 October 2009.

These principles are as follows:

Prevention of harmful organisms by means of the following options:

crop rotation;
adequate cultivation techniques (stale seedbed technique, sowing dates and densities, blending of species and/or varieties, under-sowing, conservation tillage, pruning and direct sowing);
use of resistant/tolerant cultivars and standard/certified seed and planting material; use of balanced fertilisation, liming and irrigation/drainage practices; preventing the spread of harmful organisms through hygiene measures (e.g. cleansing of machinery); protection of important beneficial organisms;

- **Monitor harmful organisms through observations in the field and warning, forecasting and early diagnosis systems, as well as advice from professionally qualified advisors;**
- **Base decision-making on a robust risk assessment founded on this monitoring, in which all relevant parameters are taken into consideration;**
- **Give preference to sustainable biological, physical and other non-chemical methods;**
- **Use pesticides that are as specific as possible and which have the least side effects on human health, non-target organisms and the environment;**
- **Keep the use of treatments to necessary levels (through reduced doses, reduced application frequency, non-development of resistance in populations of harmful organisms);**
- **Where resistance is known and where the level of harmful organisms requires repeated application of pesticides, apply anti-resistance strategies;**
- **Check the success of the applied plant protection measures.**

A reference document on integrated pest management will be established through a broad partnership, with the support of technical institutes. Inspiration should be taken from earlier work undertaken by other Member States, while also building on existing approaches.

This reference document, to be drafted as a series of guidelines, will have the following objectives:

- Establish shared points of reference for the design and implementation of actions with a focus on sustainable plant protection management, and draw these together to pursue the use reduction and improvement objectives. It will draw on all work already undertaken at sectoral level.
- Be tailored to the diverse nature of production systems, environmental conditions and local plant protection scenarios. It will be a key tool in allowing all farmers and space managers to adopt a progress-centred approach;
- Be taken to European level to be recognised and shared as widely as possible and be usable as a point of reference in the preparation of international commercial contracts and agreements.

At national level, principles allowing for the identification of differing degrees of integrated pest protection implementation, at partial or full farm level, will be established up to collective implementation across a territorial area.

Furthermore, work will continue on ÉcophytoPIC, the integrated pest management portal, and on tools to support integrated pest management implementation. The portal will evolve with the development of a

collaborative module (the GECO project) and will continue to leverage resources developed under the various plan actions, so as to build on the previously adopted system-centred approach. Further emphasis should be placed on promoting the portal among agricultural sector stakeholders, so as to guarantee a smooth flow of information on integrated pest management. The social network option will be considered. The creation of an alert system on the portal for new regulatory, technological or knowledge developments may be reviewed.

To the same end, the dissemination and ownership of crop guides on polyculture, viticulture, vegetable crops, fruit farming and tropical crops will be reinforced on the ground.

21. Organise and support collective projects around reducing the use, risks and impacts of plant protection products at territorial level

Preferential support will be provided to collective actions for the reduced use of plant protection products, particularly where such actions go beyond single farm level or mobilise various stakeholders within the same sector, in an effort to efficiently decrease the environmental impacts of plant protection products.

The system-based approach for agro-environmental and climatic measures (MAEC) will be encouraged with a view to developing more robust and resilient crop systems and operating models featuring an integrated approach to the plant protection product issue. Furthermore, efforts will be made to seek complementarity with economic and environmental interest groups and inter-professional organisations.

Production system diversification and organic farming development will be encouraged, particularly for field crops, as these permit a reduction in the use, risks and impacts of plant protection products. The crop diversification action will also apply to organic farmers, and the crop protection techniques used by organic farmers will be put forward as technical references.

Collective dynamics that aim to improve water supply quality at feeding areas at 1000 priority catchments will be encouraged and facilitated, with a specific focus on reducing the use of herbicides, and glyphosate in particular. The territorial delegations of the regional health agencies will be involved in relation to the quality of raw water to be used in the production of drinking water. The territorial food projects (PATs) may be targeted so as to include a strand dedicated to supporting farmers in the process of changing their practices.

22. Create and support collective projects at sectoral level

Focus will be placed on sectoral-level approaches that promote diversification (outlets, processing) and on the involvement of farmers in low-input practices, with consumers in particular, including the area of mass catering (certification schemes).

The development of organic farming and environmental certification for farms will be encouraged at sectoral level. It should be remembered that the aim of the Ambition Bio 2022 programme is for 15% of utilised agricultural area (UAA) to be used for organic production or be in the process of converting to organic by 2022.

More generally, the relevant bodies will consider the possibilities for incorporating these practices into the specifications of products bearing quality and provenance markings.

Distributors will also be invited to play a part so as to promote contractual initiatives with farmers who apply particularly environmentally friendly practices, specifically with regard to the use of plant protection products.

Furthermore, consideration will be given to mobilisation drivers for sectors and economic stakeholders downstream (collection and placing on the market, processing, distribution), where influence and

initiatives can often play a determining role in inspiring changes in production practices. This work will be undertaken at inter-professional level in collaboration with producer organisations and technical institutes, so to promote the development of rules for the promotion of low-PPP production methods.

To this end, the sectors will continue the work launched in the context of their sectoral plans, the fruit of the Etats Généraux de l'Alimentation, in order to establish quantifiable and verifiable objectives for reducing the use of plant protection products.

Sectors will also receive support for the development and implementation of alternative solutions for the control of stored food pests.

23. Support the development of low-PPP-dependent production methods

23.1 Further the development of organic farming

The development of organic farming will be promoted at sectoral level in conjunction with Actions 21 and 22, in particular under the Ambition Bio 2022 programme, which aims to ensure that 15% of utilisable arable land is organic or being converted to organic by 2022.

Ambition Bio 2022 has a budget of more than EUR 1 billion including, as of 2020, EUR 50 million a year from the diverse pollution levy (RPD).

For the purposes of supplying mass catering establishments and meeting the objectives set out in Article 24 of the EGALIM law, the plan is to provide local authorities with decision-making tools for structuring the supply sectors at local level, drawing up public contracts and training staff.

The organic agriculture certification system will be further developed: Projects to develop organic agriculture and transfer practices and techniques used in organic agriculture to other farmers will be encouraged under the Écophyto funding.

23.2 Reinforce the development of high environmental value certification

The high environmental value certification scheme, the aim of which is to reinforce best practices by making production economically worthwhile, will be intensified in order to contribute to achieving the objective of 15 000 certified farms by 2022, and 50 000 by 2030 (see the Biodiversity plan).

24. Specify partnership commitments and actions under the partnership charter for the JEVI (gardens, planted spaces and infrastructures) sector

In conjunction with priority area 4 for gardens, planted spaces and infrastructures, the roadmap will specify actions to help move local communities towards the substitution of plant protection products, support the Zero Pesticides charters, train stakeholders, develop educational show gardens, conduct promotional and communications actions targeting the general public on the risks of plant protection products and accepting the presence of weeds in particular, and targeting professionals and amateurs to promote alternative practices and bio-control methods.

Partnership charters may be introduced with a view to ensuring that plant protection products are not used wherever possible. These charters will enable the organisation of on-the-ground partnerships with the State, local authorities, distributors, amateur gardener and environmental protection associations, and professionals. In addition to the application of actions set out at national level (priority area 4), these charters will help to identify other actions to support the fulfilment of the objective, and will set out each partner's commitments.

Specifically, these charters will aim to lead the way towards the reduced use of plant protection products in restricted areas, where the complete cessation of their use is not possible.

Commitments will be made as regards specific targets for use, risk and impact reduction. Changes to practices and the impacts of those changes will be monitored and assessed through the use of targeted indicators.

25. Ensure that public policies with implications for the use of plant protection products are consistent

Many European, national and regional public policies have a direct or indirect bearing on the use of plant protection products. Seeking consistency across all the different plans arising from these policies will be a precondition for the success and enhanced visibility of collective action. Consequently, it will be advisable to ensure that the objectives for reduced dependence on and the risks and impacts of plant protection products are fully integrated into the main agricultural, environmental and health policies. This consistency must be ensured at European, national and regional level.

Policies and programmes that interact with Écophyto II+ will be assessed in order to identify any improvements or alterations that might be made to their application where appropriate.

In the longer term, the use, risk and impact reduction objective may be included in future discussions on CAP objectives. These objectives will be taken into account in the discussions around defining the environmental components of the future CAP (conditionality, eco-scheme, AECM, etc.) and making sure that environmental and health elements are taken on board in CAP measures.

Lastly, discussions will be held to assess how sustainable phytosanitary management and biodiversity preservation and promotion issues might be better addressed in management plans and operations. Consideration will be given to the creation of financial and legal tools to facilitate greater mobility on use or land ownership of strategic areas.

26. Consider a risk coverage mechanism linked to the adoption of new techniques

The objective is to reduce the economic risk to farmers while they make the transition to agro-ecology.

Following on from the study conducted in 2011, which included an analysis of existing experiences, and in the context of reform of the CAP, a study will be launched with the involvement of the public authorities, agricultural risk management researchers, insurance providers, CER France and professionals to quantify the risks associated with the adoption of new practices and to qualify requirements and possibilities in terms of risk coverage.

27. In partnership with the overseas departments, create an agro-ecological approach centred on reducing the use, risks and impacts of plant protection products

Agriculture in the overseas departments is the only form of European agriculture to be conducted in a tropical environment. The absence of a defined cold season and high levels of rainfall increase pest infectiousness. Plant-pathogen couples are often specific to these territories, and the development of control methods by manufacturers is limited as there is little return on investment. Consequently, non-covered usage rates are almost three times higher than those in mainland France.

Support will continue to be provided for work on tropical and island-based agro-ecology undertaken in

the French overseas departments. Support for the technical innovation and agricultural transfer networks (RITA) will be maintained to ensure a solid interface between research and professionals, and to provide support for sectoral structuring to ensure a real dynamic at local level. Action plans for individual sectors and local operator contracts will centre on an explicit commitment to agro-ecology and to reducing the use, risks and impacts of plant protection products.

Given the results of bio-control trials, it is essential that the overseas territories become pilot territories in this area.

In order to tackle misuse, research into control methods that have a low environmental and health impact will be supported as regards 'orphan' treatments.

Actions under the Chlordecone 3 plan will be pursued in order to limit the impact of this historical pollution. Inserm has developed a pharmacokinetics tool supported by health risk assessments and management of the health risks relating to contamination by chlordecone affecting people in the West Indies.

Moreover, work on improving collection systems for empty plant protection product packaging, unusable plant protection products and unidentified chemical products will be pursued in the overseas departments.

In addition to these specific actions, the peculiarities of the overseas territories will be taken into account in other actions under the Plan (DEPHY, priority 2 research, development, innovation, etc.).

27.1 Launch a trial programme with respect to empty treatments, inappropriate treatments or treatments intended solely for synthetic chemical preparations, and develop biological control agents

The situation of minor or empty usage is a real concern in the overseas regions, where there is particular pest pressure as a result of the climatic conditions and as diversification opportunities are limited by a shortage of treatment solutions.

It is important that diversity potential be maintained; minor crops play a major part in this and guarantee the richness of the different land types. Such diverse production must be able to comply with the rigorous quality criteria applied in the European Union while still ensuring reasonable prices for the consumer. Against the backdrop of a significant pest pressure exacerbated by climate change, it is important and urgent that these issues are taken on board.

The primary aim of this action is to promote innovative solutions that align with the objective of Écophyto II+ by promoting the testing of alternative or low-impact products, including bio-control methods. The overseas departments are very positively disposed towards the development of new integrated control methods, and are engaged with research efforts. Efforts in this area should be supported and intensified, both in terms of trials and implementation, and particularly in connection with the economic and environmental interest groups.

The implementation of this action may also see local technical institutes become more influential, particularly through the strengthening of partnerships with European-level laboratories and through collaboration with national structures such as CITFL, IBMA or ITAB.

27.2 Develop knowledge and testing on alternative crop management solutions that are low in plant protection products and respond to the specific requirements of the overseas departments

As previously mentioned, finding solutions for tropical crops and specific plant protection product issues is a priority. In order to achieve this Écophyto II+ target, support should be provided for the approval of new technical solutions; in addition, alternatives to the use of chemical products should also be supported through changes to farming practices. Work should focus in particular on solutions that do not involve the

use of plant protection products, such as cover crops, mechanical methods or genetic selection.

- **Promote the creation of innovative crop system platforms**

This action provides for the extension to all tropical crops of work launched under the sustainable banana plan, through the establishment of innovative crop system platforms. One of these tools, a key pillar for agro-ecology and conservation agriculture, relates to cover plants and the incorporation of service plants. The use of cover plants helps the crop system in a number of ways, including soil fertility, fertilisation, the environment and biodiversity.

It is also important to promote trials on the introduction of service plants from the local biodiversity offering, preserving a balanced ecosystem.

- **Promote research into agricultural technology**

In the field of agro-ecology, innovation cannot just be top-down; all stakeholders must work together, and particularly so in relation to mechanisms under the European Innovation Partnership (EIP). For the overseas departments, in conjunction with priority area 2, there are operational research programmes established in keeping with the cooperation measures provided for under the rural development programmes (Measure 16) with the IRSTEA, pilot farmer groups, manufacturers and technical institutes, which aim to develop suitable tools for mechanical weed management in tropical environments and to optimise spraying tools.

- **Create varietal selection platforms for tropical production offering high added value**

The varietal selection of disease-resistant plants is of special importance for tropical crops, as this offers a sustainable alternative to chemical control. As with the CIRAD banana platform, a plant breeding platform for tropical production offering high added value should be created, offering a solution to situations of technological deadlock.

27.3 Develop regional cooperation and cooperation between the overseas departments

The overseas departments are a major environmental asset for France; more than 90% of French biodiversity can be found in these territories, all of which are tropical but which remain highly diverse and distant from one another. Nevertheless, these territories have a number of similar characteristics, such as a high number of 'orphan' or empty treatments and a need for specific adjustments to farming practices to meet the expectations of the agro-ecology project. Spaces for discussion and exchange are therefore needed to promote a positive attitude to research and transfer considerations.

- **Develop regional cooperation**

As regards the focus areas of minor use and alternative practices, the overseas departments should be more fully integrated at regional level, in addition to promoting the sharing of practices between farmers and supporting cooperation between research bodies. These operations will mainly be financed through INTERREG, a cooperation body financed by the European Regional Development Fund. Écophyto II+ may act as the national counterpart to these projects.

- **Promote the exchange of practices and cooperation between the overseas departments**

The cooperation project between the overseas departments will focus on three flagship actions:

- a seminar to promote exchange between the overseas departments will be organised every two years to boost synergies between stakeholders with regard to Écophyto II+; It will be attended by farmers, researchers and institutional stakeholders, who will share their expertise and experience;
- the creation of a dedicated online platform will allow for more efficient dissemination of information in real time, formalise exchanges between technical institutes and encourage joint scientific publications of the overseas departments;
- support for the creation of the OPIDOM association, which will serve as the technical platform for sharing between the overseas departments.

27.4 Gain a better understanding of exposure and reduce risks for the general public, the environment and professional users of plant protection products in the overseas departments

Work performed under priority area 9 of Écophyto I has helped to strengthen local expertise in workplace health and safety. These efforts will be continued under Écophyto II+, in conjunction with work under priority areas 2 and 3; this expertise will be leveraged more widely in order to boost understanding of exposure and risk reduction for users, the general population and biodiversity, while taking the specific features of these territories (working conditions, crops, climatic conditions etc.) into account.

Work will centre on advancing knowledge of exposure in tropical crops by continuing work on matrices and developing safer technical solutions (application equipment and personal protective equipment in particular) that take account of the specific working conditions in the overseas departments.

27.5 Establish a long-term channel for the sustainable management of empty packaging and unusable plant protection products

The first Écophyto seminar for the overseas departments, held in March 2008, clearly highlighted the issue of agricultural waste management, specifically in relation to empty plant protection product packaging and unusable plant protection products (EVPP/PPNU).

Following on from the local organisation of regular collections, there is now a desire to introduce a sustainable and stand-alone system for collection of this waste, to be tailored to the situation in each overseas department.

The organisational structure for agro-supply waste management in mainland France was introduced on a voluntary and gradual basis, over a ten-year period. Management of the various programmes is governed by private law contracts between the stakeholders: sellers, eco-agencies, distributors and waste management businesses. The voluntary sector must be developed in close collaboration with the public authorities. As the situation for the overseas departments is more complex than in mainland France (significant additional costs, sectoral organisation which could be improved, distance to market), the authorities must be able to support the creation of a sector of this kind by means of:

- the creation of one territorial protection body per overseas department to establish the sector;
- a gradually decreasing co-financing action by the European Agricultural Fund for Rural Development and ADEME, the Agency for the Environment and Energy Management, to close the financing plan.

Research actions undertaken in this sector should also be put forward, such as adapting biodegradable mulching to the tropical environment with a view to reducing the use, risks and impacts of herbicides.

27.6 Improve agricultural transfer

The agricultural situation in the overseas departments is characterised by its specific organisation, based around large-scale production intended mainly for export, such as bananas and sugar cane, and 'diversification crops' which are used primarily to meet the food needs of the local population. These diversification crops, market produce and orchards, are mainly grown by small farmers, still often outside of sectoral organisation mechanisms, which makes the dissemination of knowledge and changes in practices more challenging. In addition, there is no general reference documentation for integrated pest management in the overseas departments.

- **Provide professional development for stakeholders and support skills transfer**

Écophyto II+ should enable the mobilisation of all stakeholders across the five overseas departments. The specific considerations around structuring both sectors and stakeholders offer an opportunity for the plan to succeed, as this structuring process can be developed with that objective in mind. The coordination of this major project is crucial to ensuring that it is properly and successfully implemented. Support should be provided through financing for a structuring body in each overseas department.

- **Develop reference documents for integrated crop management through the agricultural transfer and innovation network (RITA)**

27.7 Announce the introduction of low-plant protection product use certification in the overseas departments

The draft law on balance in trade relations in the agricultural and food sectors, and healthy, sustainable food provides for the Government to be empowered to amend the Rural and Maritime Fishing Code in order to extend the pilot project on low-plant protection product use certification to the overseas departments, in a form geared to their needs. In this context, the General Council for the Environment and Sustainable Development, the General Inspectorate for Finances and the General Council for Food, Agriculture and Rural Areas will be commissioned to prepare for the extension of this scheme to the overseas departments.





PRIORITY AREA 6

COMMUNICATE AND ESTABLISH SIMPLIFIED GOVERNANCE

The aim of this priority area is the widespread dissemination of tools and actions implemented under the Écophyto plan. This communication process will highlight the modern and positive nature of the challenge of reducing the use, risks and impacts of plant protection products (Action 28).

Furthermore, to ensure that Écophyto II develops and adapts in real time to reflect the plant protection product situation in France, information will be provided to the public on the monitoring indicators for use, impact and changing practices developed under priority area 3.

The European level will be integrated through the use of benchmarking and through the promotion of French initiatives, particularly the promotion of the French approach and positions within the development process for a new European strategy for plant health.

This priority area also outlines the arrangements for governance (Action 29) and financial circuits (Action 30) at national and regional level.

28. Focus communication on the positive and modern challenge of reducing the use, risks and impacts of plant protection products to create an agricultural sector that offers excellent economic, environmental and social performance

Communication plays a cross-cutting role across all priority areas, serving to support and spread applied actions to help gain the support of all stakeholders for the objectives of the plan and for a change in practices. The national and regional communication should therefore centre on the wide range of stakeholders involved in Écophyto, while placing the farmer at the very heart of a change in practices in order to involve the agricultural sector in a measured way.

This communication will also target the general public, providing information on risks to health and the environment and on existing provisions to prevent these risks. The aim will be to encourage transparency and understanding of the issues, in order to make the debate on plant protection products more objective.

National communications contribute to addressing the following global issues:

- Placing the necessary reduction in the use, risks and impacts of plant protection products in the wider context of sustainable agriculture at economic, environmental and social level.
- Raising awareness around protecting human health through training, information and prevention, not only for users but also for the general public, in particular those most exposed or most vulnerable (children, pregnant women, sick persons and elderly persons, and persons living adjacent to agricultural areas).
- Mobilising the public, all sectoral-level actors and all stakeholders to support them in the move towards a more enlightened, active and responsible approach.
- Promoting a positive and constructive citizens' debate on plant protection products, involving all stakeholders, in order to collectively find solutions for sustainable production, whilst protecting the entire population.
- Showcasing the regional level as a source of experience and a focal point for dissemination and transfer.

Links will be established between these communications and those on accelerating the transition to ceasing the use of plant protection products in gardens, planted spaces and infrastructure (JEVI sector) as mentioned under Actions 17 and 18 of the Plan.

In order to contribute to addressing these global issues, the communications campaign will have the following specific aims:

- **gaining farmers' and all agricultural stakeholders' support** for optimising and changing agricultural practices and fulfilling the objectives on reducing the use, risks and impacts of plant protection products requires the establishment of an agro-ecology approach that increases economic benefits and reduces environmental impacts; innovative farmers combine various tools (seeds, ÉcophytoPIC, the crop health newsletter, diversification etc.) and techniques to protect against bio-pests, instead of using chemical treatments: they do not apply a package of technological measures, but endeavour to optimise eco-system services to lower costs and reduce workload peaks in connection with their structures;
- as farmers can only commit to investing in the agro-ecology approach as part of a collaborative effort in conjunction with their sector, the local environment and advisors, **promote farmers' involvement** in Écophyto II and 'Producing Differently' group networks (DEPHY farm network and 'Producing Differently' networks); examples demonstrating that the system can be changed while also making a better living from one's profession will be given particular emphasis;
- as farmers will have made a commitment to reducing the use, risks and impacts of plant protection products, if these changes are noticed and promoted by consumers, inform consumers so that they can reconnect with farmers and all stakeholders (in the areas of food processing, health, environmental protection); citizens should be made aware that agriculture is changing and that farmers and scientists are working together to find alternative solutions to plant protection products, or viable solutions that are less harmful to health and the environment, to reduce the use, risks and impacts of plant protection products while maintaining a high-yield, high-quality agricultural industry; **respond to questions from the public and boost their confidence in producers** by making them aware of the skills and knowledge of French farmers, the hygienic quality of French food, and food control mechanisms (compliance with plant protection product residue limits, more rigorous specifications for plant protection product marketing authorisations, the national strategy for endocrine disruptors, surveys by the National Brigade for Veterinary and Phytosanitary Investigations);
- **raise awareness among farmers of consumers' expectations** around product hygiene quality

(pesticide residues); **at the same time, raise awareness among consumers of the consequences of overly high expectations** with regard to the visual appearance of products in relation to plant protection treatments;

- **encourage an exchange of information and local dialogue between farmers and local residents on plant protection products and their use, the potential impact on the health of the local population and existing means of risk reduction;**
- so as to reduce the impact of plant protection products on human health, **encourage farmers to take measures** to protect their own health and create a working environment that lends itself to risk reduction (encouraging the use of personal protective equipment etc.) ; **raise farmers' awareness of the fact that reducing the use of plant protection products actually helps to protect them, too;**
- **inform the general public** on the context of the use of pesticides, risk and exposure, the regulations adopted to prevent risks to health and the environment and means of prevention in the event of the risk of exposure to these products;
- **support the general public when, on 1 January 2019, the ban on plant protection products for private individuals enters into force, advising them of alternatives and raising their awareness of the risks of using imported products or those reserved for professional users;**
- **raise awareness of the need to prevent the introduction of regulated and quarantined harmful organisms** and invasive foreign species which may require the extensive use of plant protection products as the only possible form of treatment;

Consideration will be given to the creation of a communications plan that will involve all stakeholders, including local actors, focus on farmers and target the general public on the topic of producers of food, health and the environment, while communications efforts targeting farmers will focus on the technical, economic and health benefits of implementing a collective agro-ecology process. The latter will be illustrated by examples of viable and concrete measures that are directly applicable to agriculture.

29. ESTABLISH A SIMPLIFIED, OPERATIONAL GOVERNANCE STRUCTURE

29.1 At national level

A more fluid and streamlined governance structure has been put in place at national level. **It is based on joint operational management, shared between the Ministry of Agriculture and the Ministry of Ecological and Inclusive Transition, and strategic steering associating these two Ministries together with the Ministry of Health and Solidarity, and the Ministry of Higher Education, Research and Innovation.** The aim of this new structure is to process financial files more effectively while also allowing more space, at strategic level, for discussion around broad guidelines, with the involvement of all stakeholders.

The strategic orientation and monitoring committee (COS), comprising all the stakeholders involved in the Plan at national level, **has been reinforced and broadened to include, in particular, stakeholders involved in the area of health and the environment.** This committee makes decisions pertaining to the broad strategic guidelines of the plan. It discusses priorities, arrangements for implementing the Plan's various actions with a view to ensuring their consistency and efficiency. **An annual progress review of the actions and funding use at national and regional levels is submitted to this committee. It is chaired by the ministers responsible for agriculture, for ecology, for health, and for research.**

A **scientific and technical committee (CST)** composed of members appointed *intuitu personae* on the basis of their personal expertise, in coordination between the four steering ministries, has been established. **It**

is responsible for assessing the achievements, results and impacts of the Plan. It can propose surveys to document this assessment or European benchmarking activities. It formulates proposals with regard to indicators and follow-up. It also ensures a scientific advisory role for the managers of the Plan in order to gear the Plan to the very latest knowledge or likely future developments. CST members attend the priority area 2 steering committees.

So as to meet the specific research requirements of priority area 2, an R&I Scientific Advisory Committee has been established. This committee mobilises experts and specialists in research, training and innovation and experts from the agricultural community. **This reinforces its skills in the area of health and the environment, in particular biodiversity.** The role of the R&I Scientific Advisory Committee is to draw up the national research and development strategy, which is set out in the operational road map, to organise and monitor the implementation of calls for research proposals or surveys (meta-analyses, joint surveys). It is **co-managed by the Ministry of Agriculture, the Ministry of Ecological Transition, the Ministry of Health and the Ministry of Higher Education and Research.**

The implementation of each action is the responsibility of action or action group coordinators, who may be internal or external to the administration.

29.2 At regional level

In order to ensure consistency across development actions implemented at regional level, regional governance of Écophyto II is organised by the regional prefect with the involvement of the primary partners, as part of the committee to be established to monitor the agro-ecology project at regional level.

This **agro-ecology committee** organised by the regional prefect brings together the region, the regional health agencies, the relevant finance providers and water supply agencies, agricultural agencies and development bodies, notably the regional chamber of agriculture, the national agricultural and rural associations (ONVAR) and all stakeholders. It establishes strategic regional guidelines, discusses the regional roadmap, validates guidelines for regional calls for projects and monitors the implementation of the plan within the region. Strategic and financial guidelines will be set in keeping with other plans and policies in place locally (rural development programmes and agency intervention programmes) and in

line with the local setting, while observing the national guidelines. To do this, efforts will be made to ensure the presence of diverse structures within these committees, which will feature representatives from the agricultural and organic farming communities, the JEVI sector and consumers, alongside institutions and administrations.

Regional financing will target investment and innovation on the part of farmers and economic and environmental interest groups (DEPHY, economic and environmental interest groups, Écophyto 30 000 groups) that facilitate the reduced use of plant protection products across the various sectors (suggestions of the inter-inspection report on low-PPP certification), as well as approaches that align with the policy direction and objectives of the regional strategy developed by the agro-ecology committee.

A committee of finance providers made up of financial decision-makers will put forward funding to be allocated by that body at regional level to support agro-ecology, including Écophyto appropriations.

30. Mobilise financial resources commensurate with the objectives

30.1 Financial amounts allocated to the plan

As a result of the fee for non-point pollution paid by users, and by farmers in particular, when purchasing certain plant protection products, the amount of EUR 41 million currently allocated to the AFB (French Agency for Biodiversity) to fund Écophyto II actions will be boosted by an additional EUR 30 million (deducted by water supply agencies from 2015 and available since 2016) arising from the widening of the non-point pollution fee to include all CMR2 products.¹⁴

In addition to the EUR 71 million dedicated to Écophyto II, it will be necessary to ensure the visibility of other sources of financing to help support the plan's objective, irrespective of who manages these resources or the mechanisms that deliver them. To that end, an overview table for mobilised financial resources showing reported and provisional amounts for all identified sources of funding will be kept updated. It will be submitted annually to the strategic orientation and monitoring committee (COS). At regional level, a similar table will also be kept updated, and will be submitted to the agro-ecology committee and transferred to the national level on an annual basis.

The annual allocation of funding across the different actions of the plan will be discussed with stakeholders on a yearly basis within the committee for strategic direction and monitoring.

30.2 National and regional financial networks

With regard to the EUR 41 million drawn from the non-point pollution fee (RPD) and currently earmarked for the Écophyto plan at national level, the practical management of this payment is delegated to the AFB on the basis of specific guidelines co-signed by the Ministers for Agriculture and the Environment with a delegation of authority from the Board of Directors to the AFB Director-General for a maximum amount.

The arrangement is therefore as follows:

- implementation of the annual budget on the basis of the model formalised by means of the guidelines co-signed by the Ministry of Agriculture, the Ministry of Transition and addressed to the AFB;
- examination of individual projects by the Ministry of Agriculture, the Ministry of Transition and the AFB, with the support of the pilot actions; DG decision: either directly, if below a certain threshold, or on the basis of a decision of the Board of Directors, if above that threshold;
- preparation and signature of financial assistance agreements; monitoring of the implementation and of the agreements; financial risk provisions undertaken by the AFB.

¹⁴ Articles L. 213-10-8 and R. 213-48-13 of the Environmental Code

Funding under Écophyto will take into account the undertakings made by stakeholders formalised in their contract.

An additional EUR 30 million has been mobilised at local level, specifically to finance actions identified by the agro-ecology committee. In order to ensure overall consistency, coordination takes place at national level pursuant to the technical instruction of 1 July 2016 on the regional breakdown of the Écophyto II Plan. **This technical instruction will be updated.** This funding will target investment in farms that aim to reduce the use, risks and impacts of plant protection products, in conjunction with actions provided for under the low-plant protection product certification scheme and selected on the basis of regional calls for projects. Special focus will be placed on ensuring that management regulations for water supply agencies under this envelope are as closely harmonised as possible between the various catchment areas.

As funding for actions to be implemented in the overseas departments cannot be secured by the water supply agencies, this funding will be provided under the EUR 41 million envelope managed by the AFB.

Under Écophyto II+, the efficiency of the financial circuits has been improved in line with the national and regional priorities, in particular to support farmers more closely. In order to safeguard, speed up and facilitate financial support for the projects, certain financiers (the AFB at national level and the water supply agencies at regional level) are involved throughout the process.

30.3 Calls for projects

Every year, calls for projects are launched by the Ministry of Agriculture and the Ministry of Transition and the financiers at national and regional level to select innovative actions that champion a reduction in the use, risks and impacts of plant production products and the transition to agro-ecology.

These calls for projects, the priorities for which are defined by the Ministry of Agriculture and the Ministry of Transition, in accordance with the guidelines validated in the COS (Scientific Advisory Committee), should allow for the emergence of innovative projects, beyond structural mechanisms with previously established governance and procedural arrangements (DEPHY, biological territorial monitoring and Certiphyto in particular), and should therefore focus on actions relating to transfer, dissemination, communication, innovation, the implementation of integrated pest management, agro-equipment, personal protective equipment (PPE), and bio-control, for example.

With regard to research and innovation, national calls for projects are drawn up by the R&I COS. Particular attention will be afforded to the crops with the greatest impact on the environment and health and for so-called minor crops, 'orphan' treatments and tropical crops.



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GLOSSARY

ACTA	Association de coordination technique agricole
AEAP	Agence de l'eau Artois-Picardie
AFB	Agence française de la biodiversité
ANSES	Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail
APCA	Assemblée permanente des chambres d'agriculture (Permanent Assembly of Chambers of Agriculture)
ARS	Agence régionale de santé (Regional health agency)
AXEMA	Union des industriels de l'agroéquipement [Union for the agro-equipment industry]
BNEVP	Brigade nationale d'enquêtes vétérinaires et phytosanitaires [National Brigade for Veterinary and Phytosanitary Investigations]
BNV-D	National Bank for Distributor Sales [Banque nationale des ventes distributeurs]
CTIFL	Centre technique interprofessionnel des fruits et des légumes [Inter-professional technical centre for fruits and vegetables]
DAAF	Direction régionale de l'alimentation, de l'agriculture et de la forêt [Regional Directorate for Food, Agriculture and Forestry]
DEB	Direction de l'eau et de la biodiversité [Division for Water and Biodiversity]
DEHPY	Réseau de démonstration, expérimentation et production de références sur les systèmes économes en phytosanitaires [Network for demonstration, trial and reference production for low-plant protection product use systems]
DGAL	Direction Générale de l'Alimentation [Directorate General for Food]

DGPE	Direction générale de la performance économique et environnementale des entreprises [Directorate-General for business economic and environmental performance]
DGS	Direction générale de la santé [Directorate-General for Health]
DICOM	Délégation à l'information et à la communication [Department for information and communications]
DRAAF	Direction régionale de l'alimentation, de l'agriculture et de la forêt [Regional Directorate for Food, Agriculture and Forestry]
DREAL	Direction régionale de l'environnement, de l'aménagement et du logement [Regional Directorate for the Environment, Planning and Housing]
EPLEFPA	Etablissement public local d'enseignement et de formation professionnelle agricoles [Public local educational establishment for agricultural teaching and vocational training]
EVPP	Emballages vides de produits phytopharmaceutiques [Empty plant protection product packaging]
FNA	Fédération du négoce agricole [Federation for Agricultural Traders []]

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