

Discussion paper: protection goal options for non-target plants

Take away messages:

- Here ECPA reviews the NTTTP protection goals proposed by EFSA, the underlying assumptions and the feasibility of their implementation in practical agriculture
- To move this discussion forward ECPA recommends a dialogue with all the stakeholders including how industry can contribute

Context

In 2014 EFSA published a **scientific opinion** (SO) about the science behind the risk assessment of plant protection products (PPP) for non-target terrestrial plants (NTTP), which constitutes an extensive literature review **focusing on protection goals** for this group of organisms¹. These protection goals were based on ecosystem services and defined for off-field, in-field and endangered species. A range of specific protection goals were proposed and outlined at the plant population or community levels. However, this document did **not consider some important ecological** aspects e.g. natural shifts in communities **and practical aspects** e.g. feasibility in an agronomic context. Socio-economic considerations were also not taken into account.

Gertie Arts et al.² (reflecting the Dutch perspective) presented examples of specific protection goal options derived from the EFSA SO and stressed the importance of interaction with risk managers to refine the proposed options. The authors emphasized that the **impact of protection goal options on crop yields** has not been evaluated yet, and delegated this task to industry.

There is currently a strong risk that unrealistic protection goals are set, e.g. without considering the feasibility and costs that are potentially associated with specific options. Moreover, it should be considered that stakeholders may change their behavior in an unexpected direction for cost avoidance. Such changes can compensate or even reverse the intended positive effects for the environment. An example of the range of protection goals that may be considered is given in the following slides.

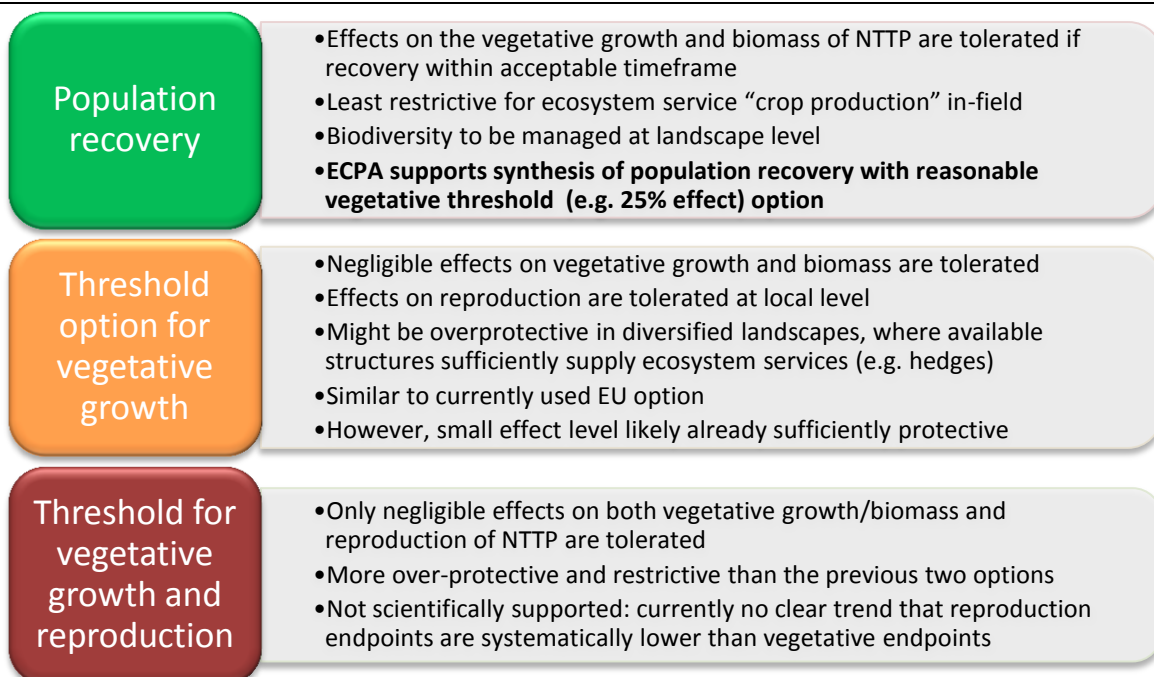
EFSA In-field options (adapted from Arts et al., 2017):

Maximal weed reduction	<ul style="list-style-type: none"> • Currently used option in the EU • The ecosystem service “crop production” with highest priority in-field • Non-crop plants in-field are not considered in the risk assessment • Protection of non-crop species to be ensured in the off-field • ECPA supports this position
Moderate weed reduction	<ul style="list-style-type: none"> • Supports moderate level of arable weeds in-field • Assumption they bring benefits e.g. prevent erosion, provide habitat • Aims to protect weeds of conservation concern and to improve the local biodiversity • Does not account for any issues concerning weed resistance
Beneficial weed protection	<ul style="list-style-type: none"> • Distinguishes between harmful and beneficial weeds • “Beneficial” and low-competitive NTTP are protected in-field • Pernicious weeds still need to be controlled to secure crop production • Feasibility depends on the existence of highly selective herbicides • Potential that beneficial weeds might become pernicious

¹ EFSA. 2014. Scientific Opinion addressing the state of the science on risk assessment of plant protection products for non-target terrestrial plants. EFSA Journal 2014;12(7):3800 [163 pp.]. doi: 10.2903/j.efsa.2014.3800

² Arts, Gertie, Jos Boesten, Theo Brock, Ivo Roessink. 2017. Arable weeds and non-target plants in prospective risk assessment for plant protection products; Specific protection goal and exposure assessment goal options. Wageningen, Wageningen Environmental Research, Report 2836. 32 pp. doi: 10.18174/424504

EFSA Off-field options (adapted from Arts et al., 2017):



The inclusion of risk management options in the risk assessment is needed to ensure high food production in-field and sufficient levels of protection of NTTP in the off-field. This is recognized by e.g. the German Federal Environment Agency UBA (2015)³, which noted that the development and implementation of risk management options is a complicated task, requiring additional applied research and the inclusion of socio-economic considerations. This supports the **need for further stakeholders' input** when discussing the relevance of specific ecosystem services, especially when more holistic protection goals are defined and these are intended to become the basis for future guidance and risk assessments.

Towards a risk assessment at the landscape level: policy and risk management aspects

The effects of PPP use on populations of non-target organisms will strongly vary, depending on the landscape structure and diversity (EFSA SO, 2014). EFSA thus concluded that, considering the diversity of production areas in Europe's regulatory zones, the definition of one representative landscape was unrealistic. This implies an additional effort to evaluate **risk management options for several landscapes types** as ecosystem services are highly spatially differentiated. Consequently implementing this concept in risk assessment/management requires locally specific valuation and decentralized decision making, which is - beyond MS level - not supported by Regulation (EC) No 1107/2009, but rather in the scope of the Sustainable Use Directive (DIR EC/128/2009), which is aiming at integrated weed control practices.

Therefore, in order to adequately address these challenges, **ECPA is interested in discussing especially with stakeholders from universities and authorities:**



³ Umweltbundesamt. 2015. Protection of terrestrial non-target plant species in the regulation of environmental risks of pesticides. TEXTE 20/2015. ISSN 1862-4804