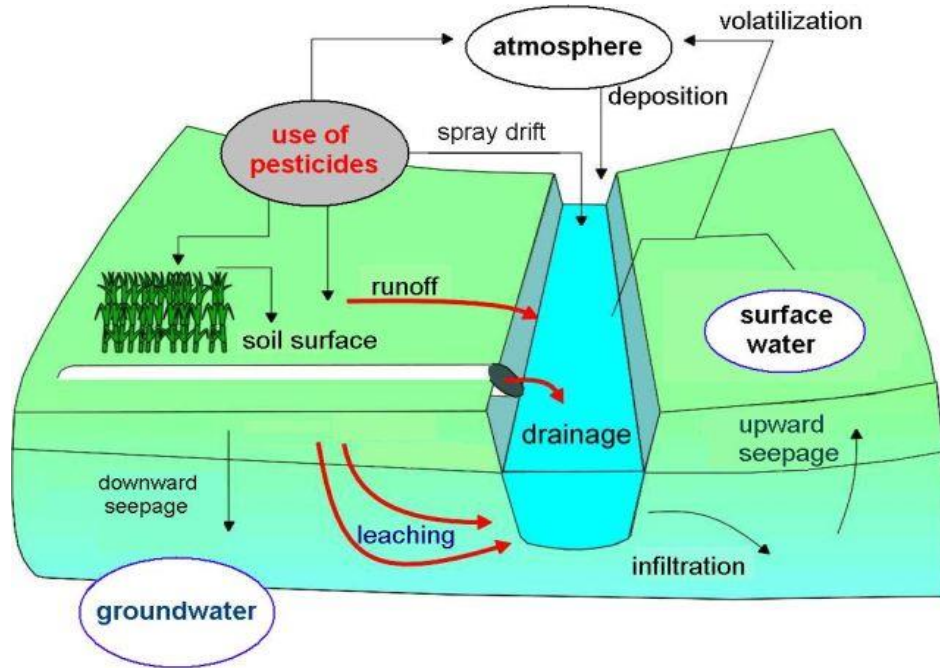


# Agricultural sustainability, role of pesticide risk indicators

19 September, Louise Wipfler, Johan Bremmer and Roel Kruijne



# Environmental risks of pesticides

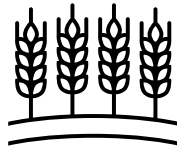


# Environmental Risk indicators

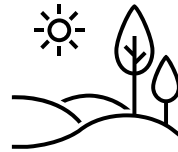
- Indicators can be helpful to support the political and societal debate about the sustainability and health impacts.
- They inherently reduce complexity to support decision making
- Purposes:



Track progress  
of agricultural  
policies



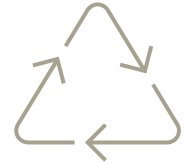
Sustainable  
Pest  
management



Prospective  
risk  
assessment



Certification  
schemes



As part of life  
cycle analysis

# Harmonized Risk Indicator I



- To monitor progress realization of F2F strategy objectives for crop protection 2030 at MS and EU Level.
- Based on the annual volume put on the market per chemical active substance in the plant protection products

Groups			
1	2	3	4
Low-risk chemical active substances	Approved chemical active substances	Approved as candidates for substitution	Chemical active substances which are not approved
Hazard weighting factor applicable to quantities of chemical active substance placed on the market			
1	8	16	64

# Harmonized Risk Indicator I



## Purpose

- Track progress of agricultural policy



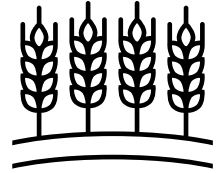
## Target users/ geographic area

- Member states
  - EU
- Farmer and other stakeholder organisation

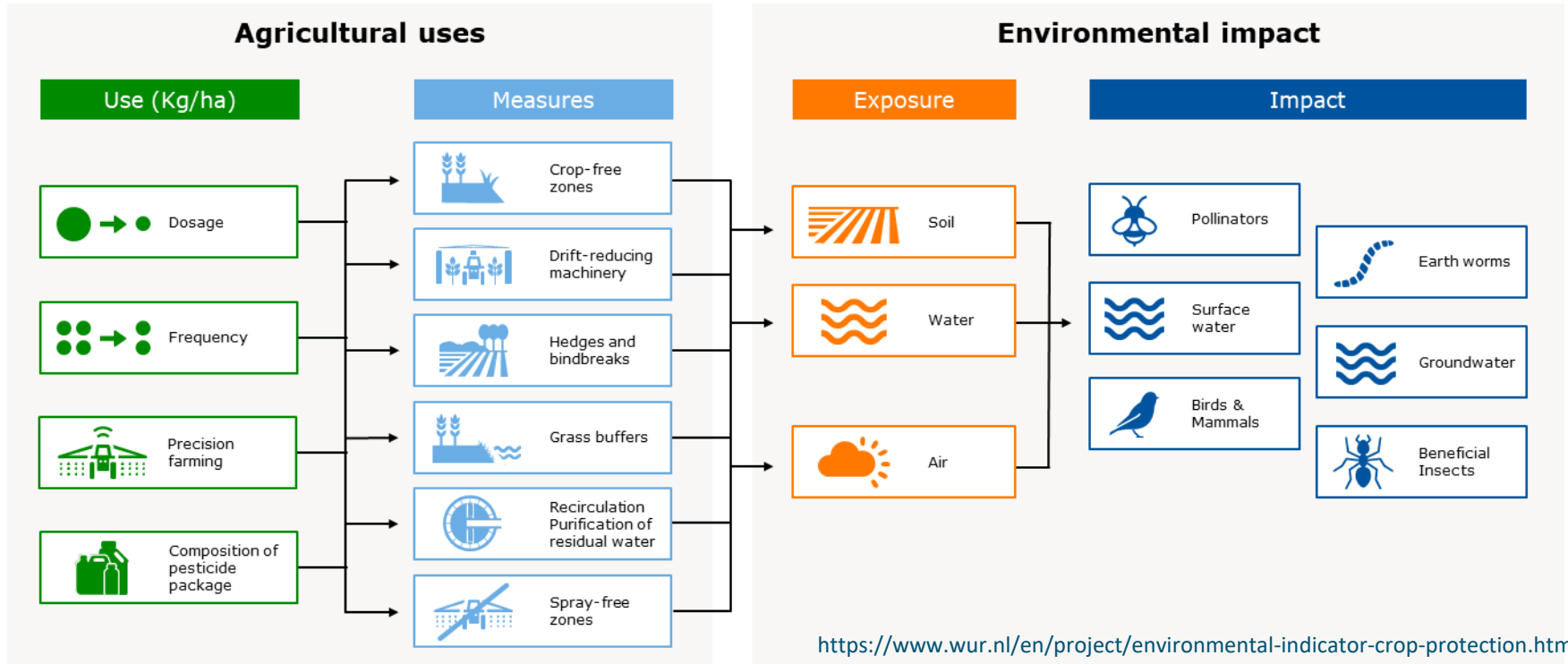
## Characteristics

- Simple
- Harmonized
- Based on uses/ hazard not risks
- Environmental and Agricultural conditions not considered

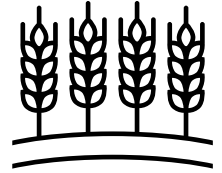
# Indicator for environmental impact of pesticides



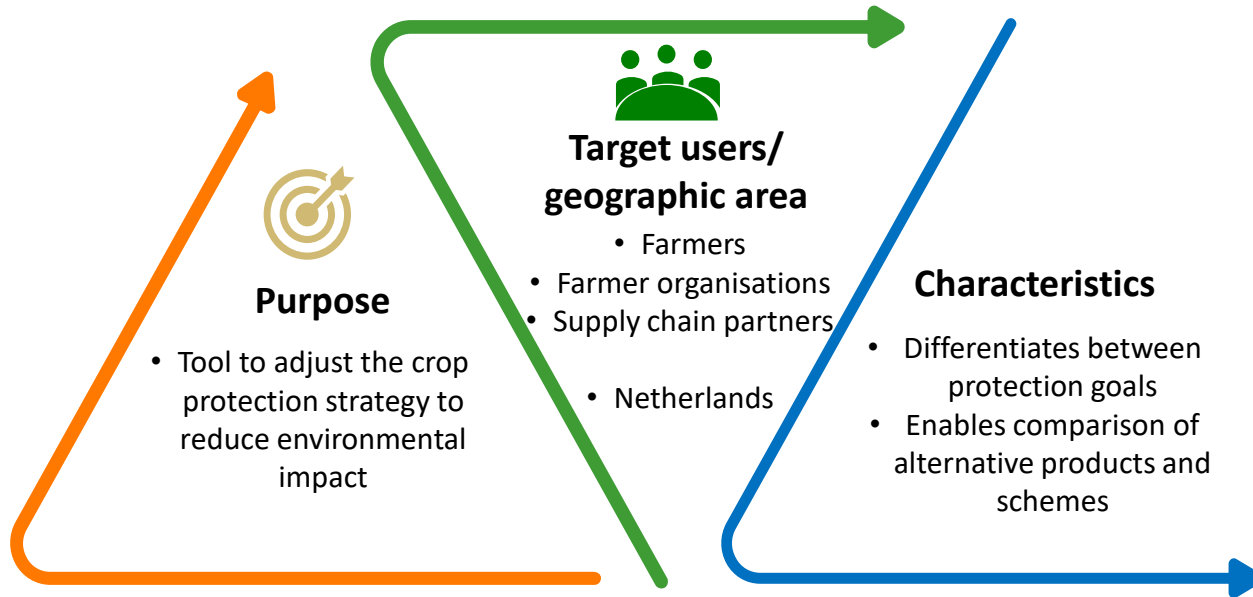
## ■ Environmental indicator crop protection (EICP)



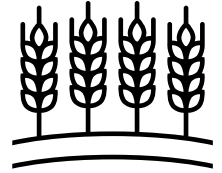
# Indicator for environmental impact of pesticides



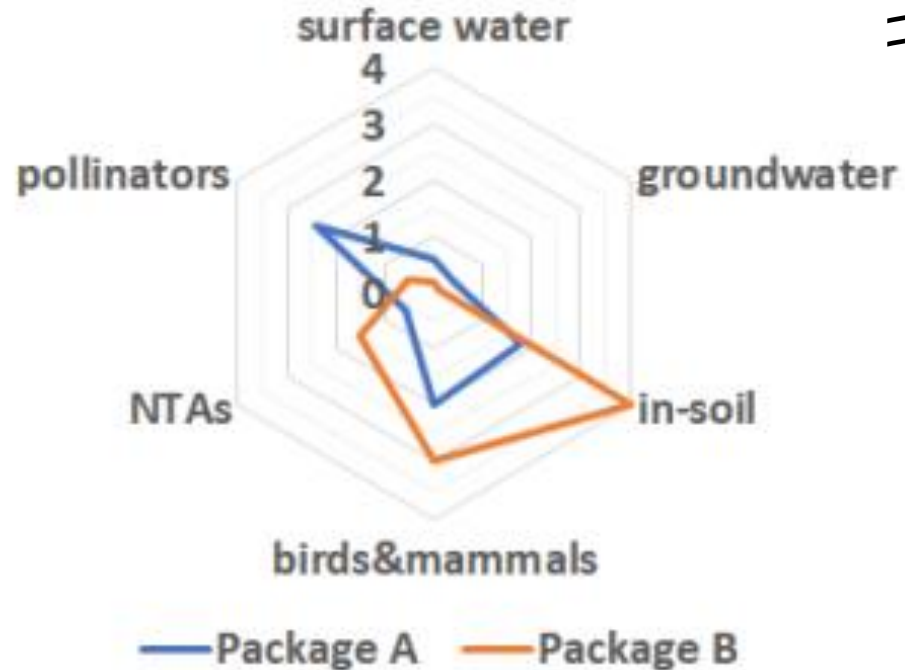
## ■ Environmental indicator crop protection (EICP)



# Indicator for environmental impact of pesticides



- Multidimensional risk indicator





# Monitoring indicator

- Groundwater Atlas for Pesticides in the Netherlands

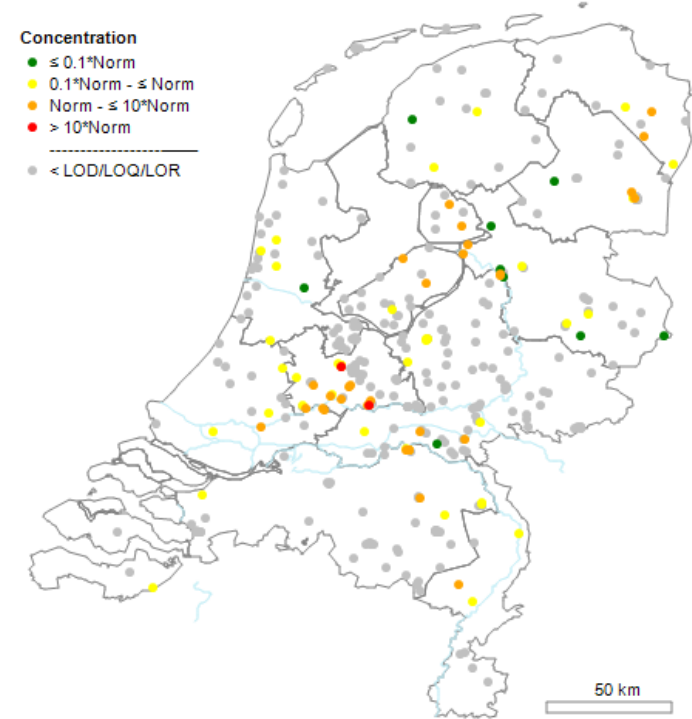
Maximum measurement value per sampling site

bentazone

Norm: 0.1 µg/L

Concentration

- $\leq 0.1 \cdot \text{Norm}$
- $0.1 \cdot \text{Norm} - \leq \text{Norm}$
- $\text{Norm} - \leq 10 \cdot \text{Norm}$
- $> 10 \cdot \text{Norm}$
- $< \text{LOD/LOQ/LOR}$



Selection criteria:

Period:

1963 t/m 2021

Screen depth (m below soil surface):

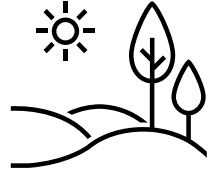
10.00 t/m 15.00

Monitoring networks:

ALL (All)



# Monitoring indicator



## ■ Groundwater Atlas for Pesticides in the Netherlands



### Purpose

- Improves access to regularly collected monitoring data
- To be used in the authorisation procedure of pesticides



### Target users/ geographic area

- Dutch Authority (Ctgb)
  - Product owners
- Netherlands

### Characteristics

- For groundwater only
- Indicator based on number of norm exceedances

# Take away

- Indicators reduce complexity to enable comparison between growing options or trends. Results should be put in context.
  - They can be used to identify specific substances with major contribution to the indicator score. These specific substances will need close attention
- Consider the risks and distinguish between protection goals
- Indicators need ownership. Who takes care that the indicator is supported with data that is regularly updated? And in line with reg. 1107/2009