



# ENDURE

European Network for Durable Exploitation of crop protection strategies

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## Glossary and Definitions

**BCA** – Biological Control Agent

**CIHEAM** – International Centre for Advanced Mediterranean Agronomic Studies. CIHEAM seeks to be an instrument for Mediterranean cooperation, a pivotal centre and support base for initiatives linking Europe and the Mediterranean by: propagating a common scientific culture for the food and agriculture sector; working in cooperative networks with national agricultural education and research institutions; and providing a Mediterranean forum where governments can discuss prospects for food and agriculture.

**CPN** – Crop Protection Network. Virtual organization formed by members of all the projects, networks and permanent organizations that are not ENDURE-members, but will cooperate somehow with this network.

**CS** – Case Study. Each of the sub-activities in RA1.

**DIABR-ACT** - Harmonise the strategies for fighting *Diabrotica virgifera virgifera*. Is an EU funded project under the 6<sup>th</sup> Framework European Programme. The long term goal of DIABR-ACT is to establish a harmonised and sustainable control strategy for *Diabrotica virgifera virgifera* (Western Corn Rootworm) (WCR) populations both in the areas of continuous establishment and in the areas of discontinuously emerging populations. At the same time DIABR-ACT aims at minimizing the impact of these measures on biodiversity and the environment. These control strategies could include biological and integrated control, plant resistance traits, the adaptation of biotechnological approaches and cultural techniques.

Stakeholders participating in the Specific Support Action are members from organizations involved in potential problems caused by this insect pest, i.e. farmers organizations, national plant protection services, policy makers, European research groups, cooperatives, chemical and plant breeding companies, environmental groups, respectively.

The focus of DIABR-ACT is on coordination of already established activities concerning the control of WCR by means of sustainable control measures. And evaluation of short and long term costs and benefits of containment and eradication strategies at the micro or macroeconomic level (farms, regions, countries, Europe) will be evaluated.

**ENDURE** - European Network for the Durable Exploitation of Crop Protection Strategies. ENDURE is a network of excellence funded by the European Union under the Framework 6 programme.

**EPPO** – European and Mediterranean Plant Protection Organization. EPPO is an intergovernmental organization responsible for European cooperation in plant health. Founded in 1951 by 15 European countries, EPPO now has 50 members, covering almost all countries of the European and Mediterranean region. Its objectives are to protect plants, to develop international strategies against the introduction and spread of dangerous pests and to promote safe and effective control methods. As a Regional Plant Protection Organization, EPPO also participates in global discussions on plant health. Finally, EPPO has produced a large number of standards and publications on plant pests, phytosanitary regulations, and plant protection products

**EUPHRESKO** - European Phytosanitary Research Coordination. EUPHRESKO is a project funded by the 6<sup>th</sup> EU Framework Programme. It is a European Research Area - Network (ERA-Net) project for research policy development and implementation in the field of statutory and emerging plant pests, diseases and invasive species (but not GMOs).

**Euroblight** - Potato Late Blight Network for Europe. Euroblight is a European network of scientists and other specialists working on the potato late blight disease. The network combines two networks originating from European Concerted Actions: EU.NET.ICP, European network for development of an integrated control strategy of potato late blight (1996-2005); and EUCABLIGHT, a potato late blight network for Europe (2003-2006).

**EWRS** - European Weed Research Society. The EWRS is an international body which was formed in 1975. It is open to everyone who has an interest in weed research and related topics. Its members come from official, commercial, university and independent research organizations, that all have a particular interest in the many different aspects of weed science and its technology.

**FAO AGPP** – Food and Agriculture Organization - Crop Protection Service. FAO AGPP is the Crop Protection Service of FAO, the Food and Agriculture Organization of the United Nations. This organization leads international efforts to defeat hunger, serving both developed and developing countries. FAO acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy. FAO is also a source of knowledge and

information. They help developing countries and countries in transition modernize and improve agriculture, forestry and fisheries practices and ensure good nutrition for all. Since its founding in 1945, FAO has focused special attention on developing rural areas, home to 70 percent of the world's poor and hungry people. FAO's activities comprise four main areas: (1) putting information within reach, (2) providing a meeting place for nations, (3) sharing policy expertise, and (4) bringing knowledge to the field. The Plant Protection Service of FAO addresses international aspects of plant protection and closely cooperates with regional and national plant protection organizations and programmes. The programme addresses plant quarantine in the Secretariat to the International Plant Protection Convention, setting standards, exchanging information and fostering cooperation. Concerning pesticide management, the programme promotes the implementation of the International Code of Conduct on the Distribution and Use of Pesticides, and cooperates with other organizations in making recommendations for maximum residue levels.

**FARM** – Foundation for World Agriculture and Rural Life. FARM was initiated by a group of companies interested in helping further agriculture and agro-industries in developing countries. Launched by René Carron, Chairman of the Board of the bank Credit Agricole S.A., on the occasion of a meeting he chaired at the Elysée, FARM was recognised as ‘an organisation of common public interest’. The aim of the founders of FARM is to put their experience, their analytic capabilities and their capacity for action at the disposal of these new agricultural actors. Bringing their capabilities to bear on agricultural production should lead to the development of new approaches and contribute to the development of sustainable agriculture at the world level. The foundation FARM is concerned with all developing countries, with a special emphasis on the Least Developed Countries and the African-Caribbean-Pacific Countries with which the European Union maintains a special partnership.

**FOOTPRINT** - FOOTPRINT: Creating Tools for Pesticide Risk Assessment and Management in Europe. FOOTPRINT is a research project funded by the European Commission as part of its 6th Framework Programme for Research and Technological Development. The project aims at developing computer tools to evaluate, and reduce, the risk of pesticides impacting on water resources in the European Union (surface water and groundwater). The project started in January 2006 and benefits from support for 3 years.

**HAIR** - Harmonised Environmental Indicators for Pesticide Risk. HAIR was supported by the European Commission under the 6th Framework Program. It was a Specific Targeted Research Project (STREP) for scientific support of policies. The project started January 2003

and finished in March 2007. The aim of the project was to support EU policies for sustainable agriculture by providing a harmonised European approach for indicators of the overall risk of pesticides, which integrated European scientific expertise on the use, emissions and environmental fate of pesticides and their impact on agro-ecosystems and human health. Its results were expected to directly contribute to Agenda 2000 aims for suitable agriculture, and to the 6<sup>th</sup> Environment Action Programme's Thematic Strategy on the Sustainable Use of Plant Protection Products.

**IA4** – Integrating activity IA4 'Integrated Knowledge and Communication' of ENDURE.

**IOBC** – International Organization for Biological Control of Noxious Animals and Plants. The IOBC was established in 1955 as a global organization affiliated to the International Council of Scientific Unions (ICSU). It promotes environmentally safe methods of pest and disease control. It is a voluntary organization of biological-control workers. Membership in IOBC gives individuals and organizations the opportunity to participate in biological control activities beyond their specific jobs and workplaces, to step outside their bureaucracies, and to contribute to the promotion of biological control worldwide. IOBC has several regional organizations; IOBC/WPRS is the West Pacific Palaeartic regional section that covers all of the ENDURE geographical domain.

**MASTER** - Management Strategies for European Rape Pests. MASTER was an EU 5<sup>th</sup> Framework project funded by its 'Quality of life and management of living resources' programme. The overall aim of MASTER was to construct, develop, evaluate and promote an IPM System for the European oilseed rape crop, incorporating biological control of pests. And in consequence, to improve the efficiency, profitability and environmental acceptability of production and, thereby, to contribute towards sustainable production of the crop.

**PAN Europe** - Pesticide Action Network, Europe. Pesticide Action Network (PAN) is a network of over 600 non-governmental organizations, institutions and individuals in over 60 countries worldwide working to replace the use of hazardous pesticides with ecologically sound alternatives.

**PRATIQUE** – Enhancements of pest risk analysis techniques. Is an EU funded project under the 7<sup>th</sup> Framework European Programme. The purpose of PRATIQUE is to address the major challenges for pest risk analysis (PRA) in (a) predicting the entry and establishment of new plant pests, diseases and invasive alien species in the EU, (b) estimating potential economic,

environmental and social impacts and (c) preventing eradicating, containing and controlling invasions. This will be achieved through improvements to the functionality and user-friendliness of the current EPPO-PRA decision support scheme and a new decision support scheme to combat pest outbreaks.

The results of the project will be tested with a representative range of the major pests and invasive alien species affecting the cultivated and uncultivated habitats of the EU and will be independently validated by phytosanitary experts. The deliverables will be provided as protocols, decision support systems and computer programs with examples of best practice made available to pest risk analysts through modules and direct links to the PRA scheme hosted by the European and Mediterranean Plant Protection Organization (EPPO)

**RA1.2** – Research sub-activity RA1.2 ‘Implementation of the Case Studies’ of ENDURE.

**RA2.3** – Research sub-activity RA2.3 ‘Exploitation of Landscape and Community Ecology’ of ENDURE.

**RA2.5** – Research sub-activity RA2.5 ‘Orchard System Study’ of ENDURE.

**RA2.6** – Research sub-activity RA2.6 ‘Designing Innovative Crop Protection Strategies in Arable Rotations’ of ENDURE.

**RA3** – Research activity RA3 ‘Multicriterion Assessment’ of ENDURE.

**RA3.3** – Research sub-activity RA3.3 ‘Environmental Risk and Benefit Assessment’ of ENDURE.

**RA3.5** – Research sub-activity RA3.5 ‘Societal Assessment of Current and Novel Low Input Crop Protection Strategies’ of ENDURE.

**RA4.1** – Research sub-activity RA4.1 ‘Pesticide Resistance Management’ of ENDURE.

**RA4.2** – Research sub-activity RA4.2 ‘Exploitation of Plant Genetic Resistance’ of ENDURE.

**RA4.3** – Research sub-activity RA4.3 ‘Exploitation of Natural Biological Processes’ of ENDURE.

**RA4.4** – Research sub-activity RA4.4 ‘Invading and Emerging Pests’ of ENDURE.

**SA1.1** – Spreading sub-activity SA1.1 ‘Joint Programme of Training Research, Key Staff and End-Users’ of ENDURE.

**REBECA** – Regulation of biological control agents. The objective of the Action REBECA is to accelerate the regulation process for BCAs and make it more cost-effective without affecting the level of safety. The Action will review current legislation, guidelines and guidance documents at Member State and EU level and compare them with legislation in countries where the market introduction of BCAs was more successful. Potential risks of BCAs will be reviewed and proposals are prepared on how regulation of BCAs can be balanced according to their potential hazards. Costs and benefits related to different levels of regulation will be reviewed and trade-offs evaluated. Alternative regulation strategies will be developed for low risk products. The action will bring together stakeholders from industry, science, regulation authorities, policy and environment to form a network within Europe bringing together the expertise and critical mass necessary to improve regulation procedures for BCAs. The action will identify future research tools to support the development of balanced regulation strategies.

**SA3.2** – Spreading sub-activity SA3.2 ‘Foster the Participation of Partners from INCO Target Countries in ENDURE Research Activities’ of ENDURE.

**SA4** – Spreading activity SA4 ‘Competence Centre in Durable Crop Protection Strategies’ of ENDURE.

**SafeCrop** – Centre for Research and Development of Crop Protection with Low Environment and Consumer Health Impact. SafeCrop was dedicated to innovative research oriented toward plant protection technologies against pests and diseases using sustainable low-environmental impact methods. The SafeCrop Centre finished its research activities at the end of 2007, its know-how has been taken by the research centre of the Edmund Mach foundation.

**SharCo** – Sharika Containment. Sharco is an EU-funded project under the 7<sup>th</sup> Framework European Programme. The sharika disease is a worldwide serious problem with a severe impact on the productivity and fruit quality of *Prunus* species. It is caused by Plum pox virus (PPV), a virus against which no chemical or biological curative treatment is available. SharCo is aimed at providing the EU with tools such as marker-assisted selection to speed up the

production of PPV (*Plum pox virus*) resistant plant materials, guidelines, early warning systems and decision-support systems in order to anticipate further PPV outbreaks. All knowledge and tools developed by the project will be widely disseminated all over Europe with a special attention paid to PPV endemic countries.

**SIGMEA** - Sustainable Introduction of GMOs into European Agriculture. The SIGMEA project is part of the EU 6th Framework Program: Policy Oriented Research. This project studied temporal and spatial gene flow across Europe in order to determine the measures needed for the co-existence of GM and non-GM production systems.

**Solagro** - Initiatives and Innovations for Energy, Agriculture, and Environment. Founded in 1981, Solagro is a non-governmental organisation whose first objective is " to promote and propose practices and processes for sustainable management of natural resources ".

**TEAMPEST** - Theoretical Developments and Empirical Measurement of the External Costs of Pesticides. Is an EU funded project under the 7<sup>th</sup> Framework European Programme. Internalization of external costs of pesticides is an option considered by some Member States as a valid policy action to reduce their use and limit their negative impacts on humans and on the environment. The project will contribute to the further development of market-based instruments to support the development and implementation of the Sustainable Use of Pesticides thematic strategy.

**WG** – Working Group.

## Summary

The Crop Protection Network (CPN) aims to cross-link ENDURE with permanent organizations, networks and projects, which share the same objectives of ENDURE. This is being done through several steps: (i), identifying the most relevant permanent organizations, networks and projects to be potentially linked to ENDURE; (ii), discussing in joint meetings potential collaborative topics and information exchange; (iii), involving representatives of external CPN members in specific sub-activities of ENDURE; (iv), supporting the attendance of CPN external members to ENDURE activity workshops; (v), subcontracting CPN external members to benefit from existing databases or other sources of knowledge, in some cases.

During these months we continued our work to identify new possible stakeholders which can be of interest for ENDURE. We planned some interactions between ENDURE and CPN-members, and we encouraged cooperation with different organizations. Afterwards it is up to the activity leaders to define the exact nature and interest of each potential link.

The different links differ in their degree of development, depending not only on the fluency of the communication with the activity leaders and other representatives, but also on several other factors such as discrepancy on the non-disclosure agreement that should be signed by all the external members of CPN.

Through this deliverable we show our progresses during the 20 months of ENDURE ongoing, including a state of the art for each planned interaction, a call for new proposal from other ENDURE partners, and a short explanation of planned interactions between ENDURE and the CPN, both directly with IA1.3 and with other activities.

## 1 Sub-activity description and aims

IA1.3 'Cross-linking with networks and projects' is an integrating sub-activity within IA1 'Ensure long-term strategy of ENDURE'. The aim of IA1.3 is to establish links between ENDURE and other projects, networks or permanent organizations, to avoid redundancy and benefit from their expertise and alternative points of view. This sub-activity is building up a CPN to facilitate exchange between ENDURE and these other stakeholders. The CPN aims to be a flexible structure rather than a fix list of cooperating stakeholders. For that reason we expect to have a varying number of members through ENDURE ongoing process, depending on the ENDURE necessities and the possibility of cooperation. Description and aims of CPN were presented in a *ad hoc* meeting in the ENDURE Kick-off Meeting held in Sophia-Antipolis in February 2007

## 2 Interaction between CPN members and ENDURE

Interactions will take place in two main ways. First, there is budget to afford for the attendance of CPN members to sub-activity workshops, where they should actively cooperate in the definition of ENDURE tasks and actions. Secondly, in some cases ENDURE will subcontract people from CPN external members to adapt and keep ongoing some important tools such as databases or models.

The exact level of cooperation and the way in which that will take place should be defined by the corresponding sub-activity leader. The task of IA1.3 coordination will be restricted to look for new external members that potentially may interact with ENDURE members, to establish the link between the sub-activity leader and the appropriate representatives of the other organizations, encourage activity leaders to cooperate with CPN members, and afterwards monitor the link and activities development.

In this deliverable we aim to complete the previous deliverable DI1.2 submitted in M16 in which different networks and projects were identified as potentially interesting during the CPN preparatory meeting, held in Montpellier (May 2007) and the annual meeting in Paris (November 2007) (table 1) with other ones identified during the lasts months.

**Table 1.** Potential interactions identified during the CPN preparatory meeting.

Project	ENDURE sub-activity identified as linked to project
Safe crop	<ul style="list-style-type: none"> <li>• RA 3.3. Environmental risk assessment</li> <li>• RA 4.3 Exploitation of natural biological processes</li> <li>• RA 1. Case study (CS) Pomme fruit</li> </ul>
Euphresco	<ul style="list-style-type: none"> <li>• RA 4.4 Invading and emerging pest</li> <li>• RA 1. CS tomato</li> </ul>
HAIR	<ul style="list-style-type: none"> <li>• RA 3.3. Environmental risk assessment</li> <li>• RA 3.4 Life cycle assessment</li> <li>• RA 2.2 Exploitation of innovative technologies (perhaps)</li> </ul>
SECURE	<ul style="list-style-type: none"> <li>• RA 4.2 Exploitation of plant genetic resistance</li> <li>• CS future about Oilseed rape.</li> </ul>
MASTER	<ul style="list-style-type: none"> <li>• RA RA 4.3 Exploitation of natural biological processes</li> <li>• CS future about Oilseed rape.</li> </ul>
SUSVAR	<ul style="list-style-type: none"> <li>• RA 4.2 Exploitation of plant genetic resistance</li> <li>• RA 1. CS Wheat</li> </ul>
EUROBLIGHT	<ul style="list-style-type: none"> <li>• RA 1. CS Potato</li> </ul>
SIGMEA	<ul style="list-style-type: none"> <li>• RA 3.3. Environmental risk assessment</li> <li>• RA 2.4. Design through modelling and experimentation</li> <li>• CS future about maize</li> </ul>

### 3 Current CPN members

During the first year of ENDURE (2007), two CPN workshops were held. The first took place in 5<sup>th</sup>-6<sup>th</sup> September 2007 in Barcelona. Representatives of 13 networks, projects and organizations attended this meeting, and this was in many cases their first contact with ENDURE. Simultaneously, the members of the Executive Committee of ENDURE also attended the meeting. The second workshop took place in Versailles during the First ENDURE Annual Meeting (November 2007), and FAO that was absent in the first workshop joined this second one.

For management reasons only people who signed the personal non-disclosure agreement can be considered as CPN members, as agreed by the ENDURE Executive Committee. Currently this agreement has been signed by Ingrid Williams (MASTER), Katrin Kaminski (EUPHRESCO), Cesare Gessler (SafeCrop), Jeremy Sweet (SIGMEA), Stephanie Williamson (PAN Europe), and Alison Lees (Euroblight). Despite the agreement has not been signed by any representative of IOBC and EWRS, these two important organizations are considered as members of CPN because there are many members of them who are involved directly in ENDURE. Due to the nature of FAO, this organization has expressed the idea to collaborate and participate in ENDURE projects, but FAO members have restrictions in order to sign any confidentiality agreement.

## 4 Planned interactions

In the Second Joint Programme of Activities (JPA) of ENDURE a list of several links foreseen for CPN and ENDURE sub-activities is included. Following there is a table summarizing these connections (Table 2).

**Table 2.** List of links between CPN and ENDURE sub-activities included in the 2<sup>nd</sup> JPA.

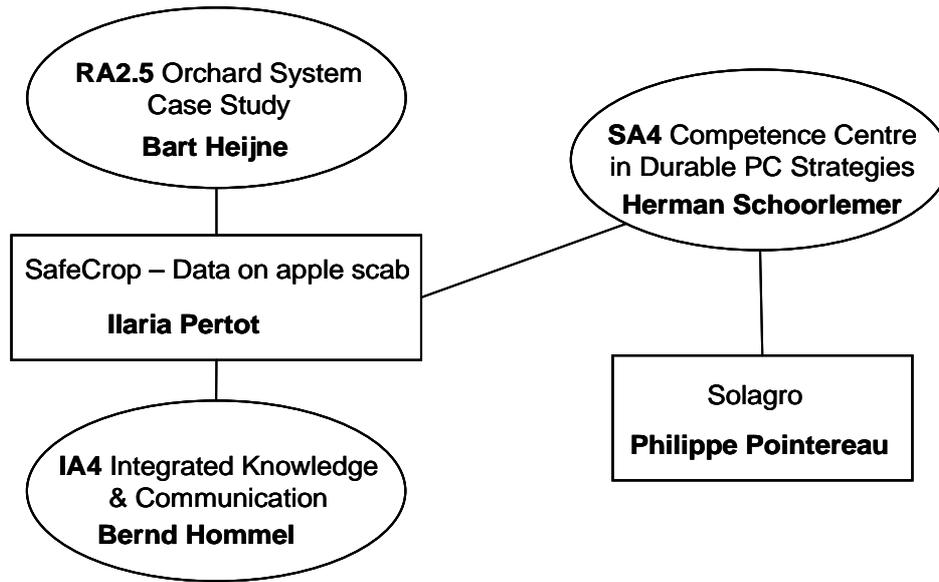
Name of non-ENDURE member of CPN	Nature of bilateral interaction	CPN-funded Meeting attendance	CPN-funded Sub-contracted work
IOBC	interactions through IOBC individuals already in ENDURE (= no cost)	0	0
IOBC	convenor of IOBC 'WG on Landscape management for functional biodiversity' to attend 1 meeting of RA2.7 orchard system study and/or RA2.3 landscape Ecology. convenor of IOBC 'WG on Oilseed Crops' to attend 1 meeting of RA1.2 rape CS convenor of IOBC 'WG on Viticulture' to attend 1 meeting of RA1.2 grapevine CS convenor of IOBC 'WG on GMOs' to attend 1 meeting of RA3.3	4	0
EWRS	interactions through EWRS individuals already in ENDURE (= no cost)	0	0
EWRS	Coordinator of EWRS WG on invasive plant spp to attend 1 meeting of RA4.4	1	0
EWRS	Coordinator of EWRS WG on herbicide resistance to attend 1 meeting of RA4.1	1	0
HAIR	Robert Luttkik to attend 1 meeting of RA3 Subcontracting time needed for adaptation of HAIR indicators to needs of ENDURE	1	1
Secure + Master	interactions through SECURE + Master individuals already in ENDURE (= no cost)	0	0
EUPHRESCO	Katrin Kaminski to attend 1 meeting of RA4.4	1	0
EUROBLIGHT	interactions through EUROBLIGHT individuals already in ENDURE (= no cost) and Alison Lees. Database to be exploited	0	1

5	SIGMEA	Jeremy Sweet to attend 1 meeting of RA3.3	1	0
6	PAN Europe	Stéphanie Williamson to attend RA3.5 meeting Other activities via EAB	1	0
7	EPPO	Nico van Opstal to attend 1 meeting of RA4.1 or RA4.4	1	0
8	FAO	Manuela Allara to attend 1 workshop of SA1.1 (Training) 1 person to be identified to attend SA3.2 (Foster the Participation of Research Teams from INCO Target Countries) 1 person to be identified to attend RA4.4 invading spp. 1 person to be identified to attend RA3.5	4	0
9	SafeCrop	1 person to be identified to attend RA1 Grapevine CS 1 person to be identified to attend DSS meeting Database on Plasmopara viticola, mixed and mono cultures of varieties of relevance to RA4.2 (Exploitation of plant genetic resistance) to be exploited 10 years of data on apple scab to be exploited (RA1 pomefruit CS, IA4, SA4)	2	1
10	SOLAGRO	Philippe Pointereau to attend 1 meeting of SA4 (ENDURE Information Center) Database on non-chemical control of insect pests for several crops (including wheat) to be exploited Philippe Pointereau to attend 1 meeting of RA2.3	2	1
11	Unidentified organization or project	3 organizations or projects to be identified and representatives to be invited to at least 1 ENDURE meeting	3	1
<b>12</b>	<b>Total</b>		<b>22</b>	<b>5</b>

## 5. State of the art of the interactions and perspectives

Some of the planned interactions have been postponed, cancelled or modified, mainly due to changes in ENDURE planning. The different links differ in their state of development, depending on several factors such as schedule or cooperating of the involved people. Following there is a description of the state of the art for each of the links.

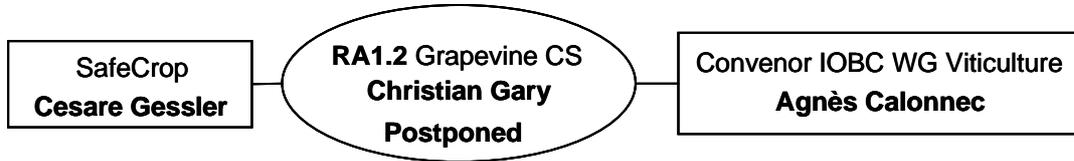
### Link 1 - IA4, RA2.5 and SA4 with SafeCrop and Solagro



In the IA1.3 workshop held in Barcelona, it was remarked the wide experience and important data of SafeCrop on apple scab. For that reason it was thought interesting to link SafeCrop with RA2.5, IA4 and/or SA4. Both activity leaders of RA2.5, Bart Heijne, and IA4, Bernd Hommel, have already agreed on establishing these links. Cesare Gessler and Ilaria Pertot, both from SafeCrop, have communicated that they would like to start the cooperation. The contact person in SafeCrop for this link will be Ilaria Pertot. After considering the possibilities, we decided that linking SafeCrop to IA4 may be more interesting than to RA2.5. We have communicated the mutual interest to Bernd Hommel and Pertot. At this moment, Bernd Hommel was interested in Solagro database and linking with SafeCrop, but no contacts have been done until now because they're just developing ENDURE-ALPS. Contacts are more likely to be done by the end of this year.

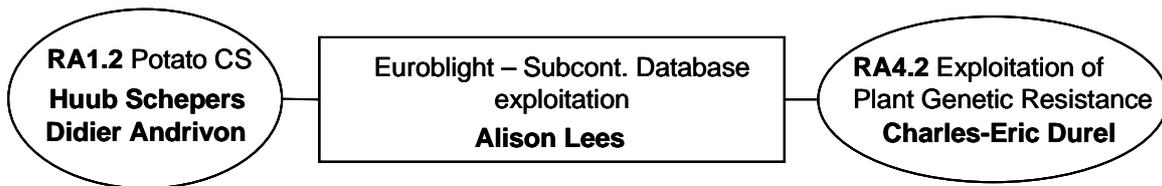
Solagro has an important database on management and ecology of natural enemies, especially on wheat. Originally we thought to involve Solagro in SA4. After some exchanges of opinion with Herman Schoorlemer, we realized that it could be more interesting to link Solagro to IA4 regarding ENDURE-ALPS and TI4.1c, that is the pilot functioning version of the data base focused on non-chemical control measures. Currently we are trying to get the agreement from both sides. However, we do not expect to have any problem as both, IA4 and Solagro, are already participating in other interactions and recently they had a meeting in Avignon (France) (2 – 3 Sept)

**Link 2- RA1.2 Grapevine CS with IOBC WG of Viticulture and SafeCrop**



This link will be postponed because the Grapevine Case Study has been postponed to the third year of ENDURE. Nonetheless, Cesare Gessler, from SafeCrop, has already ratified his interest in cooperating. No advances have been done in this cooperation since M14. We can expect a more active interaction once Grapevine CS has started.

**Link 3- RA1.2 Potato CS and RA4.2 with Euroblight**



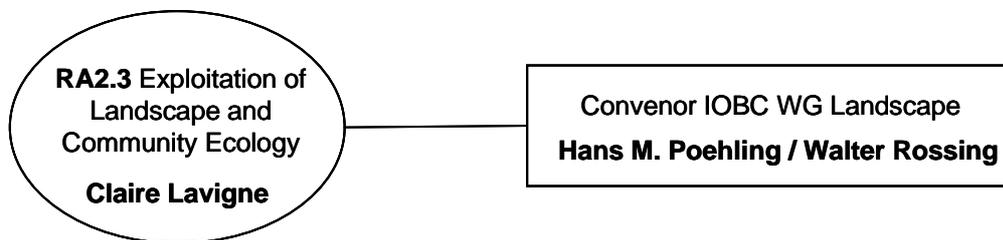
Euroblight has an important database on potato lateblight and other diseases regarding resistance, pathogen and host genetics, standardised protocols, and a catalogue for biological resources on potato. This data is very valuable and could be used by RA1.2 Potato Case Study or RA4.2.

Huub Schepers, leader of RA1.2 Potato CS, agreed in collaborating with Euroblight, or other networks. Nonetheless, he pointed out that the close end of the activity (month 18, next June 2008) can be an important handicap for any interaction. He also remarked that a clearer definition of the interaction should be given. From IA1.3, we clarified that the exact nature of the interaction should be defined by the activity leader. We also inquired him about the possibility of establishing the link between Euroblight and RA4.2 or IA4 ‘Integrated Knowledge & Communication’.

As pointed out by Huub Schepers, establishing a link between RA1.2 Potato CS and Euroblight would be difficult for schedule reasons. This highlights the interest of linking Euroblight to RA4.2. We are trying to get the agreement from Charles-Eric Durel, RA4.2 leader, for involving Euroblight in the tasks of this activity.

On the other hand, the results of the Potato CS will be used in other ENDURE activities, and closer contacts of Euroblight with the starting RA2.6 are expected. RA2.6 will study two cropping systems that include potato in the rotation, one in The Netherlands and the other in France. In addition, links with IA2 ‘Creation of a Virtual Laboratory in Crop-Pest Control’ will be developed in order to build up a ‘Eurowheat’ interactive platform based on Euroblight model and Experience. At this moment, fluent e-mail communication with Pertot, Durel and Lees has been established

#### Link 4- RA2.3 with IOBC WG of Landscape



IOBC WG on Landscape Management for Functional Biodiversity has wide expertise in landscape interactions with agro ecosystems. For that reason we think a key point of our activity, to stimulate its interaction with RA2.3. Claire Lavigne, recently named RA2.3 leader, agreed on establishing a link with the WG of Landscape of IOBC. She contacted Walter Rossing, who is the convenor of this IOBC WG attended the RA2.3 workshop which was hold in Bordeaux during the workshop of IOBC WG of Landscape Management for Functional Biodiversity. This took place in this town from 14 to 17 of May 2008. From IA1.3 we e-mailed with Lavigne to ask about the meeting RA2.3 – IOBC and the state of the art of this interaction, but no answer has been received

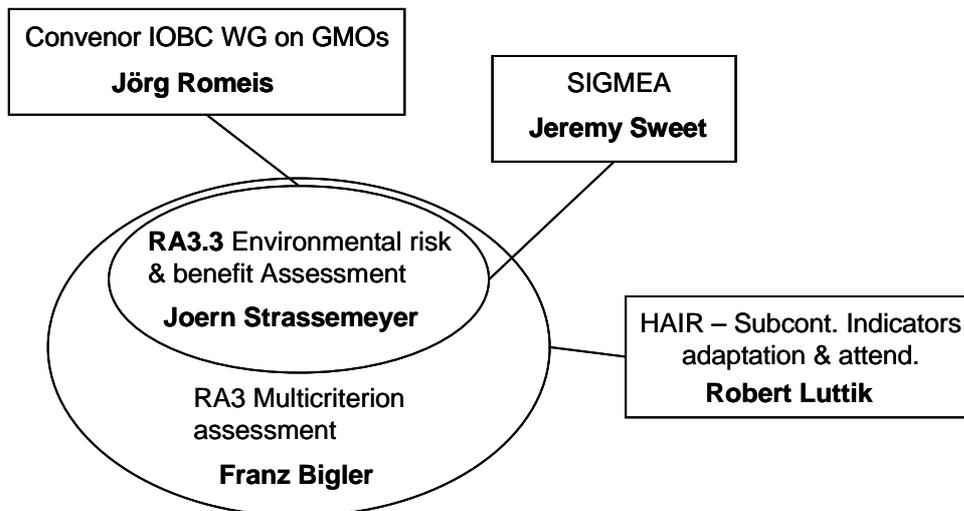
#### Link 5- RA2.6 and RA1.2 with IOBC WG on Oilseed Crops



IOBC WG on Oilseed Crops is an important source of knowledge on pest control on oilseed crops, and it is then an interesting link for ENDURE. Originally it was planned to link the RA1.2 Oilseed Rape Case Study to the IOBC WG on oilseed crops. Unfortunately this case

study has been cancelled, and for this reason we have contacted Antoine Méssean, RA2.6 leader, to see if there is sense on linking this activity with IOBC WG Oilseed Crops. Antoine Méssean was open to collaborate not only with IOBC WG on Oilseed Crops, but also with IOBC WG on Landscape. RA 2.6 members held a workshop at the beginning of April in Copenhagen. However, Antoine Méssean said that it was too early to invite CPN external members to this workshop. Afterwards he contacted and sent us the conclusions of the meeting. He will contact with Neal Evans regarding connections with IOBC oilseed rape.

### Link 6- RA3 and RA3.3 with IOBC WG on GMOs, SIGMEA and HAIR



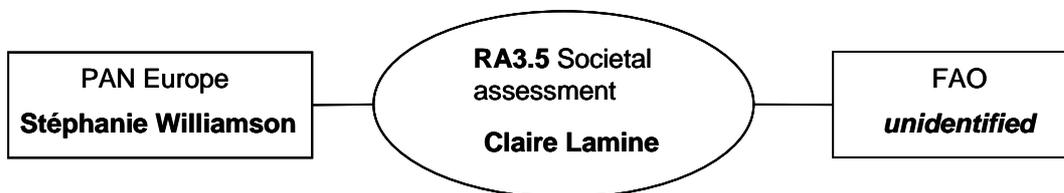
Franz Bigler, RA3 leader, and Jörn Strassemeyer, RA3.3 leader, were contacted for agreement with these connections. Franz Bigler was open, but asked about the nature of the possible links with SIGMEA and HAIR, and the web-links of these networks.

HAIR developed indicators for risk assessment at European level, and in the IA1.3 workshop in Barcelona, it was pointed out that it could be interesting to adapt them to local scale. On the other hand, SIGMEA aim was to go from crop management at the field level to European recommendations for managing GMO crops by assessing environmental and economical impacts. Thus they have a wide experience on risk assessment. This information was sent to Franz Bigler.

A telephone talk with Antoine Méssean, who was involved in SIGMEA project and is an ENDURE member, revealed that in spite of the initial plan of SIGMEA little has been done in that project regarding to risk assessment. He suggested that RA2.4 ‘Design of Crop Protection Strategies through Modelling and Experimentation’ would be a more appropriated link for SIGMEA. Franz Bigler agreed with Antoine Méssean, and we too. We contacted Christian Bockstaller, RA2.4 leader. In his answer, he suggested Antoine Méssean to be the contact person in RA2.4 for the interaction with SIGMEA.

IOBC WG on GMOs has a deep expertise on GMOs and GMO risk assessment, we thought that it will be good to profit this knowledge for RA3.3. However, Franz Bigler found this link inappropriate because RA3.3 is very focused on pesticide risk assessment. He said that this WG of IOBC could instead interact with RA1.2 Maize CS, which is also under his leadership. We send some e-mails to Franz Bigler regarding to the link with HAIR but no answer have been received until now. We also send an e-mail to Robert Luttik, HAIR responsible, for cooperation, Luttik agrees and demand more precise instructions. Finally, Méssean told us that no meeting of the RA2.4 is taking place until the International Conference, and also that SIGMEA has finished.

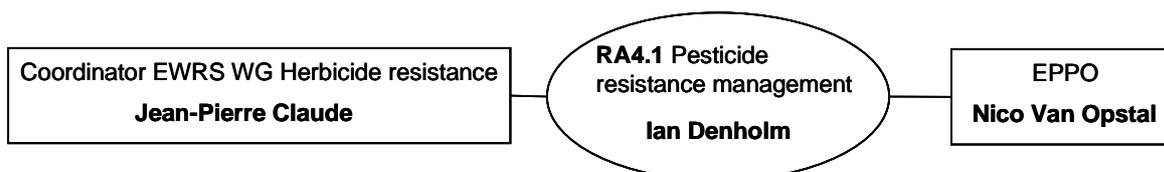
### Link 7- RA3.5 with PAN Europe and FAO AGPP



Claire Lamine, RA3.5 leader, found really interesting and agreed to cooperate with FAO and PAN Europe. Stephanie Williamson, PAN Europe representative, accepted the invitation. She also suggested that other PAN Europe people could join this interaction giving different expertises and points of view. FAO has shown its will of cooperate, but differences regarding the non-disclosure agreement should be solved, as FAO policy is against cooperation on confidential basis activities. FAO is then studying ENDURE's non-disclosure agreement.

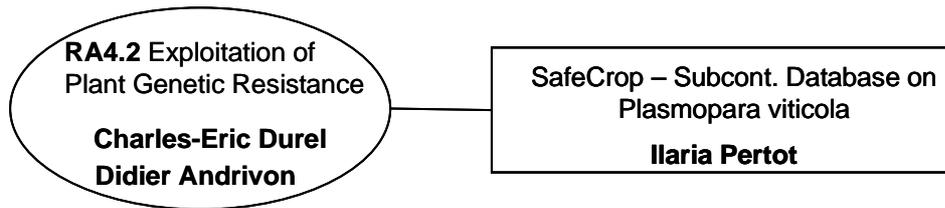
Both FAO AGPP and PAN Europe have been invited to the next RA3.5 workshop, which took place at the beginning of May 2008 in Paris. Recently, we received an answer from Lamine saying that PAN Europe could not attend the meeting in Paris but Lamine wrote to Williamson inviting her for September-October.

### Link 8- RA4.1 with EPPO and EWRS WG on Herbicide Resistance



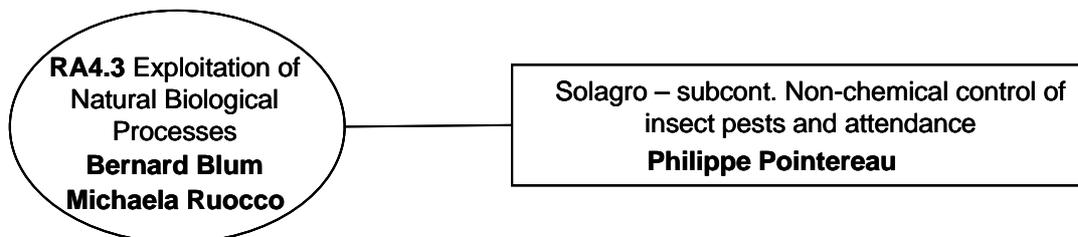
EPPO has not been able to cooperating with ENDURE until now. No representatives of this network came to the meetings in Barcelona and Versailles. On the other hand, a link with EWRS WG on Herbicide Resistance should be easy to establish as there are many members of this organization already involved in ENDURE. Currently, we are trying to get the agreement from Ian Denholm, RA 4.1 leader, for involving EPPO and EWRS in RA4.1. At this moment, no answer from Denholm has been received.

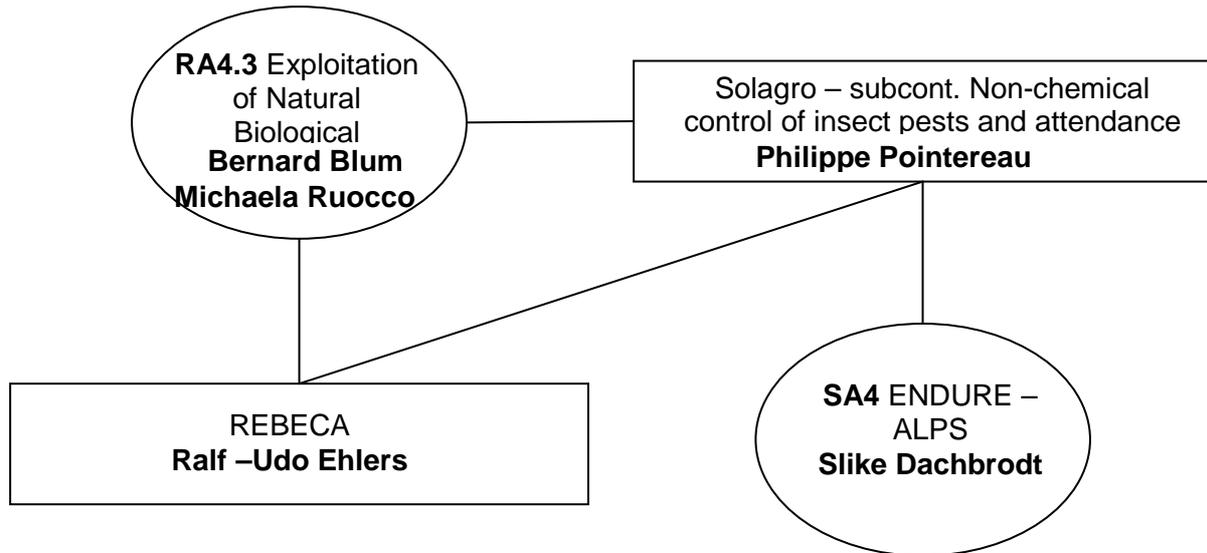
### Link 9- RA4.2 with SafeCrop



SafeCrop produced an important database on plant resistance to *Plasmopara viticola*. This database could be interesting for RA4.2. Charles-Eric Durel and Didier Andrivon, RA4.2, have been contacted via e-mail, but no answer has been received yet. Cesare Gessler and Ilaria Pertot, from SafeCrop both, have communicated that they would like to start the cooperation. The contact person in SafeCrop for this activity would be Ilaria Pertot.

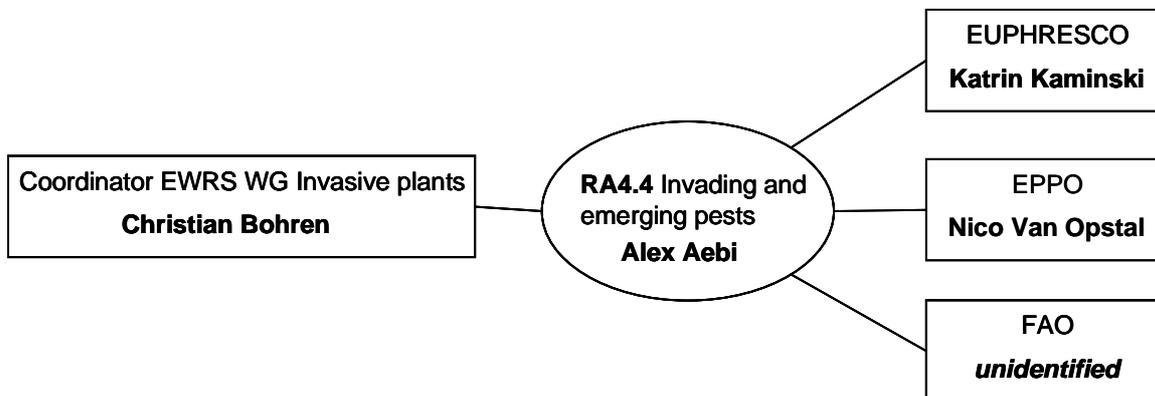
### Link 10- RA4.3 with Solagro





As said before Solagro has valuable information on natural enemy ecology and management. This knowledge could be interesting to RA4.3, in example regarding to TR4.3c 'Basic knowledge for Biocontrol Systems'. Last February 19<sup>th</sup>, 2008, the kick-off meeting of RA4.3 took place in Rome. At that point of the activity development, it was too early to interact with Solagro. However, the sub-activity leaders have agreed on interacting with Solagro, and inviting Philippe Pointereau to the next meeting. In early-march 2008, Marco Barzman informs us that Solagro and Bernard Blum are in touch and he approached Slike Dachbrodt from SA4 for relationship Solagro database and ENDURE-ALPS. Then Vincent Troillard let us know about the reference to REBECA in the 2<sup>nd</sup> JPA of RA4.3. We e-mailed Blum and Ruocco concerning cooperation with REBECA and Solagro, but Blum and Ruocco answered that REBECA is about to finish and a new registration of BCA is coming soon. Finally the meeting of RA4.3 took place in Avignon (France) (2<sup>nd</sup> – 3<sup>rd</sup> Sept) and Solagro attended it.

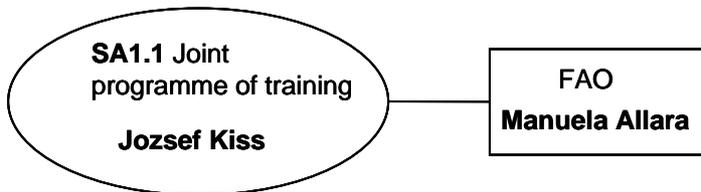
**Link 11- RA4.4 with EUPHRESKO, EWRS, EPPO and FAO AGPP**



There is a clear wilfulness to cooperate with RA4.4 from EUPHRESCO, but RA4.4 has initiated its activities late; in consequence the possible interaction has not been defined yet. Despite, a representative of EUPHRESCO, Katrin Kaminski, attended to both IA1.3 workshops. Recently, Alex Aebi, RA4.4 leader, agreed on establishing relationships with the above mentioned organizations. Soon there will be an internal call for proposals in ENDURE to define tasks and actions to be done in RA4.4. Following the instructions of ENDURE coordination, Katrin Kaminski has been invited to participate in the evaluation of the purposes that will be done by a committee. Katrin Kaminski has accepted participating in the committee and she has contacted via e-mail Alex Aebi to obtain information about the timescale and the procedure of the committee.

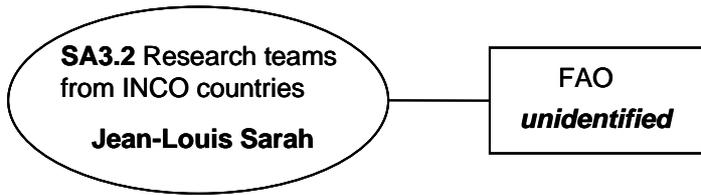
EPPO and FAO will be contacted after the resolution of this internal call. However, EPPO did not attend any of the IA1.3 workshops; in spite of this they were invited, willingness of EPPO in participating in the CPN is doubtful. On the other hand, a FAO representative, Manuela Allara, attended the First Annual Meeting of ENDURE. In this meeting, she showed open to interact, but also pointed out that signing a personal non-disclosure agreement could be a problem. It is necessary to clarify that point between FAO and ENDURE managers and coordinators. Since then a non-disclosure agreement was sent to Allara for consideration. Communication between Kaminski and Aebi seems to be fluent.

### Link 12- SA1.1 with FAO AGPP



Jozsef Kiss, SA1.1 leader, is open to cooperate with FAO. He invited Manuela Allara to the SA1.1 workshop, which was held in Budapest by the end of April. Manuela Allara has shown her intentions of cooperating, but her final decision is unknown, due to the problems with the confidentiality agreement above mentioned. A copy of the confidentiality agreement has been sent to her, and it will be studied by the competent members of FAO. Finally, Allara did not attend the meeting in Budapest, and the confidentiality agreement is still being studied by the competent members of FAO

### Link 13- SA3.2 with FAO AGPP



Jean-Louis Sarah, SA3.2 leader, agrees on establishing links with FAO. However, the final decision of FAO is still unknown due to the disagreement regarding the non-disclosure agreement. This agreement is being taken under consideration by FAO. The situation remains the same

### Other links identified

In the 2<sup>nd</sup> JPA we added 3 undefined interactions due to the flexible nature of the CPN. To find organizations candidate to join the CPN we have made an internal call through the ENDURE workspace, asking for suggestions to all ENDURE members. For making the suggestions it is only necessary to fill in a short questionnaire about the suggested organizations and the ENDURE sub-activities to be connected with, and send it to Daniel Casado ([daniel.casado@pvcf.udl.cat](mailto:daniel.casado@pvcf.udl.cat)), who's now substituted by Joan Solé ([joan.sole@irta.cat](mailto:joan.sole@irta.cat)).

Some suggestions have been already received. Jean-Louis Sarah, from CIRAD, suggested CIHEAM and FARM as interesting links for SA1 and SA3.2. Jörn Strassemeyer, from Julius Kühn Institute, has proposed a link between FOOTPRINT and RA3.4 'Life Cycle Assessment' and RA3.3. Finally, ENDURE project officer has found interesting to establish relationships with SharCo, but no concrete ENDURE activities have been suggested. These suggestions are under consideration.

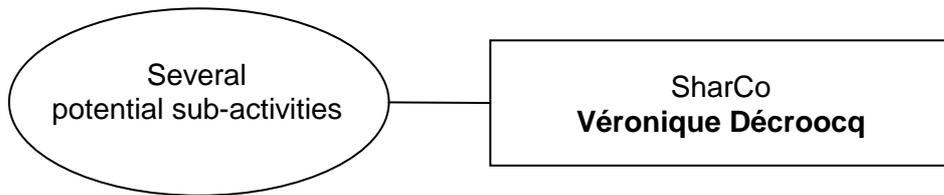
CIHEAM and FARM promote interaction and development in several INCO countries; in the case of CIHEAM in Mediterranean countries, and in the case of FARM in the Last Developed Countries and the African-Caribbean-Pacific Countries. So they are of obvious interest for SA3.2. FOOTPRINT has produced an interesting database on pesticide environmental fate and ecotoxicological properties (FOOTPRINT PPDB). This database has already started to become a reference world-wide. It is very important then to link RA3.3 and RA3.4 with FOOTPRINT to avoid information redundancy and benefit from FOOTPRINT previous work. Finally, SharCo is an EU-funded project which will deal with the Plum Pox Virus problematic. Their aims include marker-assisted selection of resistant plant material, guidelines and warning systems. In consequence, its interaction with ENDURE can take place with several

activities, such as RA4.2 or IA2.4 ‘Development of a modelling platform of decision support systems’. The different possibilities are under study.

Recently, the project manager has also indicated other possible links, PRATIQUE and TEAMPEST. As well, some contacts with Daniel Bloc from DIABR-ACT have been established.

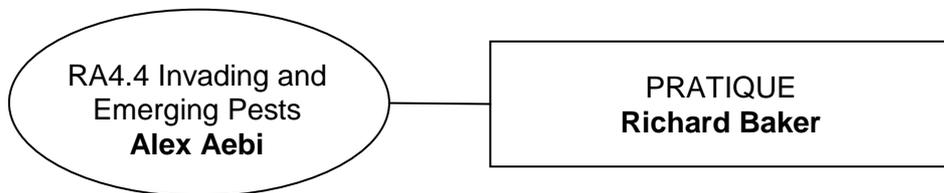
## 6. State of the art of new interactions identified

### Link 14- Several with Sharco



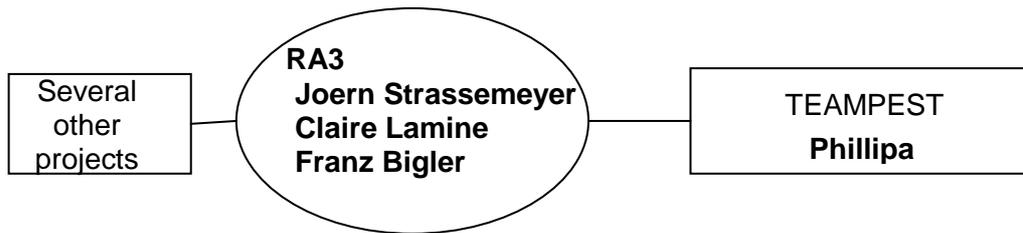
The project officer suggested contacting SharCo project through the project managers, and we sent an e-mail to Véronique Décroocq suggesting possible actions to interact to. Decroocq answered that she will have a look to the information.

### Link 15- RA4.4 with PRATIQUE



We sent an e-mail to Richard Baker, from PRATIQUE, with different information about RA4.4 and RA3. Baker responds that he finds good opportunities to cooperate, especially with RA4.4, and he proposes Katrin Kaminski to be the representative and suggests that a ENDURE member could attend their next project meeting in Switzerland (30<sup>th</sup> Sep – 1<sup>st</sup> Oct). We sent an e-mail to Aebi, RA4.4 leader, with the information sent by Baker.

### Link 16- Several/RA3 with TEAMPEST



We contact with Phillipa Nicholas, TEAMPEST member, and we sent her information related with RA3. TEAMPEST answered that they are interested to collaborate with RA3 sub-activities and they want to start contacts. We sent an e-mail to Claire Lamine, Joern Strassemeier and Franz Bigler communicating the interest of TEAMPEST and their willingness to start contacts soon. Bigler forwards the e-mail not only to Lamine and Strassemeier, but also to Gérard Gaillard and Gabriele Mack asking them about the possibility of collaboration. Gérard Gaillard argues that after reading TEAMPEST summary there is not interest from RA3.4 (Lyfe Cycle Assessment) to collaborate.

## 7. Two – track system development

In order to help the different interactions described above, a “Two-Track system” has been developed under IA1.3. The main aim of the “Two-Track” action in the ENDURE Network of Excellence is to share and organise, within ENDURE’s own database, data and knowledge coming from various Crop Protection Networks. This “two-track” system has been built up to discuss ways to exploit these data through web-based communication.

The Two track system analyses the Endure Project and the web sites of the CPNs trying to focus the main contents can be interchanged among different groups. The following subjects are analyzed:

**Sharing data:** information related to group activities that can be interesting for sharing with other organizations.

**Sharing News:** frequently updated content related to organization activities.

**Sharing Events:** info on workshops, symposia, deadlines etc...

**Sharing Publications:** info about CPNs publications, Endure public documents, it is possible to share reviews about some thematic subject interesting specific working groups from different organisations.

**Sharing Knowledge:** scientific forum to exchange information about specific fields of research.

*Method-focused:* working groups related to specific Pest Management methods (e.g. Landscape management, GMOs, plant resistance, ICT in pest management).

*Crop-focused:* create contacts among crop-specific working groups of CPNs and the case studies activities of the ENDURE NoE (RA 1.2).

*Pest-focused:* sharing info about pest specific subjects (e.g. mites, fruit fly, plant pathology, integrated weed management).

The Two-Track system is also analysing several emerging technologies to assess how to share data among the different Crop Protection Networks such as:

Wiki web style

Content management systems

Web Feed

Calendar format for interchanging data