

E-learning and indirect risk indicators for a sustainable use of pesticides

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The Sustainable Use Directive

The SUD (EU128/2009/EC) establishes a framework to achieve a sustainable use of PPPs by reducing the risks and impacts of pesticide use on human health and the environment

The main objectives

- Professional education and information
- Reduction of risks and preservation of natural resources
- Integration of all available tools
- Measuring the performance



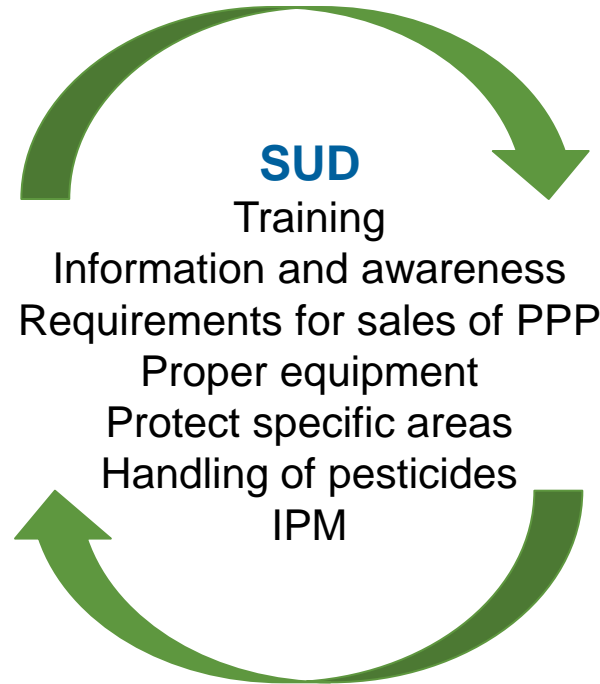


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First challenge in the SUD: Full fill the gap

Risk Assessors:

- Real risk
- Exposure models
- Professionals
- Mean values
- Projected behavior
- Good Agricultural Practices
- Focus on individual aspects



Risk Managers:

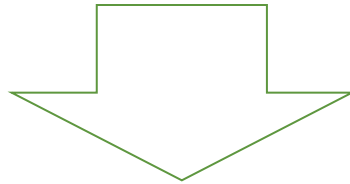
- Perceived risk
- Real life activities
- General population
- Diversity of practices
- Human interference
- Specific practices
- Complex interactions



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Second challenge in the SUD: Involvement of stakeholders

- ✓ Pragmatic measures really applicable
- ✓ Obtain a real reduction of risk
- ✓ Guarantee benefits also for the farmers
- ✓ Implement an appropriate incentive system
- ✓ Actions of training and awareness raising based on scientifically sound data and recommendations



Need to involve all the stakeholders through an interdisciplinary participative approach taking into account the local specificities



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Using a Think Tank: The case of OPERA

OPERA is a young, growing independent research centre and *think tank* of the Università Cattolica del Sacro Cuore providing simple pragmatic solutions to support EU and national decision making.

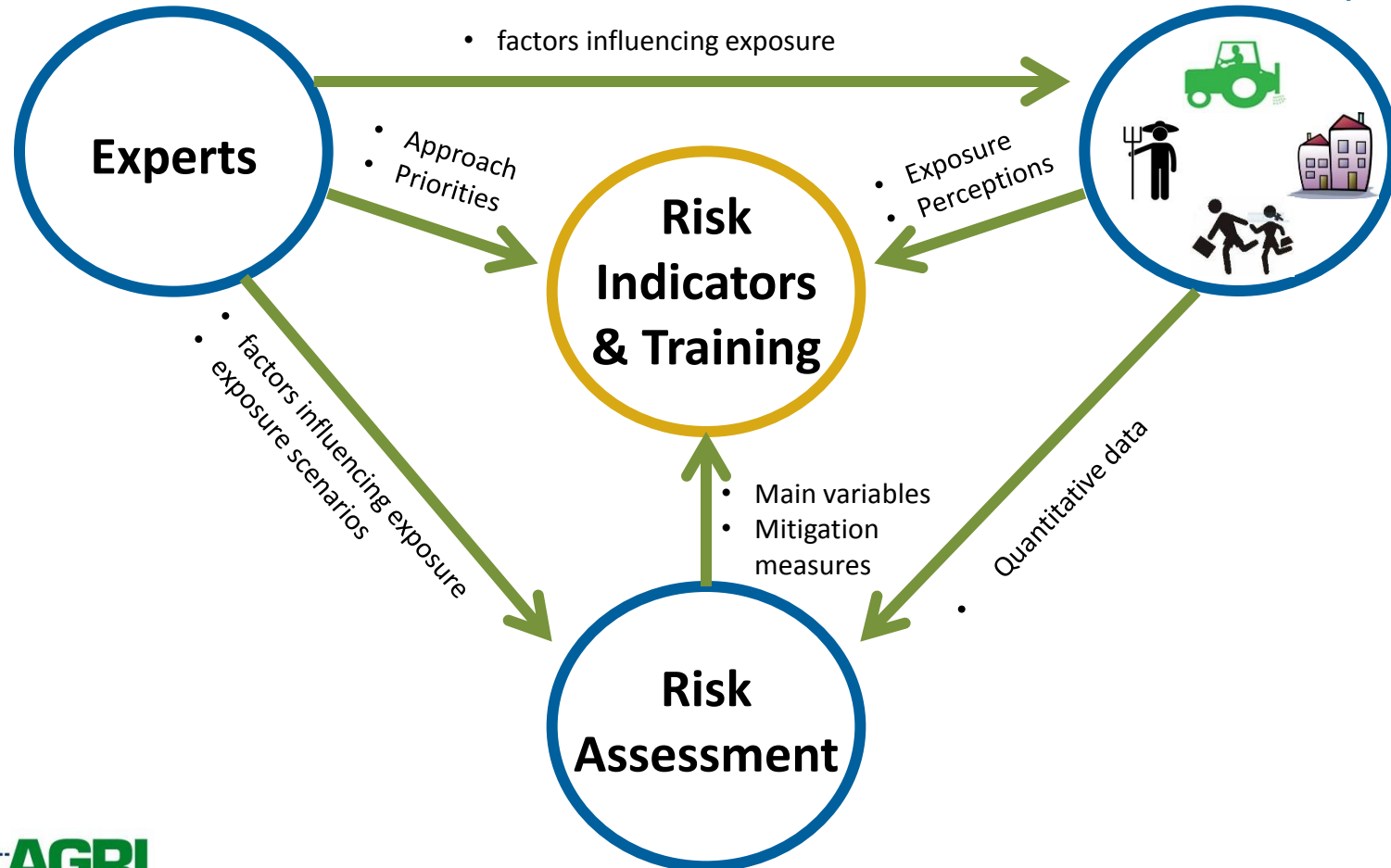
Vision:

- **fundamental idea:** bridge science and policy through a transparent platform to debate the right approaches for sustainable agriculture between stakeholders
- **Main objective:** to provide policy recommendations and pragmatic suggestions for national guidelines and implementation
- **Tools:** Equilibrate platform to debate, policy recommendations, detailed studies and suggestions for National Implementation



STAKEHOLDER CONSULTATION

SURVEYS OF B,R,O,W (IT-GR-UK)





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Objective 1: Development of new risk indicators - SUD REQUIREMENTS

- are “the result of a method of calculation that is used to evaluate risks of pesticides on human health and/or the environment” (art. 3).
- shall be established :
 - a) at community level (art. 15) to estimate trends among MSs
(To be included in the Annex IV of SUD)
 - b) at national level (art. 4) to monitor progress within the MS
(To be included in the National Action Plan of each MSs).



Objective 1: Development of new risk indicators - BACKGROUND

The EU project HAIR, developed a fully operational set of harmonised indicators (operators, workers, bystander/resident) to be used by Regulators using “estimated human exp./tox. reference dose”



+ Good scientific accuracy

- Not easy run/interpretation (complexity/high amount of data needed)
- Do not give an indication of the reason behind a change in risk

(ARCADIS, 2009)



HAIR Risk indicators do not fully reflect actual real risk



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Objective 1: Development of new risk indicators - MAIN FINDING FROM THE CONSULTATION

To answer the SUD, new risk indicators should be:

- ✓ based on **multifunctional approach** and easily **adaptable to local specificities**;
- ✓ a **combination** of different types of pragmatic indicators (including “indirect” indicators);
- ✓ able to **quantify trends** of risk for human health and the environment;
- ✓ able to **suggest the most effective mitigation measures**.

Results available in:

Maura Calliera M., Marchis A., Bollmohr S., Sacchetti G., Lamastra L., Capri E., A process to provide harmonised criteria for the selection of indicators for pesticide risk reduction within the framework of the sustainable use directive, Pest Management Science, 2012.



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Objective 1: Development of new risk indicators - RESULTS

- Output of this research is a **toolbox of examples of practical indirect risk indicators** and quantitative targets to be included in the National Action Plan as a complementary tool to the already existing risk indicators (e.g. HAIR)
- As a recommendation, for each group it was decided to include environmental, social and economic targets to evaluate the impact of the measures on the agricultural production.

Results available soon on:

Sacchettini G., Calliera M., Marchis A., Glass R., Capri E., A process to select new risk indicators through a comprehensive analysis of risk within the framework of the EU Directive on Sustainable use of pesticide, 2013 (in prep)





Objective 1: Development of new risk indicators - THE TOOLBOX OF EXAMPLE (operator case)

Social

- Attendance at designated training courses (e.g. 1000 participating every year)
- Participation in assurance scheme (e.g. +5% in 3 years)
- Participation in sprayer testing program (e.g. +5% in 3 years)

Environmental

- Completion of farm records for PPP use etc. (no target required)
- No. of inspections/no. irregularities detected (e.g. +/- 5% in 1 year)
- No. of exposure incidents requiring medical attention (e.g. -5% in 1 year)

Economic

- Sales of certified PPE/equipment (e.g. +3% during next 5 years)
- Impact on farm productivity and profitability (no target required)



Objective 2: Development of a e-learning tool - SUD REQUIREMENTS

- “MSs shall ensure that all the professional users, distributors and advisors have **access to appropriate training** (...) both initial and additional to acquire and update knowledge as appropriate”(art. 5.1).
- Regarding the **subjects listed in Annex I** (e.g. risks for human health and environment, mitigation measures, legislation,..) taking account of their different roles and responsibilities (art. 5.1)
- By 14 December 2013, Member States shall establish **certification systems** providing evidence of sufficient knowledge (art. 5.2)



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Objective 2: Development of a e-learning tool - MAIN FINDING FROM THE CONSULTATION

- ✓ Need to collect
a significant amount of material is already available
- ✓ Need to complete
different availability of material in each MSs
- ✓ Need to upload
increasing demand of a modern approaches

Results available in:

Sacchetti G. , Calliera M., Marchis A., L. Lamastra, A., Capri E., The stakeholder-consultation process in developing training and awareness-raising material within the framework of the EU Directive on Sustainable Use of Pesticides: The case of the EU-project BROWSE, Science of the Total Environment, 2012





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Objective 2: Development of a e-learning tool - THE OpenTEA WEB-PLATFORM

- a “**place to collect**” the most efficient and scientifically sound training materials that are ready-to-use by pesticide professional users;
- a “**network**” to exchange opinions, ideas and experiences on the main subjects;
- an “**observatory**” providing an overview on the state of the art of the legislation, studies and projects related to training, awareness raising and pesticides risk exposure.

.....in an easy, open and user-friendly way...**as a cup of tea!**



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Objective 2: Development of a e-learning tool - THE OpenTEA WEB-PLATFORM

Main strength will be the **active role** of Users who will principally have the possibility to:

- ✓ Upload training material in the platform (Members only)
- ✓ Become a Reviewer (Members only)
- ✓ Watch/rate/comment all the material uploaded (all Web-Users)
- ✓ Building a training program (all Web-Users)

Available on:

<http://opentea.essencecms.com/en/home/>

