

Sustainable land use management: how a uniform “Field Ecospace Index” can facilitate effective nature and biodiversity management on agricultural land

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1. **Background: ongoing biodiversity crisis in the world**

- Also an issue on farmland – the discussion about sharing vs. sparring.
- EU confirms that biodiversity on farmland is in a very bad condition and therefore promotes a sharing agenda with specific attention to farmland species (EC, 2022a).

2. **Outlining the management problem related to biodiversity and farmland species**

- We know that the population of various farmland species are declining (EC, 2022b).
- Management efforts are well-documented while their effects are not.
- Problem:** No useful single strategical framework or general management plan for managing nature and biodiversity on farmland has been proposed so far.
- Gap:** we need a measurable baseline for management efforts to (1) set targets and (2) document the development of nature and biodiversity on farmland.

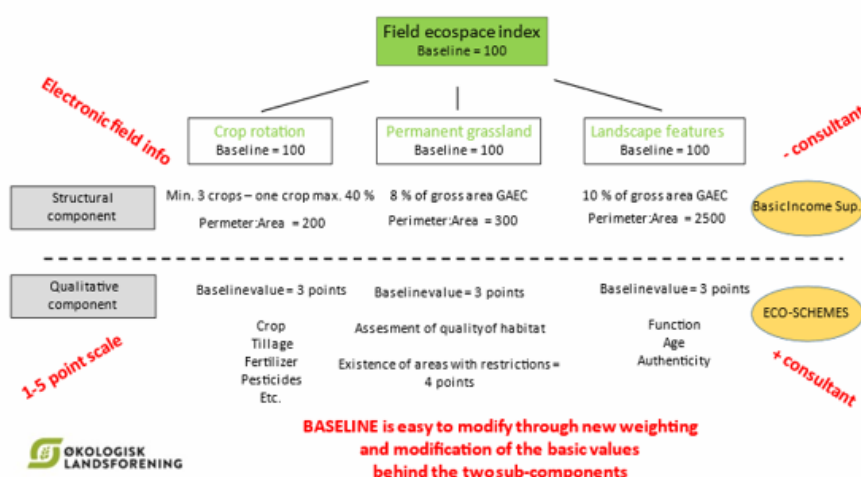
3. **Solution - The Field Eco-Space Index:**

- We need to look both quantitatively and qualitatively at the existing natural habitats for farmland species rather than measuring quantity of species on farmland.
- In ICOEL we therefore propose the management and planning tool, “the Field Ecospace Index” as solution to this problem. Thus, the idea is to improve the management and planning framework for nature and biodiversity on agricultural land by developing a comprehensive Field Ecospace index that will consist of three sub-indices, (1) rotational land (2) permanent grassland and (3) landscape features which incorporates both qualitative and quantitative data with the aim of providing complete and accurate measures for the prerequisites for biodiversity on agricultural land.
- The main task in the project will be to find accurate measures for parameters in the Field Ecospace Index, defining the baseline and the weights in each of the three sub-indices with the aim of providing targets for the development of biodiversity in the future agricultural landscape.

4. **The potential of the Field Eco-Space Index**

- The purpose in the Organic+ Project is to develop the Field Eco-Space Index model and turning it into a decision-making tool in future management of farmland nature.
- the Field Eco-Space Index could be used as an alternative way to allocate CAP funding in the future.

Exemplified model for calculating the Field Ecospace Index



Note: GAEC stands for Good Agricultural and Environmental Conditions (EC, 2022C)

Sources:

- EC (2022a) Green Deal: pioneering proposals to restore Europe's nature by 2050 and halve pesticide use by 2030. European Commission Press Release. https://ec.europa.eu/commission/presscorner/detail/en/ip_22_3746
- EC (2022b) Nature and biodiversity. European Commission https://ec.europa.eu/environment/nature/index_en.htm
- EC (2022c) Good Agricultural and Environmental Conditions (GAEC). Wikicap [https://marswiki.jrc.ec.europa.eu/wikicap/index.php/Good_Agricultural_and_Environmental_Conditions_\(GAEC\)](https://marswiki.jrc.ec.europa.eu/wikicap/index.php/Good_Agricultural_and_Environmental_Conditions_(GAEC))



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