National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

Pesticide risk indicators. Overview and selection of appropriate PRI for the national scale.

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Ceureg Forum XVIII, October 2014

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Introduction

Plant protection product policy in many countries is more than an authorisation policy.

Authorisation: safe use of single product

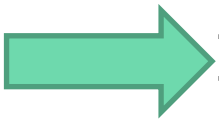
General policy may include (for example):

- Education
- Goals for reducing use, emissions, …
- Establishment / conservation of reserve areas

Introduction

If a general policy is defined, policy makers / risk managers may want to follow the progress:

- Trend over time
- Status in relation to policy goal
- Effectiveness of measures



Indicators may be useful

Introduction

OECD (early 200x)

Pesticide risk indicators:

- should link hazard and exposure data with data on pesticide use
- should complement but not replicate or compete with the tools used for pesticide registration and risk assessment
- should address risks to man, and the environment separately
- should be scientifically robust and user friendly

Introduction

OECD Expert Group on Pesticide Risk Indicators (EGPRI):

There is scope for widening the rather narrow definition. PRI not necessarily link hazard to exposure, but may contain other information as well.

Questionnaire

OECD Risk Reduction Steering Group considered it necessary to establish an overview of available pesticide risk indicators.

EGPRI established a reporting format for PRIs: PRIER (pesticide risk indicator evaluation report), an aid to select PRI.

Questionnaire

Nr.	Question, comment, etc.	
1	Name and acronym of the Pesticide Risk Indicator/PRI	
	The full name of the PRI:	*(text field)*
	The acronym of the PRI (if relevant):	*(text field)*
	Version number (if relevant):	*(text field)*
	Release date (if relevant):	*(text field)*
	Period *(e.g. year)* that is covered (if relevant):	*(text field)*

Questionnaire

5	Environmental protection goal *(more than one option possible)* *Either one or two levels of detail may apply:* *1. General: Environmental compartment (e.g. aquatic)* *2. Specific: Taxon (group) / Process*				
	☐	Aquatic			
		☑	Algae		
		☑	Daphnia		
		☑	Fish		
		☐	Other	Please specify	*(text field)*
	☐	Groundwater			
		☑	Leaching risk		
		☐	Other	Please specify	*(text field)*

Questionnaire

Now web-based and open for entering (operational) PRI.

Overview, PRI before launch of questionnaire

Indicator	Country
CEPI	Belgium
Field margins	Germany
Hair	EU
Pesticides UK	UK
PRIME	Canada
SYNOPS GIS	Germany
SYNOPS TREND	Germany

Overview, protection goal

Indicator	protection goal	
	human	environment
CEPI	x	
Field margins		x
Hair	x	x
Pesticides UK	x	x
PRIME	x	x
SYNOPS GIS	x	
S. TREND	x	

Overview, basic approach

Indicator	type		
	modelling	monitoring	survey
CEPI		x	x
Field margins			
Hair	x		
Pesticides UK	x	x	x
PRIME	x		
SYNOPS GIS	x		
S. TREND	x		

Overview, category

Indicator	category					
	Driving force	Pressure	State	Impact	Response	Compliance
CEPI				x		
Field margins				x		
Hair		x	x	x		
Pesticides UK	x	x	x	x	x	x
PRIME				x		
SYNOPS GIS				x		
S. TREND				x		

Selection of PRI

(End)users (e.g. risk managers / policy makers) are responsible for selecting appropriate PRI(s), taking into account / in view of

- Policy goals
- Data availability / required level of detail
- Evaluation of approaches taken in the various PRI (comparative assessment of the PRI)

The overview of PRI just offers starting information for the evaluation of the indicators.

Selection of PRI

Proper selection is crucial. If the PRI

- does not fit policy goals
- is not in accordance with data availability

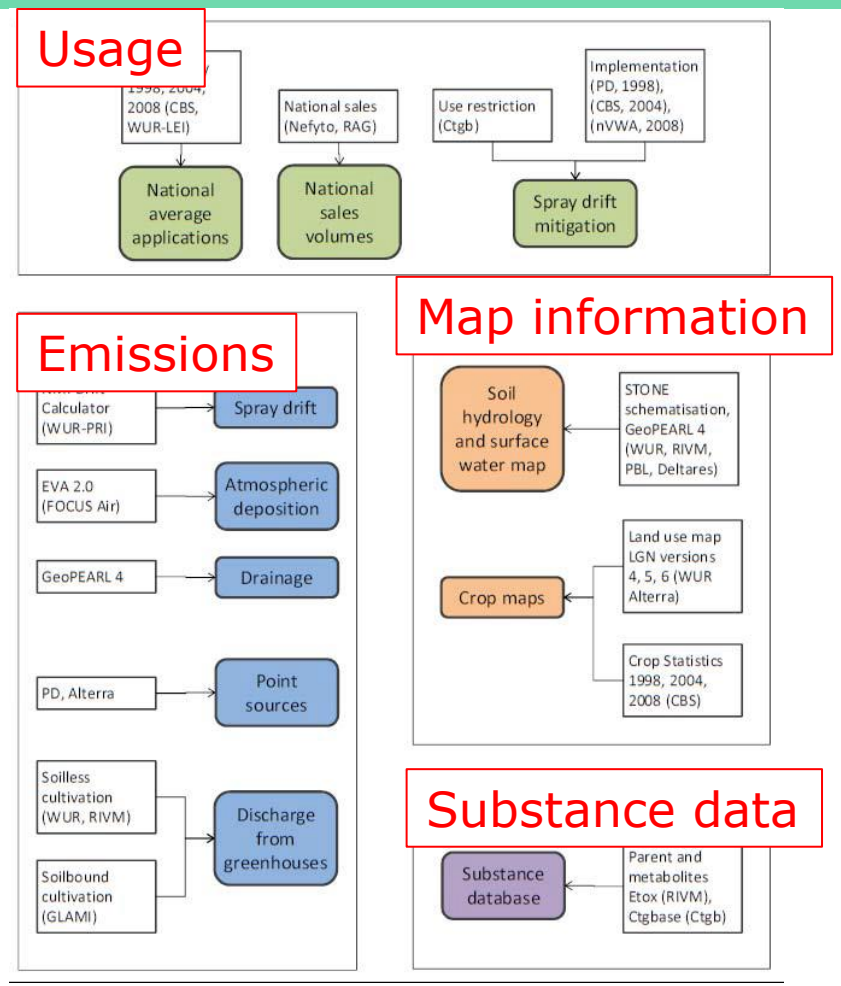
nonsens will be generated.

⇨ inadequate measures

Selection of PRI

Some PRI may be quite demanding regarding data availability, and depending on the required resolution.

The level of detail may be dependent on the policy goals and the 'distance to target' (i.e. how close you are)



Selection of PRI

Cooperation may reduce the time / efforts of individuals / individual countries required to operationalise a PRI.

For example, a common database on substance data (phys-chem, fate, ecotox, tox) would substantially reduce required efforts/

PRI and authorisation

OECD: PRI should complement, not overlap with authorisation prodecures.

Overlap would for example include that exactly the same calculation method is used; that should be avoided as it would not generate new information.

PRI giving more general information, such as %farmers that adhere to a prescription, by definition do not overlap.

PRI and authorisation

- Amongst others due to the substance by substance approach, usually realistic worst case conditions (for example 90th percentile conditions for environmental scenarios) are used in authorisation methodologies.
- Using a more central approach, for example 50th percentile conditions, would deliver more robust results.
- The real advantage is that agriculture as a whole, or relevant sectors, are considered and not individual substances.

Conclusion

Information on PRI has become available and will grow.

OECD will provide some general guidance on selection of appropriate PRI.

You, risk manager, are responsible for selecting, but may of course ask assistence from specialist.