

Proposal to develop a new indicator for monitoring the Farm to Fork pesticide reduction target

The Harmonised Risk Indicator 1 (HRI-1) is not suitable for monitoring progress towards the Farm to Fork Strategy's target of a 50% reduction in the use and risks of chemical pesticides by 2030. This indicator leads to a systematic underestimation of the risk of synthetic chemical pesticides and an overestimation of the risk of pesticides authorised in organic farming, providing an incorrect assessment of the reality. This is due to the fact that HRI-1 only takes into account the quantity of active substances sold and not the areas treated with these active substances, neither their toxicity.

IFOAM Organics Europe calls for the European Commission to develop a **new indicator** for monitoring the Farm to Fork pesticide reduction target, that takes into account **doses and hazards** of active substances, and to include this indicator in its proposal for a Regulation on the sustainable use of pesticides, instead of the HRI-1.

Taking the dose into account overcomes the bias induced by the difference between active substances effective at low doses and active substances effective with higher doses (which requires a higher amount of product per application).

To do so, the Commission could take inspiration from the indicator developed by the French authorities to monitor the progress in achieving their national action plan for the reduction of pesticides – called the “Number of Dose Unit” (NODU in French, NoUD in English) – and refine it by adding weighting factors reflecting the toxicity of the active substance.

The development of such an indicator is **possible with the data that are already collected** by the European Commission and Member States.

Overview of the characteristics of the NODU and its calculation methodology

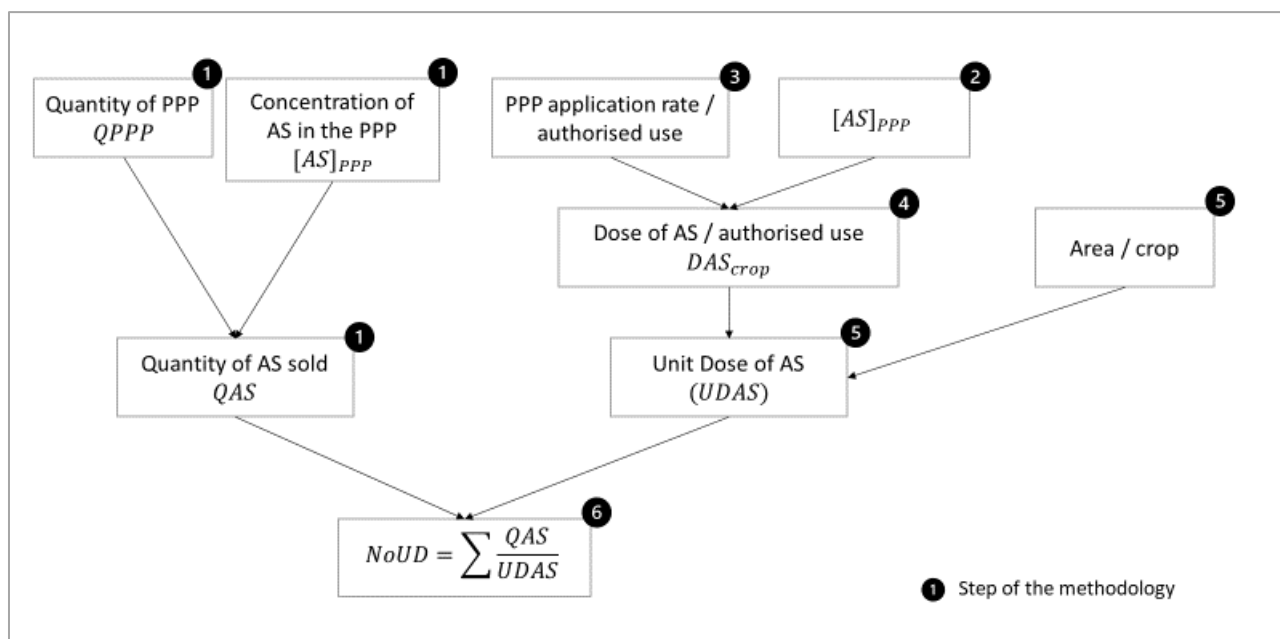
The NODU gives information on the intensity of the use of PPPs. **It is based on PPP sales data (and not on PPP use data)** and data included in the authorisation of PPPs granted by Member States.

For each active substance, the NODU calculation is based on the ratio between the quantity sold of that active substance and a "unit dose" specific to that active substance. **The result is an indicator in hectares, reflecting the total area that would be treated with that active substance.**

The NODU overcomes the bias induced by substitutions of active substances by new substances effective at lower doses since, for each substance, the quantity applied is related to a “unit dose” (DU) specific to it. The “unit dose” is calculated by **taking into account the different authorised uses of the PPPs** containing the considered active substance. This indicator can therefore reflect the differences between Member States regarding authorised uses.

The calculation of the indicator can be divided into two distinct and concomitant steps, on the one hand the calculation of the quantities of active substances sold and on the other hand the calculation of the "unit doses" of each active substance.

See below for a summary of the methodology:

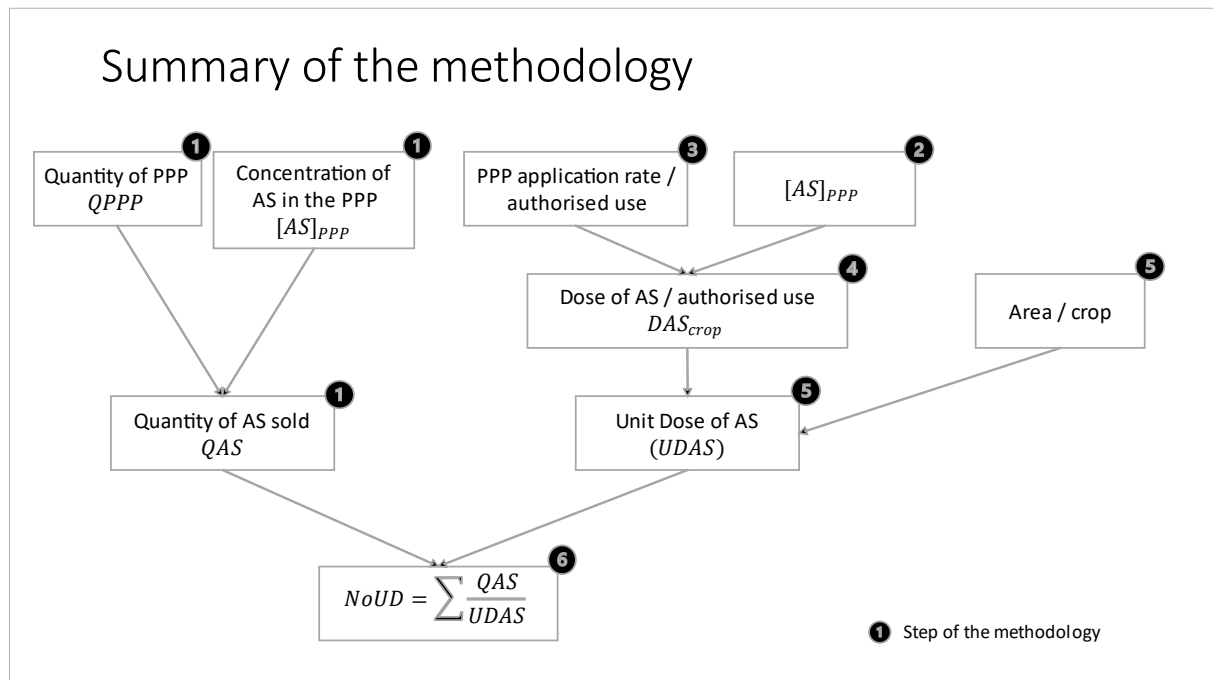


See detailed methodology in Annex.

What data is needed?

Step	Data	Availability
1	Quantity of PPP sold annually	<p>At Member State level Authorisation holders shall provide the competent authorities of the Member States with all data relating to the volume of sales of plant protection products in accordance with Community legislation concerning statistics on plant protection products (article 67(3) of Regulation 1107/2009).</p> <p>At EU level Eurostat database on pesticide sales.</p>
1 & 2	Composition of PPP (name and amount of each active substance which it contains)	<p>At Member State level Member States are required to keep this information electronically available to the public (article 57(1)(d) of Regulation 1107/2009).</p>
3	Authorised uses and application rates	<p>At Member State level Authorised uses and corresponding application rates are defined in the authorisation granted by Member States for placing the plant protection product on the market.</p> <p>At EU level In the Plant Protection Products Application Management System (PPPAMS), as all authorisations of PPPs issued by EU countries are stored in the system and made available through a database.</p>
5	Cultivated area for each crop	<p>At EU level Eurostat database on crop production per area.</p>

Annex – Detailed methodology to calculate the NODU



1

Calculation of the quantity of AS sold annually (Q_{AS})

Using the information on the composition of PPPs (name and concentration of AS ($[AS]_{PPP}$) they contain), the quantity of PPPs sold annually (Q_{PPP}) is converted into the quantity of AS sold annually

$$Q_{AS} = Q_{PPP} \times [AS]_{PPP}$$

2

List the PPPs containing the AS, indicating the amount of AS they contain

PPP a
Concentration of AS = [AS]a

PPP b
Concentration of AS = [AS]b

PPP c
Concentration of AS = [AS]c

3

List the authorised uses for each PPP and corresponding application rates

Authorised use	Max. application rate
Crop 1	X kg/ha
Crop 2	Y kg/ha

Authorised use	Max. application rate
Crop 1	X kg/ha
Crop 3	W kg/ha

Authorised use	Max. application rate
Crop 1	U kg/ha
Crop 2	Y kg/ha
Crop 3	Z kg/ha

4

Calculation of the dose of AS for each authorised use (DAS_{crop})

Dose of AS for use on crop X
= Application rate of PPP authorised on crop X × concentration of AS in the PPP

Example: Calculation of the **Dose of AS for use on Crop 1 = DAS_{crop1}**

PPP a : $X \times [AS]a = V1$

PPP b : $X \times [AS]b = V2$

PPP c : $U \times [AS]c = V3$

When several PPPs are authorised for the same use at different active substance doses, the maximum value of the dose of active substance for each use is taken

Where V3 is the maximum value, so **$V3 = DAS_{crop1}$ (in kg/ha)**

5

Calculation of the Unit dose of the AS (UDAS)

The unit dose of the AS is the average of the dose of AS for each authorised use, weighted by the areas of the crops corresponding to the uses ($Area_{crop}$)

$$UDAS = \frac{DAS_{crop1} \times Area_{crop1} + DAS_{crop2} \times Area_{crop2} + DAS_{crop3} \times Area_{crop3}}{Area_{crop1} + Area_{crop2} + Area_{crop3}}$$

6

Calculation of the Number of Unit Dose of the AS

For each active substance, the Number of Unit Dose of the AS ($NoUD_{AS}$) is calculated as the ratio of the Quantity of AS sold annually to the Unit dose

$$NoUD_{AS} = \frac{Quantity\ of\ AS\ sold}{UD_{AS}}$$