C-IPM is an ERA-Net funded by
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C-IPM
Coordinated Integrated
Pest Management in Europe

Announcement of the second transnational call for applicants (pre-proposals)

Submission

Pre-proposals, by 1st June 2016 (15:00h CET)
Full proposals, by 30th September 2016 (15:00h CET)

Amendment 2

11th April 2016

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1. INTRODUCTION

The 2nd joint transnational call of the ERA-Net C-IPM is open for collaborative research projects on **Thursday 31th March 2016,** with a total budget of approx. 7.3 Million €. This announcement provides the most relevant information on the scope of the call, topics selected for funding, countries involved, budget, application procedure, calendar, description of the consortia to apply, criteria used for the evaluation of the projects and contact details.

2. WHAT IS C-IPM?

C-IPM stands for "Coordinated Integrated Pest Management in Europe". As an ERA-Net, it intends to foster cooperation between national research - activities to ensure a higher level of implementation of Integrated Pest Management (IPM) among European farmers - by creating synergies from national investments in research and extension, from Europe initiatives, and from private sectors activities in the areas on Integrated Pest Management (IPM) and minor uses.

C-IPM considers IPM as a continuously improving process in which innovative solutions are integrated and locally adapted as they emerge and contribute to reducing reliance on pesticides in agriculture thereby promoting sustainable agriculture. IPM is therefore a continuum, ranging from optimization of pesticide use within 'current' crop protection systems, to substitution via the adoption of non-chemical strategies, and to a redesign of production systems obtained by acting for example on varieties, crop rotations and landscapes.

Member States of the European Union are currently facing major difficulties in the area of crop protection in relation to the production of minor or special crops and more in particular with 'minor uses'. This not only relates to fruit and vegetables crops, but also to tobacco, ornamental plants, herbs and spices as well as to tropical crops grown in Europe. The challenge for C-IPM here is to address the reduced pesticide availability both for the long and the short term with the combination and diversification of control methods, as well as extrapolation initiatives when not already undertaken by EPPO or the European task force on minor uses.

The ERA-Net C-IPM, consists of a network of 32 partners from 21 European countries.

3. C-IPM GOALS

The overall goal of C-IPM is to ensure a higher level of implementation of IPM among European farmers by creating synergies from national investments in research and extension. The specific goals are to:

- ✓ Identify synergies and gaps in existing national and transnational programmes and define an IPM-specific strategic research agenda and an implementation plan.
- ✓ Organise and fund joint transnational calls.
- ✓ Ensure better translation of national and European IPM-related programmes into applicable innovations.

4. BACKGROUND OF THE CALL

This is the second joint transnational call of the ERA-Net C-IPM for collaborative research projects which is open on Thursday **31th March, 2016.**

Participant countries involved in this call are: Austria, Belgium (Flanders and Wallonia), Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Lithuania, Norway, Spain, Sweden, Switzerland, The Netherlands, Turkey and United Kingdom.

The list of the funding bodies from each of these countries and their respective budget dedicated to this call, is given in Annex A.

5. CALL TOPICS

The call includes the following three topics to apply. Interested project consortia should apply **to one or more** topics, which will be funded according to the funding table (see Annex A).

CLUSTER A: Preventive and sustainable (pest) management

- **Subtopic A2:** "Integrated, sustainable and resilient Cropping systems" (RESCROPS).
- **Subtopic A3: "**Innovative and new pest monitoring tools and Decision Support Systems" (INNO-DSS).

CLUSTER B: Alternative and innovative control.

- **Subtopic B1:** "Innovative direct biological control methods in holistic IPM approach" (INDIBICOM-IPM).
- **Subtopic B2: "**Pests resistance management" (PRM)
  (the term pests includes: arthropods, bacteria, fungi, insects, phytoplasma, viruses, weeds)

CLUSTER C: IPM in Minor Crops.

- **Subtopic C2:** "IPM for Delia/Psila flies" (cabbage root fly and carrot fly)
- **Subtopic C4:** "Fruitflies in stone fruits, pome fruits, berries and small fruits; *Drosophila suzukii* and others fruitflies"
- **Subtopic C5:** "Mites (spider, rusts and bud) in berries and small fruits"
- **Subtopic C7:** "Control of thrips and whiteflies on protected crops"
- **Subtopic C11:** "Diseases in Stone fruits" (DISton).

SUBTOPIC A2:
Integrated, sustainable and resilient Cropping Systems (RESCROPS)

This topic calls for research at the level of the cropping system (CS), i.e. the combination of one or more crops with the cultivation techniques that a farmer implements in a field, or protected culture, in order to obtain the outputs he expects. Projects restricted to individual crop-pest systems are therefore not relevant. Conversely, considering contextual aspects and features occurring at organisation levels higher than the CS (multiple fields and landscape, farm enterprise, and socioeconomic organisations) is recommended as much as they have a bearing on the behaviour of pests, the setting of farmer's goals, and the feasibility and profitability of CSs.

Cropping systems are considered more resilient to pests when their inherent properties reduce pest occurrence and pressure or limit yield losses in case of pest attacks. This occurs when the type and organisation of crops and plants, and the sequence of agronomical techniques implemented in a CS interfere with the build-up of pest populations, inoculums or weed seed stocks, hinder the spreading of pests and the completion of epidemic cycles, or reduce the receptivity and vulnerability of crops.

Adopting resilient CSs is at the core of the first of the 8 principles of IPM ("prevention and suppression") listed in the EU Framework Directive 2009/128/EC on the sustainable use of pesticides (Annex III). It is a strategic approach that reduces the need to use direct control methods, including chemical ones. It may also create more favourable conditions for alternative control methods when these are more efficient under low pest pressure (e.g. some biocontrol methods), further reducing the dependence on pesticide use.

Therefore, any practice that improves the resilience of a CS also contributes to its sustainability. But because the impact of practices is manifold, CSs resilient to pests should also be assessed for their compliance with other environmental requirements, as well as for their economic and social drivers and efficiency in order to appraise their overall sustainability. Moreover, the current agriculture in Europe is diverse, adapted to the diversity of soils, economically important crop systems for specific regions, climates and economic organisations. Hence the resilient strategies likely to best reconcile the various components of sustainability probably differ across European regions. Research focusing on resilient CSs should explicitly consider this diversity of production situations so as to foster the adoption of innovative, resilient practices by the farmers.

This call is intended to support innovative research that will contribute to the design and evaluation of more resilient CSs. Research is needed to understand how the diversity within a CS (crops and plants, technical practices) and in its environment can be used as levers to manage the development of pests. This research calls for a multidisciplinary approach in order to confront the agronomic properties of the CS with the biological, epidemiological and ecological properties of the pests. As pest dynamics often exceeds the scale of a single field, effective levers to improve resilience are also to be found in the size and organisation of fields, in the spatial lay out of crops and cultivars, and in some features of the landscape. This research also requires an integrative approach to get a comprehensive view of the effects of multiple practices and their interactions on the one hand and the diverse properties of the whole set of pests that may affect the system on the other.

Ideally, research on resilient CSs should adopt a holistic approach, as indicated above. However, more sectorial projects that aim at enlightening particular aspects are also relevant, as long as the integration of their results into the whole system is fully considered. In practice, proposals will be described along the 4 following entries (types of crops, pests, levers and approaches) by indicating under each entry which aspects will be considered or emphasised.

1 – Types of crops: all annual and perennial crops are eligible, but priority will be given to those that contribute the most to the overall pesticide use (e.g. arable crops) or seem to offer the greatest opportunities to reduce dependence on pesticides by changes at the CS level; but also to those that experience a lack of chemical solutions due to the withdrawal of pesticides; and to those that may be in a priority list in the contributing member states.

2 – Types of pests: Preference will be given to projects considering altogether the set of pests that are of greatest concern in the CSs under consideration. Alternatively, projects may focus on a single type of pests (e.g. weeds, soil borne pests and pathogens, aerial diseases or animal pests, mycotoxin producing fungi) and on the set of levers most relevant for their management; in which case, pest types will be prioritised as above for their importance in pesticide use or their relevance to the CS approach.

3 – Types of levers for improving resilience and facilitate installation and activity of BCO's, falling into 3 categories:

- Plant diversity management: diversifying plant species and crop cultivars and resistances in time sequence or in spatial lay out (e.g. rotation, intercropping, cover crops, companion planting, variety mixtures…).
- Soil/substrate and crop management (e.g. tillage, fertilisation, irrigation, amendments, sowing date and density, pruning…)
- Landscape management that may restrict the dispersion and abundance of pests or enhance biological regulations (e.g. biological or physical barriers, distribution of fields and non-cultivated areas in the landscape, management of semi-natural reservoir areas providing shelter for auxiliaries…).

4 – Approaches: Research on resilient CSs should not be limited to the implementation of accepted rules of the thumb and merely empirical relationships; it has to be based on a logical framework in which (i) the main ecological processes that are critical for pest management are identified and (ii) the sequence of decisions and technical actions which can be used to target these processes is determined (including the choice and spatiotemporal arrangement of species and varieties).

Proposals should indicate how such a framework will be established, based on pre-existing data and knowledge and possible previous research. They may consider reinforcing it by acquiring missing knowledge and references on the biology, ecology and harmfulness of pests and the impact of the various features of CSs on these biological and ecological processes.

This knowledge basis may be enriched by taking stock of the largest possible range of relevant field experiments, learning from farmers' own initiatives, and developing the appropriate methodology to collect and interpret these data.

The research should contribute to the design of resilient CSs. Building agroecological models and using them by means of optimisation and evaluation procedures can be part of the design process. These models will help understand the complex effects of multiple agronomical levers and their interactions, take simultaneously account of multiple pests, and represent their interactions with crops at the system level.

Innovative CSs should be evaluated based on multicriteria assessment tools in order to simultaneously consider their environmental, economic and social sustainability. The comparative assessment of diverse CSs may help detect possible antagonisms between these objectives, identify needed trade-offs and possibly find the best compromise.

Proposals should also consider approaches that may help fill the gap between research on innovative CSs and their field implementation by farmers, such as:

- Taking into account the constraints imposed by the structure and functioning of the farm, as well as its socioeconomic context during the design/assessment process;
- Organising the experimental validation and demonstration of innovative CSs in real conditions;
- Devising tools and indicators to help farmers in the diagnosis of their local conditions and elaborating DSS to guide them in the use of resilience levers at the CS level.

General recommendations

Preference will be given to proposals that take advantage of the transnational dimension of the call:

- by gathering expertise which is not present within a single state;
- by comparing tools, models, indicators… already developed separately in different countries;
- by exploiting and taking explicitly into account the diversity in ecological, agronomical and production situations occurring across Europe in the design and assessment of CSs;
- by exploiting the potential of multinational experimental and observation networks.

Regarding experimentation, projects are encouraged to recruit already established experiments, such as IPM-orientated long term experiments.

Expected research outputs/results

Projects should result in significant advances in the potential for reducing reliance on pesticides by improving the resilience of CSs in the agronomic situation under investigation. They are not expected to produce all-purpose ready-made resilient CSs but to provide appropriate experiments, tools and advices in order to foster the practical implementation of this potential by farmers according to their local conditions and personal goals. Typical outputs are:

- Logical framework enriched with new data and knowledge for reasoning CS resilience to pests; validated approaches and models to support design and assessment of resilient CSs scientists
- Examples of CSs with multi-sector performances, illustrating how various levers of resilience can be activated, the potential for reducing reliance on pesticides, and the possible limitations according to situations of production R&D communities, policy makers, stakeholders in the agricultural and agrifood chains.
- Co-innovation oriented tools, indicators, DSS… designed to allow advisers and farmers to get involved in the redesign of CSs and support them in management of effective levers farmers, advisers, education.

SUBTOPIC A3:
Innovative and new pest monitoring tools and Decision Support systems (INNO-DSS)

Decision Support Systems (DSS) have been implemented in many countries for a long time to help farmers to adjust the control methods to the real risks posed by several pests. As they are often opposed to routine or "blind" and systematic use of PPP, these DSS are considered by the farmers using them routinely as one of the most valuable action of IPM program, with direct and concrete implication in terms of control measures and significant reduction of PPP use. The DSS are also often seen as opportunities for farmer pest control education and a starting point for a wider IPM implementation, including alternative control techniques and preventive measures.

The efficient implementation of DSSs requires efficient Pest Monitoring Systems (PMS) in order to assess the actual pest profile and pressure at different spatial and temporal scales. The organisation and the scientific basis of existing PMS/DSS vary widely from pest problems and countries, starting from the single detection of pest to complex systems including pest detection, quantification and characterisation (species, strains, resistance, etc...), information on biology and damages, dynamic of populations, economic impact, forecast of population based on modelling, risk assessment, control methods, antagonists, etc.... Huge differences also exist between countries, crop and pests in the content of the information send to the farmers and the organisation of the communication systems.

As many countries are facing similar pests in similar crops and as several DSS are using the same tools for monitoring, forecast and transfer of the information to the farmers, C-IPM partners have expressed their interest to share knowledge, expertise and develop joint research programs related to Pest Monitoring Systems and DSS. The difference of the complexity and implementation level between countries has also been seen by countries less advanced in several DSS as a relatively easy, rapid and low-cost enhancement of their system via sharing of the knowledge and experience from other countries.

An extended analysis of existing DSS in Europe has already been done in 2009 (ENDURE) and in 2013 (SCAR CWG – IPM). Even if these analyses did not include all actual partners of C-IPM, they can be considered as a good basis for mapping existing systems and used to identify possible joint research projects.

The update of the existing mapping on DSS and PMS would have high added value if it is available as a database with access for experts across countries. The database and a potentially attached wiki (or directory) would enhance the access to information and enable more efficient sharing of collaboration across borders.

Several challenges have been identified:

- Pest detection, characterisation and quantification, including development and validation of innovative tools for identification, sampling and monitoring. The recent development of molecular technologies for detecting and identifying pests offers new perspectives and could greatly improve the accuracy and efficiency of existing Pest Monitoring Systems.

- Pest forecast, including dynamic of populations, improvement and validation of models based on field observations, etc.... This includes research on the biology of the pest, their life-cycle and the key factors that could limit their populations. Several DSS are also facing the problems linked with the limited number of observation points of most PMS and their use to predict the risk in a determined area. Could these problems be solved with the help of epidemiological models? Also, what biotic and abiotic co-variables can be collected and used to redress this sampling, to extrapolate the results to other situations, to predict the local level of risk and thus to support tactical or strategic decision-making? How take local data /local conditions into consideration in the models?
- Redefinition of "old" threshold values in the context of the actual production systems (resistance traits of the actual variety set, market, control methods available, compensatory ability of crops according to the actual agricultural practices, etc...), with regional and transnational perspectives. The concept of threshold levels, commonly used in current DDS, should also be extended to better take into account the effect of the environment and agricultural practices when predicting damages. Their relevance depends heavily on the context of their use, particularly in protection strategies implemented at the cropping system scale. Finally, it might be useful to consider more generally the various 'benchmarks' used by farmers: further analysis is needed into how these benchmarks are formed and used, both in terms of biology and in terms of the behaviour of actors and their economic relations.
- Communication lines with end-users, development of specific tools.
- Harmonisation/standardisation of DSS systems at regional, national or transnational level, for all aspects of DSS (from monitoring to forecast and communication). Regarding the decision itself, the way decision-makers rationalise their practices or their phytosanitary recommendations with respect to thresholds (risk perception, ergonomics etc.) and analyse how the different benchmarks mentioned above can be used to optimise decision-making needs to be better understood. To what extent does the proliferation of information on pests and their associated thresholds modify aversion to risk and, therefore, practices?
- Harmonisation vs taking account of local needs and local data.
- Enabling the efficient cross-border use of existing DSS (core data and algorithms) by harmonising or developing interfaces.
- Implementation and integration of monitoring and Decision Support systems into Integrated Cropping Systems (also transnational and regional) with links to other aspects of IPM as breeding resistance, cropping systems, alternative control methods, etc...
- DSS in a broader context than single pest/crop association, e.g. considering farm level, production site, resistance management, global change, landscape biodiversity... By example, Pest Monitoring System can provide, beyond tactical decision, useful information on evolution of biotic pressures over time, depending on climate changes and changes in practices, in particular in response to National Action Plans.
- Socio-economics aspects, as DSS end-users behaviour, threats and limitation of the systems due to human factors, etc...

Expected research outputs / results

- Development of new tools and innovative methods for DSS including those supporting the
- choice of the most appropriate control method/product (fast monitoring of pests, pest - identification and quantification, including viruses/pathogens vectored by and the insecticide resistance alleles carried)
- New threshold values for several pest/crop combinations, adaptation of threshold to local conditions, practical solutions
- Trans-regional and national collaboration for DSS to increase the network size and the amount of input data
- New DSS systems for use in farm scale (multiple fields with different crop/pest combinations)
- Changes in cropping system of major crop
- Climate warming influence of high pressure of insect pest and diseases and also emerging of new pests
- Adaptation of DSS platform to native language for those countries which are not familiar with English…

SUBTOPIC B1:
Innovative direct biological control methods in a holistic IPM approach (INDIBICOM-IPM)

Due to the reduced availability and portfolio variability of synthetic plant protection products and the still low availability of alternative products such as natural agrochemicals or Biocontrol agents, the options for direct control of plant damaging harmful organisms according to IPM principles are limited or not yet fully explored for the different crops.

The present topic deals with the development of a range of direct biological control methods as part of a holistic sustainable approach to control plant damaging pest organisms in various crops. The range of crops cover arable crops, root vegetables and various perennial crops such as grapevines, fruit crops and ornamentals.

The subtopics will consider the development, improvement and efficacy evaluation of different biological control means and tools such as BCAs (predators, parasitoids, pathogens) and natural substances. With regard to a holistic IPM approach these BCA's shall be compatible with other IPM suitable plant protection measures such as cultural measures or physical methods (e.g. exclusion barriers such as nets or trapping devices). Field trials shall be carried out in selected target crops which are produced according to integrated crop production principles. For the selection of potential test products/compounds and the methods for their efficacy testing the relevant aspects for the authorization in compliance with pertinent EU-Regulations shall be considered.

Subtopics might also consider the evaluation of both the level and the sustainability of effects of new, innovative and already existing direct biological control methods and means in different combinations

of composition and/or applications.

The research project proposals should develop IPM suitable direct biological control solutions especially:

- for key pest species in the above mentioned crops (pests of economic interest inclusive invasive species),
- for taxonomic groups of pest species which cannot be controlled effectively at present and require new control approaches to fulfil the demands for the implementation of IPM principles (e.g. different field crops, different vegetable crops),
- some minor crops (for certain minor crops only alternative pest control methods are permitted).

The focus shall be laid on applied research, especially semi-field and field trials including concepts for implementation.

Expected research outputs / results

1. Inventory of potential effective biological candidate products/methods/tools for direct control of the selected pests of economic importance difficult to control at present for the selected target crops
2. Newly developed direct biological control methods/products/ tools for biotechnical, physical and chemical control to fill existing gaps in 1.
3. Different sets of evaluated (validated) direct biological control methods for pests in different target crops.
4. Development of tools supporting the implementation of the developed biological control products/methods/ into IPM.

SUBTOPIC B2:
Pests Resistance Management (PRM)

Current plant protection practices are mainly based on the use of chemical plant protection products. However, synthetic chemicals are losing their power due to the concern followed by increasing reports of pest (pathogens, animal pests and weeds) resistance development to pesticides in the last decades. To date, many cases of resistance have been reported among all pest categories. The use of synthetic chemicals has led pest populations to evolve, unintentionally applying artificial selection pressure in the form of pesticides. This issue is particularly acute for some pest management because very few new pesticides modes of action remain available, further increasing the likelihood of over-reliance on a narrow spectrum of synthetic molecules.

The focus of the 21st century agriculture is to develop sustainable pest management strategies with a particular attention to pest resistance management. Such pest management strategies should be friendly for both human health and the environment while ensuring, at the same time, a stable crop

yield to address food security. The reduction of selection pressure for pest resistance evolution while providing the necessary level of pest control remains a challenge. However, this will be possible if the use of pesticides is kept at a minimum level only when it is absolutely necessary, while pursuing the use of alternative pest management techniques whenever possible, in the frame of Integrated Pest Management (IPM). In addition, Pesticide Resistance Management strategies, within IPM, is necessary in order to minimise and/or slow down the selection pressure. The objective is to maintain the sustainability and efficiency of pest control, via developing appropriate pest resistance management strategies facilitating the development of a multi-faceted sustainable disease management strategies (cultural, mechanical, agronomic, physical, biological and chemical).

This topic deals with the development of sustainable pest resistance management strategies in order to slow down or prevent the development of resistance within the targeted pests.

The project(s) should cover one or more of the following subtopics:

- Development of tools and methods for resistance detection of pests including identification of resistance mechanisms;
- Networking at the EU level for detection, monitoring, mapping and regular updating of the resistance development;
- Development of pests resistance risk assessment methods and tools based on modelling approaches;
- Development of strategies at the cropping systems level that help prevent pest resistance evolution in specific crops at regional or transnational levels;
- Formation of widely shared European network of information on resistant pest populations;
- Development of strategies that help prevent pest resistance evolution;
- Design of redress strategies in case of pest resistance outbreaks.

The research project should develop suitable IPM tools/solutions especially for key pests which cannot be controlled effectively in conventional cropping systems due to development of resistance.

Expected research outputs / results

- Inventory of potential methods/tools/strategies for pest resistance prevention and management;
- Newly developed detection methods to follow the evolution of specific pest resistance;
- Networks for detecting and monitoring pesticide resistance and for producing real time data as decision support and resistance management tool;
- Risk assessment methods, including genetic and modelling approaches, related to pesticide resistance development and spread;
- Effectiveness evaluation of alternative methods for pest resistance management;
- Preservation of the efficacy of pesticide active ingredients by improved resistance management.

SUBTOPIC C2:
IPM for Delia /Psila flies. (cabbage root fly and carrot fly)

- *Delia radicum*, *D. antigua* and *D. platura* and *Psila spp*. in *Brassica* crops, other root & tuber crops (carrots and celery and economically less important umbelliferous crops) and bulb vegetables (onion and garlic)
- Resistance breeding and application of repellants.
- Application of resilient cropping systems that enhance natural control and reduce pest infestations and damage.
- Use of natural substances and microbial control to control of Delia and Psila.

These pests attack several vegetable crops. In several countries research on Delia and/or Psila is or has been performed, for example Focus Group IPM methods in Brassica crops, 2009 on the EPPO workshop on carrot fly. It would be wise to start from the outcome of that workshop and see what still has to be worked on.

Information on the pest and problems of Delia and Psila

Several important agricultural pests are Delia species, including *D. radicum*, the cabbage maggot, *D. floralis*, the turnip maggot, and *D. antigua*, the onion maggot.

In carrots and celery Psila flies occur that have with a similar ecology and damage caused by the larvae that all live near the stem base or below the soil on the roots. The larvae of these flies, which tunnel into roots and stems of host plants, can cause considerable agricultural yield losses.

During mass outbreaks one plant can be populated by as many as 300 larvae. They damage inner parts of the main root, breaking normal receipt of nutrients to above-ground plant organs which lead to growth depression or total destruction of roots and plants leading to harvest failure.

The flies can be found all over Europe. After over-wintering as pupae in the soil, the flies hatch in spring, feed on nectar and lay eggs close to plants of cruciferous (Delia) or umbelliferous plants (Psilae). The eggs of Delia are white and about 1 mm in diameter. They hatch into white maggots after about six days and the larvae feed for about three weeks on the roots and stems of the cabbage plants. After this, the larvae pupate in the soil and emerge as adult flies after around 20 days.

Delia and Psila thrive optimally in temperate climatic zones. They have 1-4 generations per year depending on the climate zone and the species.

For most species Decision Support Systems (predictive tools) are available based on weather data and trapping systems, to help to monitor adult activity. A factor limiting distribution of the fly is high air temperature and low humidity. Diapausing pupae are only destroyed by temperatures below -25°C.

Root flies in cabbage, carrots, onions, and bulbs are generally hard to control because the larvae are living in the soil and the generations of adult flies are very efficient to find young plants to lay their eggs. The few still available chemical treatments against Delia and Psila are hardly effective and under pressure.

Research already performed and in performance

Studies of Delia and Psila species have been performed for many years in different parts of Europe with a focus on North-West Europe, focusing on major crops such as cabbage, onion and carrots. Emphasis has been laid on cultural measures in the crops, forecasting and trapping systems and the use of attractants and repellants.

Possibilities of management measures of control includes for planted crops selecting strong healthy sprouts inserted in peat-compost pots, additional fertilizing, deep autumn plowing of fields after harvest of cruciferous root crops. The success of these measures depends on the way the crop is sown or planted and other cultivation methods of the crop and can differ per country.

Chemical control strategies have focused on seed coating that has been quite successful to combat the root and tuber attacking larvae. Some seed coating was not effective, especially for crops which are meant for storage with long cultivation period. Recently restrictions are imposed on seed treatment with Plant Protection Products.

There are no simple measures available to replace chemical control by resistance, cultural or biological measures. The strategies for major crops have also been adapted and used in minor crops such as celery and radish. Apart from the chemical control strategy and forecasting tools other measures were implemented occasionally with variable success. The current toolbox for Delia contains the following measures (only implement on a small scale) several of which are topics of the research of recent years France, Belgium, UK, Sweden, Denmark, Germany and Slovenia:

- Low dose of treatment with Plant Protection Products (PPP's) of seeds (coating) or young plants (in trays or by plant dipping).
- Forecasting models for cabbage root fly, onion fly and carrot root fly Sterile insects techniques
- Monitoring traps for onion fly are available.
- Steinernema nematodes (moderately effective but not widely implemented)
- Protective crop cover netting for early infestation (effective but only small scale implemented, mainly in organic. Not always effective because the larvae are already in the soil. |
- Protective high barriers (nets) are effective tools and used in some countries, but in some countries these barriers are not effective to prevent infestation.
- Cover crops and mulches have been tried with variable success (but there is potential)
- Applying mustard seed meal attracts Aleochara predators but has not been shown to diminish root fly damage
- Disorientation strategies (pheromones and plant (onion) extracts against carrot root fly). Garlic extracts are not effective.
- Management of the natural environment (field margins) is possible to increase natural enemy levels but there is a risk of increasing the pest pressure Delia and other cabbage infesting species. The target is to increase parasitoids but few successful result have been reported
- Manipulation of glucosinolate levels to attract predators in cruciferous crops (research stage). Landscape structure is important for Delia species but mostly no options for manipulation. Intercropping (with herbs) to mask the attractive smell of carrots. Oilseed rape is a source for

- overwintering Delia radicum
- Application of inhibiting, entomo-pathogenic fungi and endophytic organisms, also as seed coatings, have been tested but are still in the research stage. The field however seems to be promising.

More detailed investigations have been made on behavior of the different species, their interactions with the plant (such as the role of glucosinolates in Brassica's), some natural enemies and biocontrol options with entomopathogenic fungi and sterile male technique (in onion fly). Recently also attention is given to the genetic variation in host plant resistance against attack which may lead to new less vulnerable varieties. All species are influenced by landscape composition and hibernation sites around the production fields.

In the IPM context much research all over Europe has been done in the last decades to develop monitoring and forecasting tools and to find alternative methods. Apart from regular scientific journals, the IOBC vegetables working groups has published a long array of papers on different IPM tools (listed above) and experiments. IPM approaches were already review in 1989 by Finch, and since that time new approaches have been explored but have not led to a widespread implementation of IPM because of missing efficacy. In the last 2 decades the biological control with nematodes and entomopathogenic (insect killing) fungi and the manipulation of plant-pest-natural enemy relations got more attention but have not led to practical implementations yet.

Strategic topics for the future.

At present the knowledge of biological control agents (fungi) is rapidly increasing. In combination with seed treatment of dipping plant material or tray treatments with natural pest reducing substances this could be a promising solution for the near future.

To avoid any damage, it is necessary not only to focus on the control of maggots but also focus on the inhibition oviposition, egg development and hatching of larvae.

Also the development and better use of genetic variation (new cultivars) with cultural measures such as netting, traps crops and more protective cropping systems is a challenge for innovative IPM in the minor vegetable crops to help managing the root attacking flies.

A further integration of knowledge in IPM strategies and elaborations of promising but not yet implemented strategies in an effective and economic attractive way is necessary when chemical treatments are not available or should be replaced by other approaches.

Research on resistance

Resistence is one of the basic tools in IPM. There is several research on resistance that is interesting to know for this ERA-Net and therefor described in this part. Research on resistance itself is not part of this eranet IPM.

Breeding for resistance to root files (Delia spp.) in cabbage, Brassica oleracea, using genomic approaches (05 / 2012 - 05 / 2016, NOW), WUR, laboratorium voor entomologie: The Cabbage root flies (*Delia radicum* (L.) and *D. floralis* (Fallén) (Diptera: *Anthomyiidae*) constitute the most damaging

biotic factors in cabbage (*Brassica oleracea* L.) production in Western Europe and North America. As genetic modification is not a marketable option in the current setting, in this project the resistance found in related species will be crossed into the *B. oleracea* genome. The chemical nature of the antibiosis type of resistance against the root-feeding maggots of Delia species documented for wild Brassica species has not been addressed at all to date. Recently developed metabolomics approaches have the potential to detect novel compounds to be active in this interaction. In order to make *B. oleracea* plant material resistant to Delia flies, we propose to study physiology and behavior of Delia? Brassica interactions, the plant metabolome and global plant gene expression (Part I). In a parallel project, Brassica species hybrids will be produced and F2 / F3 generations will be studied using QTL, marker-assisted selection and genomic approaches to determine the genetic basis of resistance (Part II).

Identification and evaluation of root maggot (Delia spp.) (Diptera: Anthomyiidae) resistance within Brassicaceae: Current varieties of canola/oilseed rape, *Brassica napus* L. and *Brassica rapa* L., are susceptible to infestation by the root maggots *Delia radicum* (L.) and *Delia floralis* (Fallen) (Diptera: *Anthomyiidae*) in western Canada. Although cultural and chemical strategies exist to reduce crop losses caused by root maggots, these methods are either not sufficiently effective or pose unacceptable environmental risk. In this research 12 species of *Brassicaceae*, and many genotypes within species, were evaluated for levels of root maggot resistance, in addition to many intergeneric hybrids produced by crosses of *Sinapis albax B. napus*. The results of this research indicate that a genetic basis for resistance to root maggot infestation exists in the *Brassicaceae*.

SUBTOPIC C4:
Fruitflies in stone fruits, pome fruits, berries and small fruits; *Drosophila suzukii* and other fruitflies

The IPM approaches to control of *Drosophila suzukii* in fruits and berries.

Potentially, the subtopics are defined by crops (berries and soft fruits: strawberries and all other berries, grapes, stone fruits), environmental situation (indoor or outdoor, greenhouses) and climatic conditions (Northern Europe versus Southern Europe).

Drosophila suzukii is a native pest of Asia, which is experiencing spectacular growth since 2008 in Europe. First identified in Europe officially in 2008 (Spain and Italy), this pest causes damages to many fruit species, including cherries and red berries. The most significant damage concern cherry, strawberry, berries (raspberry, blackberry, blueberry and elderberry). Lately also damage of grapes and plums and even apples have been recorded. Damage is also observed on peach and apricot, but with a much less economic importance. Other crops like fig, kiwi and persimmon may be concerned and should be monitored.

Drosophila suzukii is a serious pest because it is polyphagous, highly mobile and very highly reproductive. In 2013, the presence of *D. suzukii* has been confirmed in all European countries. Within

task 1 of the Workpackage 3 on Minor Use of the ERANET C-IPM the needs concerning minor uses were inventoried. The outcome of this work confirms the urgency for IPM methods against *D. suzukii* in at least 9 country partners of ERANET. This might be an underestimation because the inventory took place early in 2014. The problem has aggravated since then.

The life cycle of *D. suzukii* can be very short (10 days) and up to 10-13 generations per year can be produced.

The females are fertilized before the winter, and spend the winter as adults in various shelters (sheltered areas, woods, groves ...). Winter surviving population levels are related to weather conditions. Longer periods of low temperatures, especially below 0 °C, can cause high mortalities, unless the flies can find protected shelters.

Considering the number of successive generations and the limited authorized PPP based on active ingredients with sufficient efficacy, the risk of introducing resistance is very high. The objective of this topic is to develop IPM solutions for growers for efficient control of *D. suzukii* in different fruit crops and preserve the European production for the crops concerned by the damages.

The future research project (s) will be applied research with the possibility of being used by the farmers within short term. Currently in Europe, different research projects on *D. suzukii* are in progress like IMPDROS and DROPSA. The aim of these projects is to create new knowledge and understanding of the damage and losses on fruit crops resulting from *D. suzukii* activity and to study its biology and to evaluate alternative and environmental safer control methods to those employed to date. It is essential that this call within the ERANET C-IPM is complementary to the work being done by these projects.

Depending on the specific needs of the funding partners and the work already undertaken by these projects and private companies, the adapted research project may (further) develop the adjustment of mass trapping, based on the method of attract and kill. An essential step forward would be the identification of highly efficient attractants as well as repellents. Both in combination are tools for the development of push & pull strategies.

Furthermore, attractants are essential for developing bait sprays. Biological control should be emphasized e.g. natural antagonists, predators, parasitoids, entomophagous nematodes, microorganisms. In cropping systems, hygiene measures can be effective in combination with other control methods. Technical approaches like netting to protect the crops should be investigated with regard to its efficacy, influence on the quality of the fruits (due to potential changes of the microclimate) and its economic base. In addition, other promising IPM methods could be part of this call, e.g. the optimization of the use of insecticides (e.g. better timing, new products, combining different modes of action targeting adults or sub-adult development stages of *D. suzukii*).

This project will necessitate cooperation between public institutions and private companies for the development of IPM methods such as attract and the kill technology, biological control (mass rearing of antagonists) or insecticides. Matters about intellectual property should be addressed if public/private research will take place. The attract and kill system is developed on other crops and similar pests (Mediterranean fruit fly).

This solution will permit reducing the use of chemical products and offer promising results for the growers to preserve minor crops.

Further methods should be explored and build on existing and further deepening of questions concerning the life cycles, host ranges, capacities to disperse and overwintering ability and habitats including the effects of landscape and linking to spatial information (GIS), cultural methods for prevention, the search for antagonists and potential semio-chemicals to be used in innovative control strategies. Monitoring and warning tools should be validated for their potential to establish treatment thresholds and take stock of first results of COST-Action FA 1104 and the meeting "Advances and prospects on monitoring and modelling of *Drosophila suzukii* in Europe" (March, 2013).

One important aspect regarding the biology of *D. suzukii* is the effect of environmental factors on survival, development and reproduction. According to that, it has been pointed out that *D. suzukii* is very susceptible to low environmental relative humidity, so adult flies quickly die in absence of moisture sources. However, no comprehensive evaluation of the effect of this factor on the biology of the fly has been undertaken so far.

Therefore, the knowledge of the effect of different values of relative humidity on survival and reproduction of adult flies is quite interesting to forecast the possible areas of dispersion and for the risk assessment in susceptible crops.

Another important issue is the use of wild fruits as alternative host for the development of the populations of the fly. This way, the fly might use wild fruits for oviposition and they would act as reservoirs from which infest susceptible crops. The evaluation of the capacity of the fly for population increase on different wild hosts is a crucial aspect for the management of the fly.

Expected research outputs / results

- ✓ Knowledge about the capacity to survive and reproduce at low environmental relative humidity. Suitability of wild fruits to act as reservoirs for the pest
- ✓ In the context of IPM schemes to have new solutions for the control of the pests

SUBTOPIC C5:
Mites in berries and soft fruits (PM)

General information on the pests

At least 11 countries involved in the call, have expressed a need for IPM methods to control different types of mites in berries and small fruits. The affected crops are both grown indoor and outdoor.

Description of pests

Gall, bud and rust mites: (Family *Eriophyidae*). The following species: *Acalitus essigi; Cecidophyopsis ribis/ Eriophyes ribis; Phyllocoptes gracilis, Anthocoptes ribis*. Affected crops are: blackberries (*Rubus*

fruticosus), Raspberries (*Rubus idaeus*) are attacked by *P. gracilis* and black currants (*Ribes spp*) are attacked by *C. ribis*.

Spider mites (Family *Tetranychidae*). The following species: *Panonychus ulmi; Tetranychus urticae*

The affected crops are: strawberries and several berries belonging to the *Rubus* and *Ribes spp*.

Tarsonemid mites (Family *Tarsonemidae*). The following species: *Phytonemus pallidus/ Steneotarsonemus pallidus, Phytonemus pallidus ssp. Fragariae* (strawberry mite). Affected crops are: strawberry and blackberry.

Damage and IPM methods

Spider mites and russet/bud mites can cause severe damage on different berry species.

The blackberry mite *Acalitus essigi* is an *Eriophyi*d mite that causes the so-called "red-berry disease" in blackberries. This is an important pests in blackberry cultivation in Europe.

Mites overwinter beneath bud scales. After developing on new foliage in early spring, new generations enter the flowers at blossom time. There they feed on the developing drupelets. Following the injection of toxic saliva in the drupelets, uneven ripening of the fruits occurs. Attacked drupelets remain red and hard.

So far, control depends on the use of plant protection products. Although no published experimental results are available to date, preliminary observations suggest that predatory mites may give control. The use of predatory mites therefore seems the most promising line of research.

Research should address questions on basic biology of pest and predators, and their interactions, but also practical aspects of application of predatory mites.

The black currant gall mite *Cecidophyopsis ribis* (*Eriophyidae*) is an important pest and virus vector on mainly black currant. It can also occur on gooseberry, red currant and white currant.

Mites live within the buds, causing the typical "big buds". In spring mites leave the buds and disperse to the young leaves and shoots. In June or July the mites invade the new buds. Attacked black currant buds swell during the summer, soon becoming rounded and distorted. Infested buds usually do not produce leaves or flowers in the next season.

Control depends on the use of chemical Plant Protection Products (acaricides). The most important cultivars used in the Netherlands are susceptible to the pest. In recent years, less susceptible cultivars have become available, but is not clear whether their agronomic characteristics are good enough for commercial use.

Czech research indicates that the predatory mite *Typhlodromus pyri* may have an effect on the black currant gall mite. In experiments done in the UK, the repeated application of a relatively harmless Plant Protection Product (sulfur) in combination with the use of less susceptible or resistant cultivars gave promising results.

Concerted European research on this pest could include

- Development/evaluation and selection of resistant cultivars
- development, testing of 'green' acaricides,
- testing different predatory mite species
- develop efficient application techniques for outdoor use and
- integrating the application of predators into an IPM system.

Biological control by predatory mites is a useful tool in IPM systems that growers sometimes use (mainly in protected cultivation) but is not always fully effective. Predatory mites are sensitive to several plant protection products so it's not always easy to maintain sufficient numbers in the crop. In addition, the system may be altered, due to the presence of new pests. For example extra applications of plant protection products to control the spotted wing fruitfly (*D. suzukii*) tend to disturb the natural control of the mites (and thrips) by predatory mites as well.

Solutions should consist of strategic application of (new) predatory mites which fit in the IPM control system against mites, thrips and *D. suzukii* in various types of cultures. Control systems from other crops (greenhouse) might be adapted and optimized for berry cultures. In open cultures of strawberry, some trap- crops and banker plants (plants on which natural enemies can survive after the crop is harvested) have been tested in research to manipulate the predator/prey system in strawberry.

SUBTOPIC C7:
Control of thrips and whiteflies on protected crops

The EU Commodity Expert Group in charge of the ornamentals and vegetables support different projects with the objectives the control of these pests.

This topic is part of the work programme of these groups. The group supports the idea to develop alternative IPM solutions for the control of thrips and whiteflies.

The damage caused by thrips and whiteflies concerns a large number of ornamental crops and vegetables in different environmental situations (indoor or outdoor) and climatic conditions (Northern Europe *versus* Southern Europe).

These pests are a major problem for these groups of crops and are poorly controlled by conventional chemical control.

For the main species found whiteflies on ornamental crops and vegetables are *Bemisia tabaci*, *Frankliniella occidentalis* and *Trialeurodes vaporariorum*.

The damage is due to produce abundant honeydew and especially to the transmission of viruses, particularly TYLCV virus and Tomato Spotted Wilt Virus (TSWV), which is of persistent type. In

ornamentals the market value is reduced by the presence of insects even without damage (zero tolerance).

The thrips species most frequently encountered on crops are *Thrips tabaci* and *Frankliniella occidentalis* (Californian thrips).

Considering the number of successive generations especially in warm conditions; the hidden nature of stages of the lifecycle and the limited authorized PPP based on active ingredients with sufficient efficacy, the risk of introducing resistance is very high. In addition growers of ornamentals have to spray a high number of times during the production season, causing adverse effects. The objective of this topic is to develop IPM solutions for growers for efficient control of whiteflies and thrips in different ornamental crops and vegetables to preserve the European production for the crops concerned by the damages.

Non-chemical methods for *F. occidentalis* such as the use of natural enemies, entomophagous nematodes and fungi are available: e.g. *Beauveria bassiana* en *Lecanicillium muscarium*.

Natural enemies of different life stages are: predatory mites such as *Amblyseius swirskii, Hypoaspis aculeifer* and *Amblyseius cucumeris*, predatory bugs as *Orius spp*. and the entomophagous nematodes *Steinernema feltiae*, *A. cucumeris* and *A. swirskii* attack the first larval stage of the Californian thrips, *S. feltiae* attacks larvae and pupae, the predatory bug *Orius spp*. attacks all stages of the Californian thrips. The predatory mite *H.aculeifer* attacks pupae in the soil.

In several indoor ornamentals predatory mites are used. In several crops predatory mites face difficulties in establishing on the crop and they cannot attack thrips hiding in the flower buds. The nematode *S. feltiase* is used in spring and autumn but is not effective in warm and dry conditions. In general the natural enemies can control to the thrips during low pressure of the thrips. Once the temperature rises the pressure of the thrips becomes too high and the natural enemies are unable to control the thrips. Growers need additional control methods.

The future research projects will be adapted research with the possibility of being used by the farmers within a short term perspective.

The research project proposals should develop IPM suitable control solutions especially on:

1. Virus outbreak management through effective vector pest control tactics including biological, and biotechnological methods
2. Evaluation of the efficacy of novel PPP and their impact on beneficials
3. Resistance motoring for effective IPM scheme design against whiteflies and thrips

Expected research outputs/results

- In the context of IPM schemes to have new solutions for the control of the pests
- Well working monitoring system for producers with threshold models
- Management tactics with potential impact of virus transmission. IPM schemes that incorporate effective biological control agents and novel PPPs and are adjusted for the current efficacy levels of current PPPs based on resistance monitoring

SUBTOPIC C11:
Diseases in Stone Fruit (DISton)

IPM in minor crops is uses on niche crops, i.e. crops that are grown on a relatively limited acreage (including stone fruit like plums, cherries and apricot). Plums, cherries and apricot area has an officially estimate of 9,222.2 and 4,424.15 ha, respectively in Spain with a production of 89,816 and 21,627 Tm, followed by… While plums, cherries and apricot are of high economic value for farmers, they are however usually of low economic interest for the agro-pesticide industry but they meet an exceptional plant protection need. In general, the industry has limited incentives to apply for an authorization of a plant protection product for minor uses.

Minor crops are affected by the same pests, weeds, and diseases that major crops yet have a lower availability of crop protection solutions to cope with consequences for decreases in productivity, higher risks of emergence of resistance, and ultimately difficulty sustainability. The availability of these minor crops in crop protection solutions is severed mainly by the following factors: broad spectrum of crops classified as minors; the high costs involved in the approval process of a specific solution for each crop and pest as well as the complexity of the regulatory process itself. The phytosanitary policy has emerged as a competitive factor of growing importance for plum and cherry sector and community and is affecting sustainability and job creation capacity and the quality, diversity and health of their productions.

Review programs of active substances carried out between 1993 and 2009 that resulted in the removal of approximately 70% of which were on the market, together with the lack of incentives in the agrochemical industry to perform tasks and studies for the authorization of minor uses resulted in a drastic reduction of available solutions for the protection of minor crops that is hampering the competitive and sustainable production. In response, the producer sector reacted by promoting the implementation of preventive strategies and production systems aimed at reducing the use of pesticides by incorporating other methods to manage pests, diseases and weeds.

IPM aims to answer a number of agronomic and environmental problems: the increasing development of resistant populations of harmful chemical agents, the presence of residues in food, the destruction of beneficial insects, pollution of waters and soils, loss of biodiversity, etc. The R & D programs geared specifically to the development of IPM systems are those that include R & D aimed at developing management tools that encourage the combination of biological, biotechnological, chemical, physical, cultural and genetic make possible the practical implementation of IPM systems. The priorities of the new IPM R & D programs on minor stone fruit should include both those studying causative agents of the main problems of crop pests (pests, diseases and weeds), the development of methods of control, paying special attention to aspects that prevent such control to be effective.

The present topic deals with the IPM in minor stone fruit such as plums, cherries and apricot. Subtopics that will be considered:

1. Biotic relations in minor crops

1.1) Biology, ecology and epidemiology of major pest organisms and their natural enemies and / or antagonists

1.2) potential damage caused by different types of pests on plums, cherries and apricot and the influence of biotic conditions (development status and crop vigor, period level and pest infestation) and abiotic (climatic and soil conditions of the place) on such damage

1.3) Main existing biotic relationships within agro-ecosystems (between stone fruit and their pests, diseases and weeds; between them and their natural enemies and antagonists, among the different types of pest organisms) and biotic interactions and abiotic

1.4) Relations between the agents that cause resistance against pests, diseases and weeds and plant them overlooking the efficiency of its integrated control

1.5) Possible consequences of climate change on agro-ecosystems and the current phytosanitary problems of such systems

2. Emerging pests, diseases and weeds in stone fruit minor crops (plums, cherries and apricot)

3. Resistance to pesticides

4. IPM programs

The research project proposals should develop IPM suitable management solutions especially for minor stone fruit which cannot be controlled effectively in conventional production of major crops due to low economic interest for the agro-pesticide industry. Cooperation and exchanges between the different research centers across the EU will enable the testing of different control practices and research and extension techniques in different contexts. The focus shall be laid on applied research, especially semi-field and field trials including concepts for implementation

6. OVERVIEW OF CALL PARTICIPATION

This call consists of 24 funding bodies from 18 countries (see Annex A "table of funding bodies with budget").

The 2nd joint call for proposals of C-IPM is open for research organizations and industry. For further details and clarification, see National Regulations (Annex D).

Researchers from non-funding countries in the call are welcome to participate in project proposals, by their own contribution;

Private companies can participate in consortia depending on the national rules from their respective country where the legal entity is legally established (see National Regulations).

7. APPLICATION PROCEDURE

The call is officially published on Thursday 31th March 2016. The deadline for the submission of pre-proposals is Wednesday 1st June 2016, 15:00h CET.

The respective time schedule and activities required are given in the Annex B "Timeline".

The application consists in a two steps process: submission of pre-proposals (PPs) followed by submission of full proposals (FPs). **The full proposals can be submitted only if a given shortlisted consortium will receive an invitation to submit full proposals**.

All pre-proposals must be electronically submitted via the Electronic Submission System (ESS) to the Call Secretariat. The special link created at the INIA´s website is available from the beginning of April 2016 (http://c-ipm.inia.es). Guidelines and all call documents are available under this link.

Invitations for full proposals will be sent to project coordinators in the first week of July 2016. The submission of full proposals will start from the **15th July 2016,** and the deadline for submission full proposals will be the 30th **September, 2016, 15:00 CET.**

Pre-proposals: A pre-proposal contains information on all consortium partners, an abstract, project aims, description, key-words, relevance, expected results, target groups, state of the art, added value for IPM and an overview of project costs and budget as outlined in the guidelines.
The funding mechanism is the Virtual Common Pot (VCP) procedure, what means that each funding body funds the selected researchers from their respective country;

Each coordinator must guarantee that all the partners involved in the consortium have contacted with their respective National Contact Point to ensure their eligibility before submitting the pre-proposal.

Funding decisions are expected to be published at the end of 2016.

8. ELIGIBILITY AND EVALUATION PROCEDURE

A) Eligibility of pre-proposals

The eligibility of pre-proposals will be made at 2 **independent and decisive levels**:

1. **Firstly by Call Secretariat**, to meet the formal C-IPM requirements):
   - The language either of the call or submission of applications (PPs and FPs) is English;
   - The project consortium have to consist of **at least 3 partners from at least 3 countries,** providing fund for the call (see Annex A);
   - The **number of partners in the consortium is not restricted;**
   - The maximum budget requested per partners will be the maximum budget given by its respective funding body. Subsequently, if a partner requests more funds than the budget from their respective funding body, it will be considered non eligible to C-IPM ;
   - Project duration is maximum 3 years.
2. **Secondly at national level**, to meet their respective national requirements (see Annex D, National Regulations).
3. **At national level as well**, the pre-proposal will be assessed against:
   - Relevance of the pre-proposal to the scientific scope of this call (adjustment to one or more topics selected for funding;
   - Innovative approach;
   - European added value of the partnership to IPM;
   - Quality of the consortium.

All project partners involved in a consortium have to assure that eligible costs, sub-contracting, capacity building, knowledge sharing, training and mobility, etc… are in line with the respective national criteria mentioned in the national regulations. In case of uncertainties regarding the national criteria and regulations, please refer to your National Contact Point.

A change of the consortium is not allowed after the submission of the pre-proposal. Only as an exception and after approval by the Call Group, adjustments in the consortia composition are possible.

B) Evaluation of full proposals

The evaluation of the full proposals will be performed by the Evaluation Expert Panel (EEP), taking into account the following requirements:

- Scientific and technical excellence/innovation;
- Potential impact (knowledge, socio-economic, stakeholders);
- Management, budget and implementation of activities ;
- Capacity building, knowledge sharing, training and mobility; communication activities (dissemination, etc.)
- Novelty of the project (scientific and/or technical).

9. CONTACT DETAILS

The Call Secretariat will provide administrative support to applicants regarding the call, call documents and procedures. It is the primary point of contact between the research project consortium and the C-IPM Governing Board for all general matters in relation to the call.

C-IPM Call Secretariat:

Spain, National Institute for the Agricultural and Food Research and Technology (INIA)

Anabel de la Peña
Phone: + 34 91 3478776
e-mail: anaisabel.delapena@inia.es

Questions concerning the submission tool and other general questions should be addressed to:

Jesús Jiménez
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Pablo Gómez:
Phone: +34 91 347 67 63
e-mail: pablo.gomez@inia.es

National Contact Points:

Besides the Call Secretariat, each funding body has nominated a representative at national level as National Contact Point (NCP). These representatives give support to the applicants and act as a link between the Call Secretariat and the funding bodies. Applicants should contact their respective NCP for all matters regarding national regulations and funding. An overview of the National Contact Point list is provided in Annex C.

ANNEX A - FUNDING BODIES WITH BUDGET

COUNTRY	PARTNER	TOTAL BUDGET (€)	FUNDED TOPICS		
			A	B	C
AT	BMLFUW	100.000	A2,A3	B1,B2	C4
BE	ILVO	250.000	A2		C4
BE	SPW-DGO3	300.000	A2,A3	B1,B2	C2,C4,C7
BE	VLAIO (IWT)	500.000	A2,A3	B1,B2	C2,C4,C5,C7,C11
BE	FWO	200.000	A2,A3	B1,B2	C2,C4,C5,C7,C11
CH	FOAG	200.000	A2,A3	B1,B2	C2,C4,C5,C7,C11
CZ	MZE	65.000	A2,A3		
DE	BMEL	400.000	A3	B2	C4
DK	DAFA	400.000	A2,A3	B1,B2	C2,C4,C5,C7,C11
DK	EPA	400.000	A2,A3	B1,B2	C2,C4,C5,C7,C11
ES	INIA	200.000	A2,A3	B1,B2	C2,C4,C5,C7,C11
FI	MMM	250.000	A2,A3	B1	
FR	INRA-SMACH	75.000	A2		
FR	MAAF	800.000	A2	B1	C2,C4,C7
GR	DEMETER	50.000	A2,A3	B1,B2	C2,C4,C5,C7,C11
IE	TEAGASC	400.000	A2,A3	B2	C2,C4
IT	MIPAAF	50.000		B2	
LT	LRCAF	110.000	A3	B1,B2	
NL	EZ	25.000*	A2,A3	B1,B2	C2,C4,C5,C7,C11
NL	NWO	500.000	A2,A3	B1,B2	C2,C4,C5,C7,C11
NO	RCN	670.000	A3	B1,B2	C2,C4,C5,C7,C11
SE	FORMAS	1.000.000	A2,A3	B1,B2	
TR	MAFAL-GDAR	120.000	A2,A3	B1	C4
UK	DEFRA	192.000			C2,C4,C7
Total		**7.257.000**			

* in alignment, see Dutch national regulations

ANNEX B - TIMELINE

Important events	Date
STEP 1 (Pre-proposals)	
Pre-announcement	23rd March 2016
Launching the call – Opening of pre-proposals (PPs) submission	31st March 2016
Deadline for pre-proposals (PPs)	**1st June 2016 (15:00h CET)**
Eligibility check	17nd June 2016
Call Group (CG) meeting for selection of pre-proposals (PPs)	22nd June 2016 (*Bonn*, DE)
STEP 2 (Full proposals)	
Opening of full proposals (FPs) submission	15th July 2016 (15:00h CET)
Deadline for full proposals (FPs) submission	**30th September 2016 (15:00h CET)**
Evaluation of full proposals (FPs)	17th October – 22nd November 2016
External Expert Panel (EEP) meeting for evaluation	29th November 2016 (*Brussels,* BE)
Call Group (CG) meeting for selection of final projects	7th December 2016 (*Brussels,* BE)
Communication of final projects selected for funding	20th December 2016
Beginning of funded projects	January –March 2017

ANNEX C – NATIONAL CONTACT POINTS

Country	Partner	NCP	e-mail	Phone Number
AT	BMLFUW	Elfriede Fuhrmann	elfriede.fuhrmann@bmlfuw.gv.at	+43 1711006817
BE	ILVO	Martine Maes	martine.maes@ilvo.vlaanderen.be	+32 92722474
BE	SPW-DGO3	Véronique Dewasmes	veronique.dewasmes@spw.wallonie.be	+32 81649604
BE	VLAIO (IWT)	Ellen Pelgrims	ep@iwt.be	+32 24324243
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NO	RCN	Kirsti Anker-Nilssen	kan@rcn.no	+47 48073898
SE	FORMAS	Jan Svensson	jan.svensson@formas.se	+46 87754051
TR	MAFAL-GDAR	Birol Akbaş	bakbas@tagem.gov.tr	+90 3123271793
UK	DEFRA	Giulia Cuccato	giulia.cuccato@defra.gsi.gov.uk	+44 30163182

ANNEX D - NATIONAL REGULATIONS

List of C-IPM Second Call Funders

AUSTRIA

AT - Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW)

Terms and conditions

The Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) will only accept proposals of consortia with Austrian partners that have been positively evaluated by the transnational evaluation team of the C-IPM Call Board. Consequently, the Austrian partner of the selected consortium has to submit the successful proposal to the BMLFUW via its regular research programme website www.dafne.at in order to obtain the required contract for financing.

Eligibility

BMLFUW funding is open to demands by research institutions and universities, as well as to private or semi-private research organisations with a legal basis.

The selected topics in the call are eligible for BMLFUW:

CLUSTER A: Preventive and sustainable (pest) management

- A2: ”Integrated, sustainable and resilient Cropping systems”
- A3: “Innovative and new pest monitoring tools and Decision Support Systems”

CLUSTER B: Alternative and innovative control.

- B1: “Innovative direct biological control methods in holistic IPM approach”.
- B2: “Pests resistance management”

CLUSTER C: IPM in Minor Crops.

- C4: “Fruitflies in stone fruits, pome fruits, berries and small fruits; *Drosophila suzukii* and others fruitflies”

According to the C-IPM call text, the project consortium have to consist of researchers from at least three partners from three countries, providing funds for the call. The maximum number of partners in the consortium is not restricted.

Researchers from non-funding countries in the call are welcome to participate in project proposals, by their own contribution.

The duration of the projects will be 3 years, as maximum.

Funding

Financing demands by Austrian partners must not exceed the amount of EUR100.000. A minimum in-kind contribution of 10% of the eligible project costs is mandatory.

Admitted costs

Eligible costs include:

- Personnel costs: Have to be calculated according to FWF regulations, or justified by staff costs.
- Project specific expenses: Consumables, such as lab-supplies are considered direct costs
- Equipment: Only the portion of equipment used on the project (calculated as depreciation charges over the duration of the project) may be charged.
- Travel: Expenses for travels and meetings may be charged only according to the specifications of the RGV[1] (Federal Regulation on the Reimbursement of Travel Costs).
- Overhead costs: Such costs will have to be demonstrated on the basis of an accounting system adhering to international standards[2], and may be charged as indirect project costs up to 20% of the total eligible project costs.

Disbursement conditions and the payment calendar are fixed by the national project contract. A first payment tranche of about 20-30% of the total amount is thus disbursed at the signing of the project contract; the second tranche is subject to the positive approval of the interim-report; and the final payment of at least 10% of the total eligible project costs will be made only after the positive approval of the final project report.

National Contact Point (NCP)

Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW)
Elfriede Fuhrmann: elfriede.fuhrmann@bmlfuw.gv.at
Phone number: +43 1 711006817

[1] Reisegebührenverordnung des Bundes
[2] IASB – International Accounting Standards Board

BELGIUM (FLANDERS)

BE - Institute for Agricultural and Fisheries Research (ILVO)

Terms and conditions

ILVO will finance projects in the ERA-net for ILVO consortia, according to the funding regulations that apply for this governemental research institute. This means that the projects need to meet the strategic research agenda of ILVO and the decisions on the associated financial contributions. ILVO is mandated by the Flemish Adiministration (Land- en Tuinbouw, Beleidsdomein Landbouw en Visserij) to manage its IPM program.

Eligibility

Topics (A) ”Integrated, sustainable and resilient Cropping systems” (RESCROPS) and (C) “Fruitflies in stone fruits, pome fruits, berries and small fruits; Drosophila suzukii and others fruitflies” are eligible for the 2016-call. According to the C-IPM call text, the ERA-Net project consortium have to consist of researchers from partners from at least three countries, providing funds for the call.

Funding

A budget of 250,000 € has been reserved for the call on these two projects. The duration of the projects will be 3 years, as maximum.

Admitted costs

The costs include salaries, research activities, operation, publication, missions, overheads

National Contact Point (NCP)
Institute for Agricultural and Fisheries Research - ILVO
Martine Maes: martine.maes@ilvo.vlaanderen.be
Phone number: +32 9 272 24 74

BELGIUM (WALLONIA)

BE - Public Service of Wallonia - Operational General Direction of agriculture, natural resources and environment (SPW-DGO3)

Terms and conditions

Only projects that clearly meet the needs of SPW-DGO3, will have a priority treatment in the eligibility process, with the restriction that only proposals under the following subtopics are funded by SPW-DGO3 for this second call:

CLUSTER A: Preventive and sustainable (pest) management

- **Subtopic A2:** "Integrated, sustainable and resilient Cropping systems"
- **Subtopic A3: "**Innovative and new pest monitoring tools and Decision Support Systems"

CLUSTER B: Alternative and innovative control

- **Subtopic B1:** "Innovative direct biological control methods in holistic IPM approach"
- **Subtopic B2: "**Pests resistance management" (PRM) (the term pests includes: arthropods, bacteria, fungi, insects, phytoplasma, viruses, weeds)

CLUSTER C: IPM in Minor Crops.

- **Subtopic C2:** "IPM for Delia/Psila flies (cabbage root fly and carrot fly)"
- **Subtopic C4:** "Fruitflies in stone fruits, pome fruits, berries and small fruits; Drosophila suzukii and others fruitflies"
- **Subtopic C7:** "Control of thrips and whiteflies on protected crops"

- Proposals must be innovative and link with existing knowledge.

- Proposals must link with the regional policy priorities and research agendas.

- Interdisciplinary research proposals will be prioritized.

- Enterprises and SMEs are welcome as partners in the consortium, only if they are legally established in Wallonia and their costs are covered by their own resources.

- A change of the consortium is not allowed after the submission of the pre-proposal. Only as an exception and after approval of the Call Group, adjustments in the consortia composition are possible.

- The duration of the projects will be 3 years, as maximum.

Funding conditions

- The total funding for this call is maximum 300.000€ (including BTW).

- The call is addressed to public research institutions and public universities.

- Maximum 5 % of overhead can be reimbursed. It must be included in the provisional budget.

- Funding can be granted to research teams according to the rules and procedures of SPW-DG03.

- Funding will be subject to availability of the regional budget and under the Walloon rules.

- The partners must:

  - Be located within the borders of Walloon Region and constitute a research unit or a legal entity benefiting from a research unit.; A research unit means a research unit of a university faculty, or high school providing higher grade education, or local public or private research centre conducting research in agriculture, horticulture, or environmental purposes.
  - Satisfy the eligibility conditions requested in the second call for project coordinated the ERA-Net C-IPM network (detailed in the Candidate Guide or "Applicants' Guide");
  - Satisfy the eligibility conditions imposed by the SPW-DGO3 (Operational General Direction of agriculture, natural resources and environment of the Public Service of Wallonia).

- The selection procedure is defined in the Candidate Guide (Applicants' Guide) of the second call for projects of ERA-Net C-IPM network. To coordinate efforts in Wallonia, it is also asked to teams involved in a consortium to send the expression of interest to the NCP before the submissions of the proposal.

- The indicative amount potentially grant is set at max 100,000 euros, corresponding to a third of the total budget that the SPW-DGO3 provides as part of the second call for ERA-Net C-IPM projects. Therefore it will be possible to fund at least three research projects if several projects were selected for funding after the selection procedure of the ERA-Net C-IPM.

- The content of the partnership agreement between the beneficiary and the SPW-DGO3 will detail the subject of the agreement and its duration, the budget allocation for the convention, the liquidation, the correspondence, the technical committee, the justification for use of the grant, information and documents required, the budget (market return), the financing, the data ownership and confidentiality, the responsibilities, the obligations of the beneficiary, and at least the specific terms and conditions for the ERA-Net C-IPM.

- The funds will be transferred to the beneficiary in an advance payment at the start of the project and other annual payments after scientific and financial justification by each beneficiary corresponding to each year. Annual scientific report in French as well as in English will be submitted to SPW-DGO3.

Eligibility

National rules

Eligibility conditions- April 2016

1. GENERAL RULES – PRINCIPLES

- Only expenses directly related to the approved project and indicated in the estimated budget in the description sheet of the validated project are eligible.
- The actual incurred expenses must correspond to payments effected by the final beneficiary and supported by receipted invoices or, if this is not possible, by accounting documents of equivalent probative value.
-The rebates of Insurance, electricity, water (etc...) are not incurred and must be deducted from the grant.
- Contributions in kind and other expenses not resulting in a payment by the final beneficiary are not allowed.
-The Beneficiaries maintain either a separate analytical accounting system or an adequate accounting codification to identify the costs subject to co-financing.
-The Beneficiaries retain all supporting documents constituting eligible expenses in connection with the accounts referred to above. The documents must be kept 3 years after the closure of the program.
-If Regional or community texts are stricter, they will apply.

2. ELIGIBLE EXPENSES

- The Expenses incurred during one year must be submitted in the invoice of the reporting period except for the pre-payments. In this case, it is the date of the invoice or of the regularization credit note to be taken into account.

2.1. STAFF COSTS

-For anyone working partially or fully to the achievement of research, the final beneficiary is required to produce a document (work contract addendum to the contract, engagement letter...) evidencing the assignment of personnel and specifying the tasks and the time spent on the financed tasks.
A copy of the employment contract must be available at SPW-DGO3 from the beginning of the grant. If replacing staff new contracts will be provided to SPW-DGO3.
-Only Expenses on those persons mentioned above are eligible.
-The Recipient may replace a person assigned to the transactions of Research by another whose qualifications and functions are similar, in the limits of the initially set budgets. Members of the Project Committee are required first to give their agreement. It is the same for the rate adjustments assignment of people in charge to research. This agreement can be obtained via a written procedure.
-The Eligible staff costs only include wages, payroll taxes (employer and employee), legal insurance, and allowances payable under the laws and regulations or collective agreements, the employer's meal vouchers.
- The Staff whose remuneration is a whole or partial part of the eligible expenditure is subject to the wage conditions identical to those practiced by the SPW for the staff of the same level of responsibility, qualifications and seniority.
-The Recipient sets up a tasks control system with a monthly statement per half day that mentions the timetable of those active in the project. This statement will be included in the progress report. It will also be attached to the semestrial invoices. If the remuneration of the person is also funded by

another grant during the debt statement that other grant will be included in the summary table of the program staff.

- The Budget table relating to the staff assigned to carry out the research, displays the qualifications, functions, occupancy rates and the names of the beneficiary, listing separately the total compensation (including social security contributions), which depends entirely or partially of the budget for the action, and the eligible expenses included in the project.
- Details of the eligibility of expenses are available and will be provided by the NCP

2.2. EXPENSES RELATED TO VOLUNTEER

- Unpaid voluntary nature does not prevent voluntary to be compensated by organizing expenses he incurred for this (observance of the law of July 3, 2005 as amended by the Act of 19 July 2007 and Decree Royal May 9, 2007 on the rights of volunteers).
  In this context, a volunteer list must be maintained with a timesheet. The www.volontariat.be website contains all the useful information about permitted types of refund.

2.3. OPERATING EXPENSES

2.3.1

- Eligible operating expenses related to personnel activities may include, within the budget limits as described in the project description form:
  -the office supplies;
  -the supplies (including computers);
  -the documentation costs;
  -the postage;
  -The cost of telephone, fax, internet;
  -The cost of small equipment (consumable less than 250 Euros) identifiable in accounting;
  -the technical assistance and training related to acquired equipment.
- All supplies will be subject to a competitive 3 minimum price offers.
  In the particular case of small office supplies, a competitive analysis with main supplies (ex.: comparison online catalogues) is required at least 1 time per year.
- Traveling abroad are subject to prior agreement. A mission statement should be written, mentioning the name of the person(s) and the estimated costs. A detailed mission report should be carried out and be delivered with the debt statement (DC).
  All supporting documents which are not an invoice should be clearly identified and pasted on the document template (ask to NCP)

2.3.2

- Travel costs and mission will be specified in an appropriate supporting document, detailing the purpose, place and date of the mission and will be accepted on the basis of a maximum indemnity limited to the effective rate at the public service of Wallonia. The number of kilometres will be taken into account, according to the shortest route, the one from the administrative residence or domicile to the place of the mission.

- Only train ticket and refunds related to the use of a personal vehicle are eligible. May not be admitted the charges associated with the use of a company car or a vehicle financed by leasing payable by the employer.

3. ELIGIBLE EXPENSES UNDER CONDITIONS

3.1. VAT, TAXES, CHARGES, TAXES, ...

-The VAT recoverable, refunded or offset by the tax authorities, or by any other means cannot be considered eligible, and therefore cannot be subsidized. The cost of VAT is therefore fully eligible in the case where the final beneficiary actually and definitively has supported the cost.
Therefore:
-for the recipient is not subject to VAT, the expenses charged to the project are VAT included;
-for the final beneficiary subject to VAT, expenses charged to the project are excluding VAT;
-for the final beneficiary partially subject to VAT, expenses are charged to the project is inclusive of VAT if the VAT on the expenses made is not recoverable or VAT if the VAT on the expenses made is recoverable.

3.2. STRUCTURE COSTS

-The necessary structure costs for the project, previously identified in the project sheet as having a direct link to the project, are eligible up to a maximum of 5% of the budget, provided that they are affected to this Project and if they are justified in proportion to full-time equivalents (FTEs) assigned to the project over the total FTE of the beneficiary.

3.3. SUBCONTRACTING (service delivery)

-The expenses from subcontracting (maximum level 1) are eligible except in the following cases:
a) Contracts of subcontracting that result in an increase of the execution cost of the operation without proportional adding value.
b) Sub-contracts with intermediaries or consultants under which the payment is defined as a percentage of the total cost of the project, unless such payment is justified by the beneficiary, in reference to the actual value of the work or services provided.
-For each subcontracting contracts, the contractors undertake to provide to the audit and control services all the necessary information regarding the subcontracting activities of the project.
- The actions to actual cost by different partners are considered as partnership and not as subcontracting. Furthermore expenses related to these activities will be clearly identified in the estimated budget in the project sheet.

In the context of subcontracting, a competition will be required if the subcontractor has not been clearly identified in the project description sheet.
This partnership will consist in a specific agreement between the beneficiary and the project partners.

4. INELIGIBLES EXPENSES

- Charges, exchange fees, fines, penalties or financial and litigation costs and other purely financial expenses are not eligible.
- The vehicle purchase is not eligible.
- Expenses on the acquisition of skills prior to the filing of the project, are not eligible (training remaining eligible with the agreement of the concerned funder).
-The Estimated expenses (to pay year-end bonuses and holiday pay ...) are not eligible
- Gift -Purchase staff are not eligible.
-The Extra-legal insurance: insurance administrators, are not eligible

5. PUBLIC PROCUREMENT

In the implementation of the funded actions, the beneficiary is required to comply with regulations on public procurement, both Belgian and European.
More information will be made available in French by the NCP.

6. INFORMATION AND DISSEMINATION

Dissemination of results of research will mention the support of Wallonia as funder.

National Contact Points:

Public Service of Wallonia - Operational General Direction of agriculture, natural resources and environment (SPW-DGO3)

Véronique DEWASMES : veronique.dewasmes@spw.wallonie.be
Phone number: +32 81 649604

General questions and Electronic Submission System support

Philippe DELAUNOIS: philippe.jeanpierre.delaunois@spw.wallonie.be
Phone number: +32 81 649619

BELGIUM (FLANDERS)

BE - Flanders Innovation and Entrepeneurship (VLAIO)

Terms and conditions

Funding will be administered according to the national rules. Flanders Innovation & Entrepreneurship will provide information on the website http://www.vlaio.be for applicants with additional templates to be completed. Those templates are mandatory to check the national eligibility and must be sent towards Flanders Innovation & Entrepreneurship on date of deadline of pre-proposals (documents received latest on 01.06.2016). We kindly ask applicants to apply for a meeting with Flanders Innovation & Entrepreneurship before the end of May to check eligibility aspects.

Eligibility

For LA-trajecten (Only extensions of ongoing La-traject projects will be taken into account) only Flemish centres for agricultural research (praktijkcentra), universities and university colleges (hogescholen) and research institutes that are recognized as eligible in past evaluations according to EU regulation. Each project needs a solid base of partnership from the agrosector (represented by an user committee) that is responsible for the co-financing of the project. Demonstration projects are not eligible for the Flemish partners

Funding

No priorities as long as the projects fit in the program (thematic restrictions, see call-topics). Military applications are excluded.

An indicative budget of 150.000 EUR/Project (max. 24 months) through the virtual common pot principle

Admitted costs

Funding percentage follows national rules of funding scheme

National Contact Point (NCP)
Flanders Innovation & Entrepreneurship (VLAIO)
Ellen Pelgrims: ep@vlaio.be
Phone number: +32 2 432 42 43

BELGIUM (FLANDERS)

BE - Research Foundation Flanders (FWO)

Terms and conditions

The Research Foundation Flanders (FWO) is the agency that supports ground-breaking fundamental research and basic strategic research at the universities of the Flemish Community. The FWO also stimulates cooperation between the Flemish universities and other research institutes.

The objective of the FWO's research projects is to advance fundamental scientific research.

Eligibility

Art. 9 of the FWO-regulation on the regular research projects is applicable. In this article is stated who can apply as a Principal Investigator for a research project:

- an Independent Academic Staff (ZAP) member with an appointment of more than 10% at a Flemish university;

- an Independent Academic Staff member with an appointment of 10% at a Flemish university and whose main task is research;

- an Independent Academic Staff member with an appointment of 5% at a Flemish university and with an appointment as (assistant) clinical head or an equal function in a university hospital;

- an academic staff member with an appointment at the Evangelic Theological Faculty in Leuven and the Faculty for Protestant Theology in Brussels;

- a research director of the FWO;

- a designated beneficiary of an ERC Starting Grant, an ERC Advanced Grant, an ERC Consolidator Grant or an Odysseus II grant, with a Flemish university as a host institution.

If more than one university is involved in the project, at least one promoter of each university has to fulfill the above mentioned eligibility criteria as well as to occupy a position covering entirely the period of the project that is applied for.

The criteria have to be met with at the start of the project at the latest, which has to be proven at the date of the submission.

Funding

FWO funds 200.000 EUR for one Flemish research group per call under this ERA-NET scheme.

Admitted costs

Funding money can be used for staff, consumables and infrastructure. The minimal and maximal amounts of money allowed per cost category, as applicable for the regular FWO-projects, are not applicable for the projects funded by FWO in ERA-NET. Moreover, FWO pays the host institutions of a project 6% overhead on top of the funding amount.

Funding cannot be used for training activities, apart from the opportunity for a researcher appointed within the project to obtain a PhD on the basis of the results from his/her project research.

National Contact Point (NCP)
Research Foundation – Flanders
Egmonstraat 5 B-1000 Brussels, Belgium

Dr. Olivier BOEHME
Senior Science Administrator
Phone number: +32 2 550 15 45

Toon Monbaliu
Advisor Research Affairs
Phone number: +32 2 550 15 70

e-mail: eranet@fwo.be

SWITZERLAND

CH - Federal Office for Agriculture (FOAG)

Terms and conditions

Funding for Swiss partners in an ERA-Net C-IPM consortia is granted according to national regulations, which are stated in the "Verordnung über die landwirtschaftliche Forschung (VLF) vom 23. Mai 2012". An electronic copy of the pre-proposal and of the full proposal must be sent to the National Contact Point (NCP) no later than the closing date for pre-proposals and full proposals respectively.

Eligibility

Eligible are public and private research institutions as well as small and medium enterprises (SME), if they are legally established in Switzerland. The planned research activities must be consistent with the Swiss legal regulations for animal research and for genetically modified organisms (GMO).

Funding

The overall funding amount for Swiss partners in the second call of the ERA-Net C-IPM is EUR 200.000. The requested amount for each applicant shall not exceed EUR 100.000. The funding will be granted as a global contribution, usually one third as an advance payment, one third as an intermediate payment after the midterm reporting and one third as a final payment after the final reporting. The formalities of each contribution will be regulated in a contract between the FOAG and the corresponding research partner. Additional funding will not be provided afterwards.

Admitted costs

Funding is limited to 75% of the total reported costs. The remaining costs must be covered by own resources of the applicant or by other funding bodies. The exchange rate is 1 CHF = 1 EUR. Funding does not cover expeditures for activities carried out before the project has been granted, e.g. for the pre-proposal or the full proposal.

National Contact Point (NCP)
Federal Office for Agriculture (FOAG)
Valérie Page: valerie.page@blw.admin.ch
Phone number: +41 584622556

CZECH REPUBLIC

CZ - Ministry of Agriculture of the Czech Republic (MZE)

Terms and conditions:

Funding of Czech partners in ERA NET C-IPM consortia is granted according to national legislation for public tender (Act no. 130/2002 Coll.). There will be no special call at national level because both funded topics A2 and A3, or one of them, will be involved in the global national project: "*Integrated pest management of cereal crops against pathogens, weeds and insects for sustainable production of food, feed and raw materials*" headed by Crop Research Institute in Prague.

Eligibility:

Public research organisations.

Funding:

The overal funding all partners in consortia for topics A2 and/or A3, will be upto 65.000 € by the exchange rate 1€ = 28 CZK (Czech crown). Funding is covered by the current contract between Ministry of Agriculture and national coordinator of a. m. global national project, i. e. Crop Research Institute. Funding wil not cover expenditures for activities carried out before the start of topics A2 and A3.

Cofunding by national partners:

5,6 %.

National Contact Point (NCP)
Ministry of Agriculture (MZE)
Ladislav Jerabek: ladislav.jerabek@mze.cz
Phone number: +420 221812252

GERMANY

DE - Federal Ministry of Food and Agriculture (BMEL)

Terms and conditions

BMEL supports the first call on international cooperation in research funding within the framework of the ERA-Net Coordinated Integrated Pest Management (ERA-Net C-IPM).

The funding is limited to

- **Topic A3:** "Innovative and new pest monitoring tools and Decision Support Systems" (INNO-DSS)
- **Topic B2:** "Pest resistance management" (PRM) (the term pests includes: arthropods, bacteria, fungi, insects, phytoplasma, viruses, weeds)
- **Topic C4:** "Fruitflies in stone fruits, pome fruits, berries and small fruits; *Drosophila suzukii* and other fruitflies"

The Topics A2, B1, C2, C5, C7, C11 are not funded by Germany.

Eligibility

- **The requested budget** for the German partner(s) **is limited to 133.000 € per project.**
- German applicants must be research groups from academia, universities, research organisations or industry. Enterprises, especially SMEs, may participate as partners provided they can prove their financial stability (see hereunder).
- The project is submitted under topic A2, B2 or C2.

Funding

The main regulations are as follows:

- Funding bases on §§23 and 44 BHO (Bundeshaushaltsordnung) and associated administrative regulations according to Verwaltungsverfahrensgesetz (VwVfG) §48 § 49, §49a.
- The funding regulations, follow up and reporting of publicly funded projects are regulated according to ANBest (Allgemeine Nebenbestimmungen).
- Proposed projects must be in line with the above mentioned national announcement.
- Funding will be awarded as non-repayable project grant.
- Eligible Applicants are universities and research institutions domiciled in Germany. Research institutions, which receive basic financing, can be funded subject to specific conditions.

In case of involvement of private enterprises:

- Private enterprises have to be domiciled in Germany.
- The funding regulations, follow up and reporting of publicly funded projects are regulated according to NKBF 98 (Nebenbestimmungen für Zuwendungen auf Kostenbasis).

Admitted costs

See above

National Contact Point (NCP)

Federal Ministry of Food and Agriculture (BMEL)
Wolfgang Zornbach: Wolfgang.Zornbach@bmel.bund.de
Phone number: +49 228 99 529 – 4317

Federal Office for Agriculture and Food (BLE)
Annika Fuchs: Annika.Fuchs@ble.de
Phone number: +49 228 6845 – 3746

DK - The Danish AgriFish Agency (DAFA)

Terms and conditions

The funding from the *Danish Ministry of Food, Agriculture and Fisheries* for this call is under the auspices of the Board of the "Green Development and Demonstration Programme" (GUDP) and is administered by the Danish AgriFish Agency.

The GUDP is a funding programme which focuses on motivating and promoting ambitious and green business oriented innovation activities in the Danish agriculture, fisheries and food sector. Thus GUDP projects must induce green sustainability and economical sustainability simultaneously through the entire value chain. Green sustainability means having a focus on the environment, climate, nature, quality, sustainable exploitation of resources, food safety, human health, and animal welfare. Economical sustainability means having a focus on generating profit, socio-economic effects and addition of value to raw materials to support growth and competitiveness.

Projects shall meet the needs of DAFA.

Eligibility

It is a requirement that Danish participants submit a separate business plan in order to be eligible for funding. It can be uploaded with other documents in the electronic application system.
Requirements for the business plan are described further later in the document.

Who can apply

Applications for funding can be submitted by:

- Large, medium and small size enterprises (incl. stakeholders and similar associations, independent institutions, private research organizations, owners, tenants and users of farms)
- Research and other public knowledge institutes
- Technical Service Institutes (GTS) – are classified as companies

Funding from GUDP cannot be granted directly to foreign institutions or businesses registered outside of Denmark; however they can be part of the Danish participation in a project on a consultancy basis.

Table1. Maximum Subsidy Rates

	Public research institutes	Small enterprises	Medium size enterprises	Large enterprises
Applied Research	100 pct.	80 pct.	75 pct.	65 pct.
Development	100 pct.	60 pct.	50 pct.	40 pct.

Further information and definitions of size of enterprises can be found in the guidelines of the European Commission:
http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/

Project period

Projects must be conducted within a period of maximum 3 years.

Funding

A maximum of **3 million DKK (0.4 million euro)** is reserved for the call within the "Green Development and Demonstration Programme" (GUDP).

Admitted costs

Eligible costs

The following costs are eligible:

- Salary costs during the project period
- Consumables and other costs directly related to the project
- External consultancies
- Indirect costs (e.g. overhead)

To be eligible the costs must be directly related to the project and must be incurred and paid during the approved project period.

All costs must be stated excl. VAT, unless the applicant itself has to pay VAT and therefore is applying to have this expense covered.

Note: PhD inscription/scholarship/course fees are not eligible. The salary of PhD involvement in a project is an eligible cost.

Direct costs:

Salaries (Staff costs)
Salary can be provided for scientific staff, technical administrative staff or other staff involved in the project. Staff can be paid no more than a salary equivalent to comparable positions in the State. Sickness and maternity benefits, holiday pay and other social obligations should be incurred by the employing authority.

Universities and other governmental institutes, that are required to act in accordance to the rules concerning funded research activities in the budget guidelines of the Ministry of Finance, determine the salary costs as the actual salary expenses.

Private research institutes, e.g. Approved Technological Service Institutes (GTS institutes) budget actual salary costs per hour used (i.e. excluding overhead/general costs).

Operational costs

Operational costs are other operational expenses necessary for the implementation of the project including analyses, meeting and travel expenses.

Durables and equipment

Applicants must require or provide the necessary apparatus for the project themselves. If this is not possible, the acquisition of the requested equipment will be considered. Applications for a funding for durables and equipment must be accompanied by an explanation. A scrap value should be calculated for equipment funded by the Danish AgriFish Agency (see table 2). This value (the scrap value) represents the value of the equipment after the conclusion of the project and will be deducted in the budget.

Other costs

E.g. subcontracting, including consultancy services from Danish or foreign external advisors, where the beneficiary acquires the full right to exploitation. Applications for funding of 'other costs' must be followed by an explanation in detail of the content and requirement.

Table 2. Calculation of scrap value

	Straight-line depreciation over 5 years	**Depreciation rate of 25 pct.**	**Straight-line depreciation over 3 years (IT-equipment)**
	pct. of purchase value	pct. of purchase value	pct. of purchase value
Purchase value	100	100	100
Value 1st year	80	75	66
Value 2nd year	60	56,3	33
Value 3rd year	40	42,2	0
Value 4th year	20	31,6	0
Value 5th year	0	23,7	0

Indirect costs:

Contribution to general costs

Universities and other governmental institutions, which are required to act in accordance to the rules concerning funded research activities in the budget guidelines of the Ministry of Finance, can charge in the budget a contribution to the common expenses (overhead) of 44 percent of the direct costs.

Other applicants shall document all costs including overhead/common expenses. Overhead/common expenses should be calculated as a percentage of the salary costs and can exceed no more than of 30 percent. The calculated percentage must be documented based on entries in the accounts of the beneficiary in connection with the payment of the grant.

Own financial contribution and co-financing

Project activities can be co-financed with other national funds up to the maximum funding rate for national funding. The remaining funding must come from own financing and private sources. Trade funds in the context of state subsidy are considered so-called para-fiscal funds and thus considered as national public funds.

GUDP is encouraging both industry and universities to contribute with own funding for the projects.

Research and other public knowledge institutes must contribute with at least 10 pct. of the accumulated project costs in order to get funding from GUDP.

Business plan

Danish applicants are required to submit a business plan which will be part of the evaluation of the project's growth potential. The business plan should be in English and include the following aspects:

- *Project title and acronym*
- *Consortium participants*
- *Project output (max. 1 page)*
- *Description of marked and customers (max. ½ page)*
- *The business perspective (max. 1 page)*
- *The business model (max. ½ page)*
- *Risk analysis (max. ½ page)*

The business plan should be sent directly by the Danish project partner to the Danish contact person (see contact details below) before the application deadline.

Applicable legislation and guidelines

Act on a Green Development and Demonstration Programme, Act. No. 1502 of 27 December 2009:
https://www.retsinformation.dk/Forms/R0710.aspx?id=129569

Administrative Order on a Green Development and Demonstration Programme, Order No. 1261 of 24 November 2014:
https://www.retsinformation.dk/Forms/R0710.aspx?id=165671

GUDP – full application guideline (In Danish):
http://naturerhverv.dk/tilskud-selvbetjening/tilskudsguide/groent-udviklings-og-demonstrationsprogram-gudp/#c10113

Reference is made to the GUDP Strategy 2015-18 and Action Plan 2015:
http://naturerhverv.dk/tvaergaaende/gudp/gudp-bestyrelsen/

Application form

Application form, further information and match making tools are available at www.c-ipm.org

National Contact Point (NCP)
The Danish AgriFish Agency (DAFA)
Karina L. Vintersborg: klv@naturerhverv.dk
Phone number: +45 4526 3773

DENMARK

DK - Environmental Protection Agency (EPA)

Terms and conditions

Projecs shall meet the needs from the Danish Environmental Protection Agency (EPA): http://eng.mst.dk/media/129517/standard-tems.pdf

Who can qualify for funding?

Funding is available for public and private research institutions in Denmark which work on strategic research within the pesticides area. As a general rule the research should have an application perspective aimed at solving problems associated with use of pesticides and establishing targets and their measurability, e.g. using indicators; or aimed at new methods to reduce the negative impacts of pesticides on the environment and health.

The application should be submitted by the researcher taking part in the project and with primary responsibility for its completion.

How to apply

An application for funding for pesticide research should always include:

- completed application form,
- description of the project,
- timetables,
- curriculum vitae and list of publications (relevant publications in the past five years. The CV for the main applicant may be up to two pages,
- supplementary information about budget, e.g. break-downs of expenses for materials and quotes for services from subcontractors etc.

General requirements for the application

The project application must state the relationship with previous projects or current projects in progress which can support the project, and other knowledge, including from abroad, which should be included.

Description of the project

The nature of the project should be stated clearly in the project application. The description of the project should account for the entire content of the project and it should be written in easily understood language which is suitable for publication for a broad group of pesticide-research users.

The description of the project should contain:

1. the research-technical content of the project in relation to 'state-of-the-art',
2. the research question and hypothesis of the project, its theoretical foundation and methodology,

3. the research qualifications of the project participants directly relevant for the project under application, including relevant information on division of responsibilities between the scientific participants,
4. detailed description, including tables, of the size (dimension) of the project (number of samples and experiments/trials etc.),
5. strength calculations in connection with controlled studies (possibly enclosed as annexes),
6. assessment of the expected significance of the results for future research, application and administration in the area,
7. assessment of existing risks in order to be able to carry out the project activities described,
8. information on how the results of the project are to be published and communicated in addition to the mandatory reporting to the Danish EPA.

If the description of a project breaks down into work packages, a description must be included with reasons for the breakdown and how these packages are technically linked, as well as how results from each work package are compared in the project reports.

Timetables

Two timetables should be drawn up on the basis of the description of the project. The first timetable should state in hours and on a monthly basis when the individual, planned activities are expected to be completed. The second timetable should state in hours and on a monthly basis who of the individual project participants is to carry out the activities stated in the first timetable.

The full time consumption budgeted within the project should be included, i.e. jointly financed time consumption should be stated in both timetables.

Information about the applicant

Curriculum vitae and lists of articles etc. published (relevant publications over the past five years) must be enclosed for the main applicant and other scientific participants for whom salaries funding is being applied.

The important points in the curriculum vitae are the applicant's educational qualifications, research experience (participation in/management of larger research projects) and international network.

The list of articles etc. published should be limited to the most relevant:

- "peer reviewed" publications in the past five years,
- any relevant reports and chapters in books etc. in the past five years.

Eligibility

Only research will be supported from EPA. Only projects containing relevant crops and growing conditions in Denmark will be supported.

Criteria for quality assessment

In assessment of applications, priority will be given to the following criteria:

- The quality of the description of the project, the originality of the research and the scientific and societal perspectives,
- The scientific qualifications of the applicant, including publications in international journals,

- Description of the principle suitability of the proposed methodology and the possibility for practical completion of the task,

The criteria for quality assessment include two main dimensions: quality of methodology and news value.

Quality of methodology

The quality of methodology is a question of the degree of cohesion between the elements in the research process (research question, hypothesis, research design and methods). This involves research "craftsmanship" which meets accepted research norms and standards.

The quality of methodology is assessed with regard to:

- cohesion between the research question, the proposed collection and analysis methods, and the conclusions expected (i.e. good/bad cohesion between problems raised, hypothesis and research design as well as the suitability of the proposed methods),
- expected quality of data (high/low degree of reliability, validity and generalisability).

News value

The news value is a matter of the contribution made to existing scientific knowledge in the field. This means primarily the news value of empirical findings because originality in the form of development of a theory is usually not a requirement in an application-oriented strategic research programme.

The news value is assessed with regard to:

- formulation of the research question (interesting and innovative for research in the area/ trivial and well known),
- Applied methodology (inventive use of methods, new combination of known methods/ well known and tested),
- theory (contribution to theory development in the field/ no explicit conceptual framework),
- empirical results (contributes to completing (or challenging) research knowledge/ repeats well known knowledge).

Criteria for relevance assessment

The relevance assessment is a matter of the practical / societal relevance and not scientific relevance, which is covered by the news value dimension above.

In this context, relevance is defined in relation to the objectives of the programme to describe the impact of pesticides on the environment and health and to reduce the use and load of pesticides. Therefore, relevance is assessed on the basis of the contribution of the project to achieving one or more of the following goals:

- increased understanding of the environmental impact and health effects of the products,
- improved basis for regulating pesticides,
- reduction in the overall load on the environment and health,
- contribution to development of alternative methods to control and prevent pests.

The suitability of the workplace (access to laboratories, devices, offices, expertise, scientific guidance, etc.). There is a requirement that the workplace approves in writing that the project be conducted at the workplace. It is usually expected that the host institution will actively be involved in the project, and often provide joint financing.

General information
The following material can be ordered on the internet:

- Danish Chemicals Act, see Consolidation Act no. 849 of 24 June 2014.
- Statutory Order on Pesticides, see Statutory Order no. 151 of 18 February 2014.
- Statutory Order on Use of Chemical Substances and Mixtures in Pesticides, see Statutory Order no. 628 of 13 June 2014.
- Budget guidelines on activities financed by subsidies, see (in Danish) http://www.fm.dk/publikationer/2010/budgetvejledning-2011/,
- The Danish Government (2012): -Government draft pesticides strategy 2013-2015 - Richer nature, cleaner drinking water and better health, see http://www.mst.dk/pv_obj_cache/pv_obj_id_7B08730AC7A0FFA6BCAE101BD86B8185EE953500/filename/MST_sprøjtemiddelstrategi_210320132.pdf
- EU (2009): Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides, see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0128:en:NOT.

Funding

The total funding from EPA is 400.000 €.

Admitted costs

Budgeting and budget items

The budgets should be drawn up at actual prices on the date of the application and any seniority increases or other pay increases over the funding period should be taken into account. It is recommended that the applicant apply to the institution which is to administer the funding for assistance in preparing the budgets.

It is difficult to make precise estimates of costs and when they will be incurred for research activities. There may also be uncertainty with regard to valuing the human resources to be used in the work, acquisition costs of consumables and operating costs etc. The Danish EPA fully understands these uncertainties.

Nevertheless, as a basis for preparing the application, to the best of his ability, the applicant is expected to complete a budget process which ensures that reasonable resources are allocated to complete the work, and that, as far as possible, the budget is based on actual hourly rates incl. any pay increases etc. Note that it will not be possible to obtain supplementary funding later. It is also expected that the applicant will submit a financing plan which ensures that all costs can be covered.

The financial annexes have been included to provide an insight into the scope of the activity, the commitment of the research institutions involved, the scope of participation in the activity by the

individual employees, as well as the expected operating costs. All these aspects are significant for assessing the application.

The aspects mentioned above are also key parameters to be included in follow-up to the funding. For example, they mean that it is important to have approval from the Danish EPA for changes in the scientific staffing of the project or significant changes in the involvement of individual employees, changes because partners resign and/or new partners join, large changes in budget allocations between partners and changes in postdoc scholarships, etc. The Danish EPA should also be contacted for large changes in joint financing which affect the overall budget of the activity. Such approval will be made on the basis of a specific assessment of the individual case. Furthermore, the budget annexes to the application serve to ensure that the Secretariat can check whether the correct overhead rates are being applied, whether the prices/rates applied seem reasonable, and whether the regulations for state aid are being observed.

Finally, it should be noted that other publicly financed activities should be included in the budget, except for activities financed via the basic appropriations for public institutions or through general performance-contract funds. The activities which should not be included in the budget include; projects funded by other research councils, EU projects or PhD grants from the business community. The Danish EPA is keen that there is cohesion and synergy in such activities, but if these were included in the budget, they may blur the picture of the activity supported by the Danish EPA and complicate budget follow-up for both the recipient of funding and the Danish EPA.

Salary costs

Salary costs should be included for the number of hours the relevant employee is to work on the research activity (hourly rate and the number of hours). The hourly rate and number of hours that form the basis of the budget must be stated in the budget in the application form and the timetable for each employee/employee group.

The actual hourly rate for project participants must be calculated by dividing the gross annual salary of the employee by 1,628 hours. The gross salary is the salary paid to the relevant employee working 37 hours per week in Denmark or in the project country if the project is carried out outside Denmark.

The gross monthly salary, see the most recent payslip, comprises:

- Fixed monthly salary
- + pension contribution paid by the enterprise
- + holiday supplement (usually 1%)
- + benefits liable to A income tax
- + statutory benefits less compensation

Danish and Greenlandic public institutions: The budget should be based on the expected actual salary costs per hour over the funding period.

Foreign research institutions otherwise: The budget should be based on the expected actual salary costs per hour, if necessary with a modest supplement (max. 20% of the actual salary costs).

Approved technological service (in Danish 'GTS') institutes: The budget should be based on the expected actual salary costs per hour performed (effective hour), (i.e. without overhead/general costs).

Danish enterprises, including private research institutions and hospitals: The budget should be based on a fixed hourly rate of DKK 600, or a calculated rate per hour used (cost plus overhead). A statement of how any calculated rates for scientific staff salaries of more than DKK 600 per hour have been calculated should be enclosed.

Foreign enterprises: The budget should be the same as for Danish enterprises with a fixed hourly rate, but adjusted for the pay levels in the relevant country.

Other costs

Operating costs etc. calculated at expected actual price, excl. VAT.

Scientific salaries

The application form must clearly state who is to be paid by the Danish EPA and the relevant period concerned. The job category of the person must also be stated.

The researchers taking part in the project must have a masters degree or similar to qualify for support. Specific funding for PhD programmes and PhD students is not available. However a salary subsidy for active project participation by PhD students is available, if their project directly contributes to the goals of the specific research project and these can be included as an integrated part of the overall project.

Funding is not normally available for elderly scientific employees with unlimited senior contracts at universities, and where the hiring institution has not placed demands on full or part financing of salary expenses through revenue-funded activities. However, in exceptional circumstances it is possible to apply to buy out such employees for a limited period. The application should always account for the exceptional circumstances which justify that the project cannot be completed within the normal research hours of the applicant. Any buy-out may amount to a maximum of 60% of the current salary of the applicant, incl. pension contributions etc. and the actual buy-out should be documented in the application (certificate or similar).

The name, hourly rate and number of hours for funding must be stated for all scientific project participants. The hourly rates should be documented for each project participant.

For applications for unnamed researchers, the position must be advertised in accordance with the current regulations for the institution. The application should clearly state the positions to be filled through advertisements. The draft job descriptions should be enclosed as annexes with the overall application.

The contribution may be stated as number of hours and an amount in DKK for workplace and other funding.

Technical and administrative salaries etc.

Funding to pay for technical assistance, including student assistants can be applied for to the extent that the relevant person is linked to the project under application. The application should specify in detail the person's tasks.

Either name or job description as well as hourly cost and number of hours should be stated for technical and administrative salaries. The contribution may be stated as number of hours and an amount in DKK for workplace and other funding.

Consultant fees

If funding for consultant fees is also being applied for, a detailed offer from the consultant for the amount under application should be enclosed with the application. Funding for consultant fees is usually only granted for specific, short-term activities in a project requiring special scientific expertise, e.g. specialist analyses. Participation of statistical expertise is regarded as an integrated part of the project, and therefore, this activity should be included as a fully fledged part of the project group.

Operating costs

Operating costs must be divided into materials, stating the type, as well as transport and any sundry. Description of the individual operating costs should be included.

All operating costs (excl. VAT) should be stated, broken down into:

1 Materials (consumables),
2 Animals for experiments,
3 Services from subcontractors,
4 Transport and travelling costs

Materials (consumables)

Only costs of materials to be used directly in the project can qualify for funding.

Materials include glass products, chemicals and other items which will only be used in the relevant project. The application should always include an annex with a detailed list of the materials for purchase. Funding is not available for permanent activities such as permanent funding for operations, purchase of devices, computer programs, networks of researchers, databases, exchange scholarships, guest lecturers, research trips abroad, publication of articles in journals, organisation and participation in scientific conferences, workshops, seminars and similar as well as funding for preparing EU applications.

Participating institutions may not receive funding to rent or operate their own experiment areas, greenhouses, animal pens and lab facilities etc. Such rentals may, however, be included as part of the institution's own financing.

Services from subcontractors

If there is a need to use subcontractors, e.g. to analyse samples or to lease equipment from, there should be a specific reason for this.

The name of the subcontractor should also be stated and there should be documentation that the subcontractor possesses the knowledge necessary to perform the task. Offers etc. from the subcontractor should be enclosed as annexes to the application. Overhead is not available for large subcontractor costs.

A subsidy for direct expenses may be achieved for purchasing of animals and pesticides for experiments. Normally an overhead on the purchasing price will not be achieved.

Applicant institutions may not receive funding for internal subcontractors from their own institution.

If the involvement has the nature of a large sub-supply (procurement of a specific service, e.g. an analysis, procurement of animals for experiments, a survey or subcontracted research), a total price could be budgeted. The name of the supplier of such services should be stated at the date the funding is granted, because the overall activity depends on the contribution from this specific supplier. A notice/quote from the supplier must always be enclosed. Funding for overheads is not available for a large sub-supply to collaboration partners and affiliated collaboration partners.

Transport

The budget can include costs of transport to and from trial/experiment areas.

Use of own car is paid for in accordance with the lowest rate in the relevant circular from the Danish Ministry of Finance (Finansministeriets tjenesterejsecirkulær) unless otherwise approved by the provider of funding.

Travelling costs

Only travelling costs for participation in project coordination meetings, meetings of the monitoring group and the Danish EPA's pesticide research seminar can be included in the budget for the project.

Funding is not available to participate in conferences, workshops or similar meetings. If necessary, funding may be granted for study visits in connection with phasing in new methodologies. There should be a specific reason for this and this should be described in an annex.

Calculation of costs and overhead/administration contribution

An overhead is provided for certain types of institution to cover costs that cannot be directly attributed to the research activity. The overhead is calculated as a fixed percentage of the direct costs, see the rates below. Overheads should be added in the budget for Danish EPA funding and in the joint financing budget.

Type of institution/enterprise	*Overhead*
Danish institutions (including universities and government research institutes), which are subject to the regulations on funding-financed research activities in the budget guidelines from the Danish Ministry of Finance, and are authorised to carry out funding-financed research activities.	44%
Danish approved technological service (in Danish 'GTS') institutes.	20%

Type of institution/enterprise	*Overhead*
Danish institutions which meet the following criteria: • Receives and is expected to receive permanently a minimum of 25% fixed state funding to cover operating costs (measured in relation to annual turnover). • Is a non-profit institution for which any surplus may not be distributed to its owners. • Has the performance of research as a primary object.	20%
Public research institutions in Greenland.	20%
Public Danish and Greenlandic hospitals.	3.1%
State-recognised Danish museums (see the Danish Museums Act).	3.1%
All other Danish and foreign institutions and enterprises	0%

Statement of significant budget matters

The applicant can account for relevant matters of significance in the budget in a normal text document. The annex should not contain information which has already been stated in the financial forms or has otherwise been described in the application form.

The annex can include matters that the applicant finds relevant for the application such as:

- a statement of total costs of management functions,
- a statement of large items in the operating budget, including costs linked to expected smaller sub-supplies, particularly cost-demanding experiment activities, logistics and procurement of small items in large quantities,
- a statement of the budgetary conditions in connection with any large sub-supplies of consumables,
- supplementary information regarding the funds included in the financing from external sources of finance. Including information on any joint financing which has not yet been finalised,
- other matters which could help create an overview of the financial aspects of the project application.

If necessary, the Danish EPA will ask for supplementary information regarding the budgets before entering into an agreement on funding.

Conditions are also described in http://eng.mst.dk/media/129517/standard-tems.pdf

National Contact Point (NCP)
Environmental Protection Agency (EPA)
Helga Hjort: hehjo@mst.dk
Phone number: +45 72544538

SPAIN

ES - National Institute for the Agricultural and Food Research and Technology (INIA)

Terms and conditions

Only projects answering to clearly expressed needs of the 2015 INIA´s priority lines, will have a priority treatment in the eligibility process.
http://wwwsp.inia.es/Lists/Titulares%20Portal/Attachments/15/Prioridades2015.pdf

An electronic copy of the pre-proposal and full –proposal must be sent to the National Contact Point (NCP), once proposal has been submitted by coordinator.

Interdisciplinary research proposals will be prioritized.

The duration of the projects will be maximum 36 months.

Eligibility

The call is addressed to public research institutions and public universities.

Only one proposal per Spanish applicant, will be accepted. A maximum of two Spanish entities per proposal are allowed to apply for funding to INIA in this call.

The three cluster of topics in the call are eligible for INIA:

CLUSTER A: Preventive and sustainable (pest) management

- ✓ **A2**:"Integrated, sustainable and resilient Cropping systems"
- ✓ **A3**: **"**Innovative and new pest monitoring tools and Decision Support Systems"

CLUSTER B: Alternative and innovative control.

- ✓ **B1**: "Innovative direct biological control methods in holistic IPM approach"
- ✓ **B2**: **"**Pests resistance management" (PRM) (the term pests includes: arthropods, bacteria, fungi, insects, phytoplasma, viruses, weeds)

CLUSTER C: IPM in Minor Crops.

- ✓ **C2**: "IPM for Delia/Psila flies" (cabbage root fly and carrot fly)
- ✓ **C4:** "Fruitflies in stone fruits, pome fruits, berries and small fruits; *Drosophila suzukii* and others fruitflies"
- ✓ **C5:** "Mites (spider, rusts and bud) in berries and small fruits"
- ✓ **C7:** "Control of thrips and whiteflies on protected crops"
- ✓ **C11:** "Diseases in Stone fruits"

Enterprises and SMEs are welcome as partners in the consortium, only if they are legally established in Spain and their costs are covered by their own resources.

Funding

- The INIA´s total funding for this call is 200.000€. The requested contribution from Spanish applicant shall not exceed of 75.000 €.
- In case of Spanish Coordinator the requested contribution shall not exceed of 100.000€.
- In case of several Spanish partners in a consortium requesting funds to INIA, each Spanish partner might request 75.000€ as maximum, with exception of Spanish Coordinators (100.000€).

Funding can be granted to research teams according to the rules and procedures of INIA. Funding will be subject to availability of the national budget and under the Spanish rules (Law 38/2003 of November 17 of General Grants, article 28.1).

Grant awards (including mobility and training) and their justification, will be made according with the INIA´s subsidization rules (Order ECC /2098/201, of 8th November).

In case of budget limitations or budget reductions, an official agreement from the project coordinator to the National Contact Point (NCP) should be needed certifying that all partners involved in the consortium agree with the new funding conditions, in order to manage the contract with the beneficiary.

Admitted costs

- Subcontracts are possible following specific regulations of Spanish rules ECC/2098/2013 (BOE, 4th November, 2013).
- Only costs arising after the start of the project will be eligible, funding does not cover expenditure for activities implemented before and after the project has been granted. Applicants should implement the project and should have the necessary resources to do it.

The beneficiary should break down the costs per year, as following:

Direct costs:

- Salaries: Only for non-permanent scientific staff and non-permanent technicians hired for the project. PhD students and fellowship grants will not be eligible as personal costs.
- Fungible materials.
- Travel and subsistence costs for meetings can be charged as eligible costs, only for personnel included in the project, in accordance with the INIA´s rules (http://www.inia.es).
- Equipment: Only essential scientific equipment purchased specifically for the project will be reimbursed. In case of equipment and instruments not used for their full life for the research project, only the depreciation costs corresponding to the research project, as calculated on the basis of good accounting practice, shall be considered eligible.

Indirect costs (overheads):

- 20 % of the direct costs.

- Electricity, heating, some consumables (e.g. office supplies, toners for prints and repairs) are considered overheads.

The funds will be transferred to the beneficiary in an advance payment at the start of the project and other annual payments after scientific and financial justification by each beneficiary corresponding to each year.

An annual scientific report in both Spanish and English, will be submitted to INIA. Standards economic and scientific rationale for all beneficiaries of calls ERA-nets in which the funder is INIA are available at: http://wwwsp.inia.es/RelInt/Era-nets/Normativa/

National Contact Point (NCP)

National Institute of Agriculture and Food Research and Technology (INIA).

Anabel de la Peña: anaisabel.delapena@inia.es
Phone number: +34 91 347 8776

General questions and Electronic Submission System support

Jesús Jiménez: jesus.jimenez@inia.es
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FINLAND

FI - Ministry of Agriculture and Forestry (MMM)

Eligibility

The main national criteria emphasizes that the research benefit the agri-food livelihood. The work carried out must be pre-competitive research and/or prototype demonstration. Product development supporting individual companies will not be supported. Financial involvement must be clearly stated in the application. The application must contain a plan for communication of results.

Funding does not cover expenditures for activities before the project has been granted. Normally maximum 70 % of the project's gross eligible costs can be covered by the MMM funding. Applicants must provide the necessary apparatus (equipment costs) for the project themselves. If a special apparatus is needed an explanation and application for funding for apparatus must be included. If the applicant has not earlier given the explanation for indirect employee costs and overheads the applicant has to give an account to the ministry. The conditions (in Finnish) can be found at: www.mmm.fi/tutkimus -> Lomakkeet ja ohjeet (Makerasta myönnettyjen tutkimus- ja kehittämishankkeiden avustusten yleiset ehdot)

National Contact Point (NCP)

Ministry of Agriculture and Forestry (MMM)
Tove Jern: tove.jern@mmm.fi
Phone number: +358 295162318

FRANCE

FR - National Institute for Agricultural Research – Sustainable Management of Plant Health Program (INRA-SMACH)

Terms and conditions

The INRA metaprogramm SMaCH (Sustainable management of crop health) only finances INRA units according to usual internal rules. Applicants from INRA must send an electronic copy of the pre-proposal and of the full proposal to the SMaCH National Contact Point (NCP), before the closing dates.

Eligibility

Only Topic A2: ”Integrated, sustainable and resilient Cropping systems” (RESCROPS)” is eligible for INRA-SMaCH. INRA will priorize projects with: an interdisciplinary and innovative approach and a potential socio-economic impact.

According to the C-IPM call text, the project consortium have to consist of researchers from at least three partners from three countries providing funds for the call. Researchers from non-funding countries in the call are welcome to participate in project proposals, by their own contribution.

Funding

INRA-SMaCH funding is 75 000 €. The duration of the projects will be 3 years, as maximum

Admitted costs:

Only operational costs are eligible, salary costs are not.

National Contact Point (NCP)

National Institute for Agricultural Research - Sustainable Management of Plant Health Program (INRA-SMACH)
Sylvie Colleu: sylvie.colleu@paris.inra.fr
Phone number : +33 1 42759555

FRANCE

FR - Ministry of Agriculture, Agrifood and Forestry (MAAF)

Terms and conditions

Applicants must send an electronic copy of the pre-proposal and of the full proposal to the FR-MAAF National Contact Points (NCPs), before the closing dates.

Eligibility

The following topics are eligible for FR-MAAF:

CLUSTER A: Preventive and sustainable (pest) management
Subtopic A2: Integrated, sustainable and resilient Cropping systems (RESCROPS).

CLUSTER B: Alternative and innovative control.
Subtopic B1: Innovative direct biological control methods in holistic IPM approach (INDIBICOM-IPM).

CLUSTER C: IPM in Minor Crops.
Subtopic C2: IPM for Delia/Psila flies (cabbage root fly and carrot fly)
Subtopic C4: Fruitflies in stone fruits, pome fruits, berries and small fruits; *Drosophila suzukii* and others fruitflies
Subtopic C7: Control of thrips and whiteflies on protected crops.

The call is open to teams from public research and to professional and private actors carrying out research and development. Interdisciplinary research proposals will be prioritised.

According to the C-IPM call text, the project consortium has to consist of researchers from at least three partners from three countries, providing funds for the call. The maximum number of partners in the consortium is not restricted.

Researchers from non-funding countries in the call are welcome to participate in project proposals, by their own contribution.

The duration of the projects will be 3 years, as maximum.

Funding

FR-MAAF total funding is €800,000. The requested contribution for French applicant shall not exceed €200,000.

The amount of the grant shall not represent more than 75% of the total project costs.

The funds will be transferred to the beneficiary in an advance payment at the start of the project and other payments (mid-term and end of the project) after scientific and financial justification by each

beneficiary. Interim and final scientific reports in French as well as in English will be submitted to MAAF.

Costs attributable to the project

I. Eligible costs

The costs attributable to the project must match actual expenditure and must be strictly related to conducting the project, no profit margin is allowable.

Staff expenditure

The following expenses are allowed: salaries for non-permanent staff hired for the project, salaries for permanent staff for private bodies. In no case can staff costs for the permanent staff of public bodies be included in the grant awarded by MAAF, but these costs are eligible to justify self-funding.

Operating costs and small equipment

The following expenses are allowed, including non-recoverable VAT:

- Laboratory costs (chemicals, products and consumables)
- Office supplies
- Costs of intellectual property patents or licences
- Publication costs
- Travel costs for permanent or temporary staff assigned to the project
- Outsourced work (photographs, calculations etc.)
- Maintenance of equipment acquired for the project
- Small equipment with a unit cost of less than €1,600 before tax.

Service providers

Whatever their legal status, beneficiaries may order work or rent equipment from organisations outside the project, though the cost must remain marginal and less than 30% of the total grant awarded. The cost of these services should be included in an individualised manner in the operating costs.

MAAF has no obligation to service providers who, accordingly, are not entitled to request MAAF's aid in the event of default by a grant beneficiary. These services are provided on behalf of and under the control of the individual recipient of the grant.

In accordance with the rules in force, the beneficiary must pay for services as and when they are completed and not make this payment conditional upon the receipt of the grant expected from MAAF.

Capital expenditure

The purchase of material whose unit value exceeds €1,600 before tax is considered capital expenditure and MAAF takes into account:

- All or part of the purchase cost of these materials if they are not reusable after the project (which must be the general case).

- The share of depreciation calculated pro rata to the duration of use if the acquired materials are reusable after the completion of the project.

Overheads

Part of the general administration costs attributable to the project may be included as expenses. These costs are limited to 4% of total expenditure.

II. Non-eligible expenditure

The following are not covered:

- Financial fixed assets and habitual expenses for the simple renewal of equipment.
- Expenditure relating to the costs of marketing, sales and distribution.
- Expenditure relating to land, buildings and structures.

National Contact Point (NCP)

Ministry of Agriculture, Agrifood and Forestry (MAAF)

Cyril Kao: cyril.kao@agriculture.gouv.fr
Phone number: +33 1 49 55 45 98

Gérard Gautier-Hamon: gerard.gautier-hamon@agriculture.gouv.fr
Phone number: +33 1 49 55 51 72

GREECE

GR - Hellenic Agricultural Organization - DEMETER

Terms and conditions

The projects (research, development, demonstration and other) which are carried out by the Research Institutes of the General Directorate of Agricultural Research of Hellenic Agricultural Organization-Demeter should serve the specific objectives of the research policy, as specified by the relevant Scientific and Administrative boards of the Organization.

Eligibility

Eligible for funding are all the Research Institutes of HAO – DEMETER.

The preparation, submission and implementation of projects, follow our national laws (e.g. National laws for travel expenses, for recruitment, for sub-contracting etc.), our Regulation for Research and Development projects and our internal rules (e.g. Decisions of the Scientific Council and the Administrative Board of Hellenic Agricultural Organization-Demeter).

Funding

According to Decision of our Board, HAO - Demeter will fund all topics in total with the amount of 25.000 € in cash and 25.000 € in kind. There will be special preference in any of the selected topics.

Admitted costs

Eligible are the costs which are defined by HAO – DEMETER internal regulations for projects' implementation.

For further information contact our National Contact Point.

National Contact Point (NCP)
Hellenic Agricultural Organization-Demeter
D.G. of Agricultural Research
56-58 Kourtidou & Nirvana str, 111 45, Athens, Greece

Dr Georgia Ouzounidou: geouz@nagref.gr
Phone number: +30 210 8392220

IE - The Agriculture and Food Development Authority (TEAGASC)

Terms and conditions

Pre-proposals will be prioritised on the basis of their capacity to meet Teagasc research needs before a full proposal is invited. Teagasc will fund suitable projects from the call topics:

- A2: Integrated, sustainable and resilient cropping systems.
- A3: Innovative and new pest monitoring tools and decision support systems.
- B2: Pest resistance management.
- C2: IPM for Delia /Psila flies.
- C4: Fruitflies in stone fruits, pome fruits, berries and small fruits; Drosophila suzukii and other fruitflies.

All applications from Teagasc staff must be approved in advance by the Director of Research. For the efficient use of time, researchers are advised to consult with the National Contact Point (NCP): dermot.forristal@teagasc.ie at an early stage to make sure their topic is in line with Teagasc research priorities. Electronic copies of the pre-proposals and full proposals should be sent also to the NCP before the closing date for pre-proposals and full proposals respectively.

Eligibility

Only Teagasc staff members are eligible for Teagasc funding. Existing contract staff members whose contracts link them to a specific externally-funded project are not eligible to participate in applications to this call. Only proposals which address the A2, A3, B2, C2 and C4 call topics will be considered.

Funding

The total indicative Teagasc funding available for this call is €400,000. The total value of the Teagasc budget in individual applications cannot exceed €200,000 (including permanent staff time, walsh fellows etc). The annual budget cannot exceed €66,667 per application.

Admitted costs

Post graduate fees and stipend at the current Walsh fellow rate. Permanent research staff time. Travel and consumables. Indirect costs (overheads)

National Contact Point (NCP)
The Agriculture and Food Development Authority (TEAGASC)
Dermot Forristal: dermot.forristal@teagasc.ie
Phone number: +35 3876798688

ITALY

IT - Ministry of agricultural, food and forestry policies (Mipaaf)

Terms and conditions

Funds are available for research proposals in the thematic area B.2 "pest resistance management" and the proposals should refer to the priorities set in the Strategic Research and Innovation Plan for agricultural, food and forestry sectors (DECRETO n. 7139 01.04.2015) https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/7801

Eligibility

Eligible partner are: national public research bodies (ministerial, regional-provincial centers, university departments and institutes, university consortia, interdepartmental centers, etc.) and no-profit private bodies, if in their institutional and statutory scopes performing research activities is included.

Any private research body or foundation defined above must produce the official documents (statute and/or articles of incorporation or memorandum of association, etc.) where the mission of performing research activities and no-profit purpose are declared. They must send to Mipaaf by the application deadline copy of the documents (statute and/or articles of incorporation or memorandum of association, etc.) to: PEC: aoo.cosvir@pec.politicheagricole.gov.it, specifying in the subject "C-IPM 2016 call documents – private body".

SME or other private bodies can participate if they are able to provide their own funds to carry out the work.

Addendum: only research groups with documented expertise and participating in national and/or European research projects in the thematic area relevant for the call are eligible for funding.

Funding

Mipaaf rules (DG DISR IV acting as funding body) for eligibility and allocation of the financial contribution are given under the framework of the User's Manual which applicants must refer to (D.M. 6387/2010) at: http://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/3959).

A summary of these rules is hereafter reported and some specific requirements for this call are given.

Mipaaf total funding is € 50.000; the proposed projects may last from 24 to 36 months.

The Mipaaf contribution will correspond up to 99% of the approved eligible project costs. The transfer of funds will occur in three steps:

1) 50% of the approved costs immediately at the issue of the Ministry decree (contract between the Ministry and the beneficiary);
2) 25% of the approved costs at the mid-term report (both scientific and administrative) if at least the 80% of the prepayment has been spent;

3) 25% of the approved costs once the final report has been approved.

Eligible costs:

- Personnel
  - Salaries – only for non-permanent scientific staff (including temporary contracts, post docs, PhD students, fellowships and grants). In case of private institutions salaries of permanent staff actually participating in the project activity can be funded.
  - Travel expenses-for permanent and non-permanent staff involved in the project.
- Consumables
- External activity costs – expenditures for activity carried out externally to the research applicant (Consultancy services, agreements, maintenance, repairs, material transportation when needed for the project implementation). These costs shall be indicated as "Other costs" in the online template.
- Overheads – no more than 10% of the total amount of the above mentioned costs.
- Coordination – costs related to coordination activities with the other partners of the project (e.g. project meeting organization, etc.) must not exceed 5% of the total costs of the IT partner, even if the Italian institution is also playing the role of project coordinator. If an Italian institution is playing the role of coordinator non-permanent administrative staff can be included in the coordination costs.

National additional forms and documents

Submission of the proposal or other documents at the national level by the deadline is not required, except for no-profit private bodies (see above section "eligibility").

Only after the final funding decision by the C-IPM call partners, Mipaaf DISR IV, acting as funding body, will contact each Italian research unit of the selected projects asking to fill in an *ad hoc* model *C2* to apply for contribution.

In case of a research unit acting as Coordinator, also the general project description, including the activity of all partners (*ad hoc* model *A2*-project form) and the financial sheet for coordination activity, should be presented to the funding body. All these forms must be written in Italian.

Applicants are encouraged to contact the N.C.P. before submission of the proposal.

National Contact Point (NCP)

Ministry of agricultural, food and forestry policies (Mipaaf)

Annamaria Stella Marzetti: a.marzetti@politicheagricole.it
Phone: + 39 06 46655174

Elena Tibaldi (DISR IV Secretariat): e.tibaldi@politicheagricole.it
Phone: +39 06 46655176

LITHUANIA

LT - Lithuanian Research Centre for Agriculture and Forestry (LRCAF)

Terms and conditions

Only projects that clearly meet the needs of agriculture research will have a priority treatment in the eligibility process. The Lithuanian priorities are:

- Threshold values in the context of the actual production systems. Pest forecast, including dynamic of populations and research on improvement and validation of models. Harmonisation of DSS systems at regional level.
- networking for monitoring, mapping and regular updating of the resistance development, development of strategies for the prevention of resistance formation
- Soilborne fungal diseases

Eligibility

The call is addressed to legal person dealing with research activities, irrespective of its legal form.
The three selected topics in the call are eligible for LRCAF:

- Topic A (A3): "Innovative and new pest monitoring tools and Decision Support Systems"
- Topic B (B1): "Innovative direct biological in a holistic IPM approach"
- Topic B (B2): "Pests resistance management"

According to the C-IPM call text, the project consortium have to consist of researchers from at least three partners from three countries, providing funds for the call. The maximum number of partners in the consortium is not restricted.

The duration of the projects will be 36 month, as maximum.

Funding

Total funding is 110.000€.
Funding will be subject under the Administrative rules of Ministry of Agriculture for international research and technology development projects (No. 3D-177 March 19, 2009).

Admitted costs

Only costs arising after the start of the project will be eligible, funding does not cover expenditure for activities implemented before and after the project has been granted.

Direct costs:

a. Salaries: for scientific staff and technicians hired for the project.
b. Travel and subsistence expenses- only for personnel included in the project.
c. Equipment: Only specifically for the project will be reimbursed.
d. Reagents, active substances and othe measures for the project.

Indirect costs:

a. 20 % of the direct costs (up till 15 % of this cost for salary of managing staff. Electricity, heating, some consumables are considered overheads).

National Contact Point (NCP)

Lithuanian Research Centre for Agriculture and Forestry (LRCAF)
Roma Semaškienė: roma@lzi.lt
Phone number: +370 347 37038

THE NETHERLANDS

NL - Ministry of Economic Affairs (EZ)

Terms and conditions

- The Ministry of Economic Affairs will accept proposals on all three selected topics in the call.
- Proposals must link with the national policy priorities and research agendas.
- Proposals are welcome if the costs are covered by other funding, e.g. from the topsector call.

Funding conditions

- The total funding for this call is 25.000€ (including BTW).
- The budget is only possible if proven to be necessary for alignment of national research (where costs are already covered) or to meet the NWO requirements.
- The National Contact Point must be asked about further details.
- Funding can be granted to research organisations according to the rules and procedures of the Ministry. These can be asked for at the NCP.

Eligibility

- The call is addressed to research institutes with proven experience on the topics.
- Enterprises may participate as partners or subcontractors by their own contribution.

It is obligatory to contact the National Contact Point

National Contact Point (NCP)

Ministry of Economic Affairs, Department of Agro-Knowledge (EZ)
Policy Officer
Annet Zweep: a.t.zweep@minez.nl
Phone number: +31 (0) 652 690 643

THE NETHERLANDS

NL - Netherlands Organisation for Scientific Research (NWO)

Terms and conditions

- NWO will accept proposals on all three selected topics in the call.
- The review process is carried out under responsibility of C-IPM. Eventually the NWO-ALW Divisional Board will decide which Dutch proposals are to be awarded. This decision will be based on the ranking established by C-IPM.

Funding conditions

- The total funding for this call is 500.000€
- The maximum available budget per project is 250,000€
- The maximum project duration is 3 years.
- Funding can be applied for by associate, assistant and full professors or researchers with a comparable position who work within the earth and life sciences and hold an appointment at a Dutch university or a research institute recognised by NWO (cf. Open Programme NWO-ALW). For this specific call, this includes TO2 and HBO institutes.
- Specifically:
  - Applicants must hold a doctorate and/or be professor.
  - Applicants must have a paid appointment for at least the duration of the application process and the research for which the grant is requested.
  - Employees who have a 'zero-hours' contract (0-aanstelling) or a contract as an unpaid guest researcher cannot apply.
  - Applicants may not apply for a position for themselves (if required with the exception of senior researchers at TO2/HBO).
- TO2 institutes are defined as TNO, DLO (research institutes of Wageningen UR), the National Aerospace Laboratory (NLR), Energy research Centre of the Netherlands (ECN), Deltares and the Maritime Research Institute Netherlands (Marin). HBO institutes are defined as government funded HBO institutes as included in article 1.8 of the 'Wet op het hoger onderwijs en wetenschappelijk onderzoek <http://wetten.overheid.nl/BWBR0005682> (WHW)'.
- The Dutch applicant submits his/her application as part of an international consortium. An individual Dutch applicant may request funding for only one project (part of a consortium) in this C-IPM call.
- Applicants can apply for a grant to cover research costs such as the appointment of personnel (post-doc/senior researchers), material facilities (consumables, travel costs, etc.) and fieldwork. Each cost category should be explained separately in the application.
- For the salary costs the VSNU contract 'Akkoord bekostiging wetenschappelijk onderzoek <http://www.nwo.nl/financiering/hoe-werkt-dat/Salaristabellen>' applies. For the Dutch Individual Project a grant can be requested for a postdoc researcher (maximum 3 years full time, per 1 July 2015: 207.663 euro). This amount includes a bench fee of 5,000 euro for individual costs

for the purposes of the research of the post-doc (e.g. publication costs, congress visits, etc.). In this specific call TO2 and HBO institutes may also request funding for senior researchers with a fixed position. In such cases the conditions for post-doc researchers will apply (maximum 3 years full time, per 1 July 2015: 207.663 euro).

- For material costs (consumables, fieldwork, travel costs) and networking costs (consortium meetings, travel costs, communication) a maximum of 50,000 euro for the entire funding period can be applied for.
- A budget to cover equipment costs cannot be requested under this call. Applicants cannot apply for a grant to cover the costs of tenured staff (with the exception of senior researchers at TO2 or HBO institutes), student assistants, analysts or technicians, overheads, general laboratory equipment and the costs for maintenance, insurance, congress visits and publications. Costs for sub-contracting are not eligible for funding.
- It is recommended to link proposals to ongoing projects on sustainable crop protection within the Topsector Horticulture & Propagation Materials and Agri&Food. For Dutch researchers funding is available from the Ministry of Economic Affairs to align with ongoing research.
- For Dutch policies on integrated pest management minor use issues are most relevant, therefore applicants are urged to relate proposals to cluster C (IPM in Minor Crops). Submitting proposals in the other clusters is however allowed as well.

Eligibility

- There will be no selection of pre-proposals other than an eligibility check based on the criteria described in the national requirements (this page and NWO website via link below).
- Before submitting a pre-proposal, it is obligatory contact the National Contact Point to discuss eligibility criteria and possible relevance to policy.
- Please refer to all eligibility criteria for Dutch applicants on the NWO website: http://www.nwo.nl/en/funding/our-funding-instruments/alw/era-net-coordinated-integrated-pest-management-in-europe-c-ipm/era-net-coordinated-integrated-pest-management-in-europe-c-ipm.html

It is obligatory to contact the National Contact Point before sending in the pre proposal and full proposal.

National Contact Point (NCP)
Netherlands Organisation for Scientific Research (NWO)
Policy Officer
Martijn Los: m.los@nwo.nl
Phone number: +31 (0) 703440508

NORWAY

NO - The Research Council of Norway (RCN)

Terms and conditions

The national research programme participating in this call is BIONAER (Sustainable innovations in food and bio-based industries): www.forskningsradet.no/bionaer

Proposals with Norwegian partners in this call must be within the frame of the BIONAER programme plan and national agricultural policies, and support the National Action Plan.

Norwegian participation must follow RCN's General Terms and Conditions for R&D Projects. Norway will support researcher projects in this call. Norwegian participation must fulfil RCN's requirements for researcher projects. This implies that the responsible Norwegian partner in the project has to be a Norwegian research institution, but Norwegian enterprises or e.g. Norwegian companies, groups of companies or trade and industry organisations are also welcome to join the projects as partners or subcontractors.

Eligibility

Only the Norwegian project partners of positively evaluated projects in the first step will be eligible for the second step. Project partners of financed projects will have to submit national application forms to The Research Council of Norway after notification.

National priorities

Norway will not fund projects where the main activity is within subtopic A2 *Integrated, sustainable and resilient Cropping Systems.* The remaining topic clusters/subtopics have equally priority.

Funding

National budget for this call: Normally up til 670 000 €.

The maximum grant for Norwegian participation: € 335.000 per proposal. Norwegian partners are encouraged to take leading roles in the projects.

Admitted costs

Norwegian participation must fulfil RCN's requirements for researcher projects.

Applicants are encouraged to contact The Research Council of Norway:

National Contact Point (NCP)
The Research Council of Norway (RCN)
Kirsti Anker-Nilssen: kan@rcn.no
Phone number: +47 480 73 898

SWEDEN

SE - The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS)

Terms and conditions

The mission of Formas is to promote and support basic research and need-driven research in the areas Environment, Agricultural Sciences and Spatial Planning. The research that is funded should be of the highest scientific quality and relevance to the areas of responsibility of the Council.

The Swedish participants who will apply for national funding from Formas must fulfill the the general terms and conditions for applicants to the research council:
http://www.formas.se/en/Financing/General-instructions
(e.g. eligble costs, overhead, ethical guidelines, open access, national reporting)

Eligibility

The eligible Swedish applicant and co-applicant need to have a doctoral degree and apply for a grant eligible Swedish research organisation. See:
http://www.formas.se/en/Financing/General-instructions/Grant-administrating-organisation/

Only the Swedish project partners of positively evaluated projects in the first step will be eligible for the second step.

Sweden has priority for the topics under clusters A and B, however topics in cluster C that are part of a proposal covering topics of clusters A and/or B are also fundable.

Funding

National budget for this call is a total of 1,000,000 € (Note! Decisions are made in Swedish crowns, and total call budget cannot exceed 10,000,000 SEK). The maximum grant for Swedish participation is 300,000€ per proposal (100,000€/yr). Swedish partners are encouraged to take leading roles in the projects.

Project partners of consortia selected for funding will have to submit a national application form to The Research Council Formas after notification. If more than one Swedish research institution are participating in the same proposals, the partners would, if selected for funding, be recommended to make a joint national application in Swedish crowns (SEK) to Formas.

National Contact Point (NCP)
The Swedish research council for environment, agricultural science and spatial planning (FORMAS)
Jan Svensson: jan.svensson@formas.se
Phone number: +46 8 775 4051

TURKEY

TR - Ministry of Food, Agriculture and Livestock-General Directorate of Agricultural Research and Policy (MFAL-GDAR)

Terms and conditions

The consortia, which will apply for the IPM Call, have to consist of partners from minimum 3 participating countries of the Call. Every research team taking place in the project is supported by their country's funder institution and according to that funder's system. Turkish researchers taking place in the project will be supported by GDAR. Since GDAR only funds research and development studies conducted by its institutes researchers applying from to an international call from Turkey must colloborate with GDAR Research Institute. The projects can last up to three years

Eligibility

This call's aim is to fund projects that will increase Integrated Pest Management's effectiveness.

The four selected topics in the call are eligible for GDAR:

•Topic A:
Subtopic A2 : "Integrated, sustainable and resilient Cropping systems" (RESCROPS).
Subtopic A3: "Innovative and new pest monitoring tools and Decision Support Systems" (INNO-DSS).

•Topic B:
Subtopic B1: "Innovative direct biological control methods in holistic IPM approach" (INDIBICOM-IPM).

•Topic C: "Minor uses".
Subtopic C4: "Fruitflies in stone fruits, pome fruits, berries and small fruits; Drosophila suzukii and others fruitflies"

Funding

It is advisable that the project budgets do not exceed 30.000 Euros.

Admitted costs

There is no personal cost in the project budget.

National Contact Point (NCP)
Ministry of Food, Agriculture and Livestock-General Directorate of Agricultural Research and Policy (MFAL-GDAR)
Birol Akbaş: bakbas@tagem.gov.tr
Phone number: +90 312 327 17 93

UK

UK - Department for Environment Food and Rural Affairs (DEFRA)

Funding Programme:

Food and Farming Directorate – Crops Science

Eligibility criteria:

Applicants are advised to familiarise themselves with Defra's research activities and procurement requirements found at:

https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/research

https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/procurement

Defra's contribution towards each project should not exceed the maximum limit of £50k inclusive of VAT.

National Contact Point (NCP)

Department for Environment Food and Rural Affairs (DEFRA)
Innovative and Sustainable Farming Team
Rm AREA 1B. Nobel House. 17 Smith Square, London SW1P 3JR

Dr Giulia CuccatoGiulia: Cuccato@defra.gsi.gov.uk
Phone number: +44 30163182

Dr. Luke Spadavecchia: luke.spadavecchia@defra.gsi.gov.uk
Phone number: +44 30163821