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Feedback from NIBIO on Revision of Directive 2009/128/EC on the sustainable use of pesticides (SUD)

About the consulting institution NIBIO

Norwegian Institute of Bioeconomy Research (NIBIO) is subject to the Ministry of Agriculture and Food as an administrative agency with special authorization and its own supervisory board. NIBIO is to contribute to food security and safety, sustainable resource management, innovation and value creation through research and knowledge production within food, forestry and other biobased industries. Further, The Division of Biotechnology and Plant Health has Norway's most comprehensive competence when it comes to plant health and plant protection in agriculture and forestry. The Division is commissioned by the Norwegian Food Safety Authority and the Ministry of Agriculture and Food within plant health issues. We are a national reference laboratory for pesticide analysis, plant toxins and plant pest organisms.

Summary of NIBIO´s feedback:

NIBIO think that the objectives behind the revision of Directive 2009/128/EC on the sustainable use of pesticides (SUD) to the sustainable use of plant protection products and amending Regulation (EU) 2021/2115 (SUR) are relevant. Our comments and concerns are, however, related to the following topics:1) To avoid that Norwegian growers give up growing certain crops due to an increased risk of yield loss in lack of good available alternatives to chemical pesticides, a massive R&D effort and approval of on non-chemical methods in Norway is absolutely necessary. This will take longer than 8 years. 2) As a R&D institution in a non-EU-country NIBIO are interested in how Norway and other EEA countries may be able to implement/ adapt to EUs electronic register for collection and analyzing relevant monitoring data in a way that will be efficient and not too work consuming/ bureaucratic. 3) An annual calculation of progress towards achieving the Union 2030 reduction target may be too often for a meaningful evaluation of the goal. 4) An annual review of national crop-specific rules is also too often to be meaningful. 5) The regulation should be clearer about the IPM authorization requirements to professional users, advisors and distributors and whether they should be on a national or EU level. Several EU and EEA countries (including Norway) already have pesticide authorization courses that include IPM education. 6) We miss something more specific on precision plant protection of biological control agents, odour pastes or other "Low Risk Pesticides" by the use of platforms such as robots, unmanned aircraft etc. 7) It is unclear whether macro-

organisms are included in the concept of 'plant protection product' (se examples below). 8) We believe that the proposal is vague with regard to suggestions for mitigation measures to reduce environmental impacts and risks. The proposal rather refers to other directives and regulations concerning the different environmental compartments. It would be preferable from a stakeholder point of view to make this regulation more available to stakeholders if this was elaborated a bit more like in the current SUD. 9) We believe that the regulation holds little ambition as to the use of environmental monitoring data to assess the environmental concentrations and risk of plant protection products. The use of data arising from nationally initiated monitoring efforts, as well as the monitoring efforts under the COMMISSION NOTICE of 10.10.2017 'Guidance on monitoring and surveying of impacts of pesticide use on human health and the environment under Article 7(3) of Directive 2009/128/EC should be further explored before finalizing the regulation text. Further, the potential future use of data from groundwater monitoring programs for pesticides should be mentioned. 10) Some parts of the regulation, especially the introductory section is too "wordy" to be available for the reader and we suggest improving this.

Whereas Pg18-32:

This section is too big and "wordy" to be available for most people. We suggest cutting down extensively on number of points (several are overlapping) and numbers of words under each point. We give some examples on this below. In addition, we have several questions/ comments below:

Point number 13 and 14 are used two times, please correct.

Point 13 (number 1) should be cut down in terms of words and if possible be made more concrete.

Point 18. Cut down and leave the explanation of IPM to the definition section.

Point 19 and 20. Should this Regulation say what the Commission should do? Rather refer to the coming standards. Further, please specify whether the "crop specific rules" should be national or not.

Point 21. Will the EEA countries implementing this new EU Directive be a part of/ have access to this electronic register?

Point 22, 28, 30 and 31. Should the requirements to professional users, advisors and distributors be on a national or EU level? Several EU and EEA countries (including Norway) have such authorization and IPM is already a part of this in e.g. Norway.

Point 25 and 26: Precision farming could be better defined (it can be applied on very high resolution (< 1 cm to > 100 m^2). Preferably the term Precision Crop Protection should be defined instead since this is the sub-category of precision farming of relevance for the document. We suggest adding the words in large letters as follows (since Galileo and Copernicus cannot deliver reduced pesticide usage *per se*): The application of existing technology, including the use of Union space data and services (Galileo and Copernicus) AND NEW TECHNOLOGY, have the potential to significantly reduce pesticide usage. It is therefore necessary to provide for a legislative framework that incentivises the development of precision farming. Claiming that drones are less precise than other means is NOT correct. Drones can probably be very suitable for patch spraying down to resolution of about 1 m^2. We suggest that drones are taken completely out of point No. 25 and has its own point (26) while manned planes and helicopters are kept in 25.

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It should be considered to merge the following points: No. 11 and 13 (number 2); 12 and 17; 18 and 19 (after 18 is cut down and 19 is reworded).

CHAPTER I. GENERAL PROVISIONS

Article 2 **Scope**

Are adjuvants included in the term 'plant protection product'?

Article 3 Definitions

Are adjuvants included in the term 'chemical plant protection product'?

It is unclear whether macro-organisms are included in the concept of 'plant protection product'. 'Active substance' is normally used about chemicals, but micro-organisms are explicitly defined as active substances in the definition of chemical active substances (3). In the following, we assume that macro-organisms are (still) not included in the PPP-definition.

In definition 7 and 10, only chemical plant production products should be included, to avoid for example that dispensers with semiochemicals are included in the rigorous rules following. The scope of the regulation is to target chemical plant protection products.

CHAPTER III. NATIONAL ACTION PLANS

Article 10 **Annual progress and implementation reports**

An annual calculation of progress towards achieving the Union 2030 reduction target may be too often for a meaningful evaluation of the goal.

CHAPTER IV. INTEGRATED PEST MANAGEMENT

Article 13 **Obligations of professional users and advisors related to integrated pest management**

Point 2, the option "pest exclusion by use of protected structures, nets and other physical barriers." may fit better under point 4. Alternatively, the introduction to point 2 should be rewritten to: "A professional user's records referred to in Article 14(1) shall demonstrate that he or she has considered all of the following preventive options".

Point 6. Addition to "(d) spot application" you should also add "precision application by the use of sensor technology". This is very important since we have in our experiments shown up to 90% reduction of herbicides due to precision technology.

Article 14 **Records of preventative measures and interventions for crop protection by professional users, and of advice on use of plant protection products**

Each grower typically has several plots (of the same or different crops/cultivars, cf. crop rotation etc). All these plots may differ in plant protection issues. To keep records of all the measures and advice having a potential plant protection effect (see for example the list in Article 13, point 2) for each of all these

plots, is a lot of work. These records must be integrated with other systems already in use, into a user/grower-friendly system. This integration process will take time.

Article 15 **Implementation of integrated pest management using crop-specific rules**

An annual review of national crop-specific rules is too often to be meaningful. The main problem is that the details required (list of pests and available means, etc) is continually changing and the rules will never be up-to-date. That is challenging when they have a legal status and breaking them is due to sanctions.

Also, detailed rules will be very hard to make since climate and cropping conditions varies very much inside the country. To make and maintain a different set of rules for each climate and cropping condition present in Norway will require a lot of resources. It would be good to see an example of such rules. Perhaps a point system with could be possible.

CHAPTER V. USE, STORAGE AND DISPOSAL OF PLANT PROTECTION PRODUCTS

Article 19 **Measures to protect the aquatic environment and drinking water**

In general, the proposal is vague with regard to preferred/suggested/options for mitigation measures to reduce environmental impacts and risks. The proposal refers to other directives and regulations concerning the different environmental compartments that might be affected by the use of plant protection products and other IPM-practices. Even if this is a well thought out strategy to avoid duplication in text between different legislative documents, it would be preferable from a stakeholder point of view outside the legislative and policy making community that this was elaborated a bit more like in the current SUD. This comment holds for this article which in its current form mainly rely on referrals to the current directives concerning the aquatic environment and drinking water.

The regulation holds little ambition as to the use of environmental monitoring data to assess the environmental concentrations and risk of plant protection products. The use of data arising from nationally initiated monitoring efforts, as well as the monitoring efforts under the COMMISSION NOTICE of 10.10.2017 'Guidance on monitoring and surveying of impacts of pesticide use on human health and the environment under Article 7(3) of Directive 2009/128/EC should be further explored before finalizing the regulation text. Further, the potential future use of data from groundwater monitoring programs for pesticides should be mentioned in accordance with Gimsing et al (2019): Conducting groundwater monitoring studies in Europe for pesticide active substances and their metabolites in the context of Regulation (EC) 1107/2009, which is currently being assessed by the EFSA PPR panel.

Article 21 **Use of plant protection products in aerial application by certain categories of unmanned aircraft**

This article should also include the use of unmanned aircraft for the precise application of biological control agents, odour pastes or other "Low Risk Pesticides". This is coming in the very near future/ is already on the market in some countries and is important to include.