Addressing data gaps with focus on biodiversity - Estonia`s approach

European Evaluation Helpdesk for the CAP

Good Practice Workshop „Addressing data gaps to evaluate CAP Strategic Plans"

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Good practice regarding obtaining environmental data for evaluation

☺ Data exchange/cooperation agreements between different data providers –
to ensure that the data is submitted as expected (both in content and time wise; complying with the GDPR).

☺ Periodic meetings with data providers to give an update on data needs and available data.

☺ Good example – cooperation with the National Environmental Monitoring Information System (EELIS), evaluators were given special licenses and instructions to use this database. Fast and effective solution.

Data for environmental evaluation of the CAP

Existing data + **METK specific studies for environmental indicators since 2004 (+ single studies)**

Soil (studies on soil organic matter and soil fertility (pH, K, P); soil nutrient dynamics, etc)

Water (studies on nutrient balance, pesticide use, water quality)

Biodiversity (farmland birds, bumblebees, earthworms, soil microbes, vascular plants in field edges)

Landscape (studies on changes in the landscape, High Nature Value (HNV) farmland analysis)

Socio-economic (studies on family farm income, share of organic products sold as organic and study on environmental awareness etc).

Ongoing studies

– Our developed system is still relevant for the CAP Strategic Plan evaluations.

– Valuable long time data series.

– Possibility to compare the periods of the CAP.

– Continuous data collection and data synthesis to be able to feed evaluations in required time-frame. Until now, most of the environment related evaluations are largely based on the information produced by the ongoing evaluation and studies.

– Most of the studies carried out on ongoing basis for the evaluation go beyond the required minimum level and are much broader – this is especially important for internal use in proper policy design.

– Constantly sharing information related to evaluation!
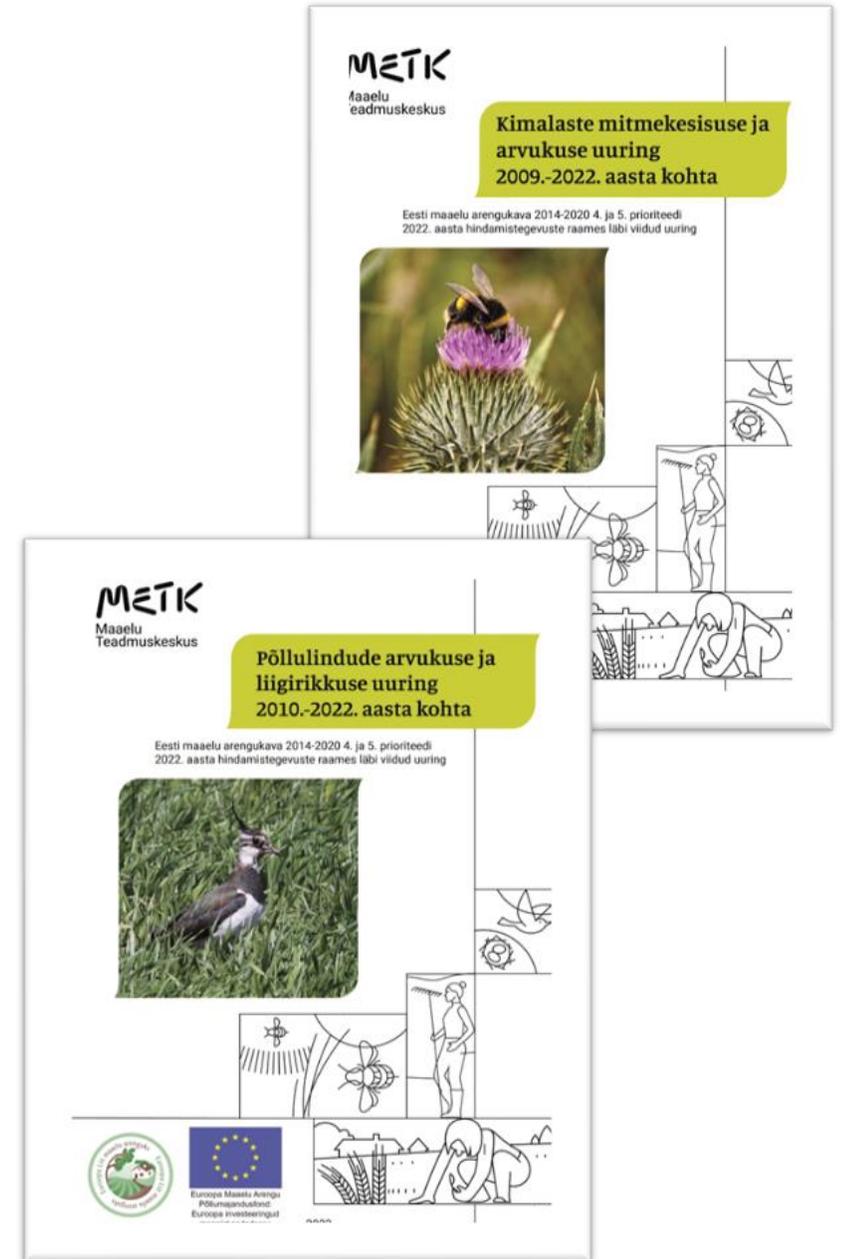
Studies and analyzes related to biodiversity

Agri-environmental interventions have an objective to maintain and increase biodiversity and landscape diversity.

Is the objective achieved?

- Study on species richness, abundance and density of farmland bird species (2005-…)

- Study on diversity and abundance of bumblebees (2006-…)

- Plant community study regarding established field edges/margins (2011, 2013, 2016, 2019, 2022, …)

- The methodology to identify High Nature Value (HNV) farming areas (2015, improved 2021)

Challenges for CAP SP evaluation (1)

The need to review critically the **suitability of current research** for the new CAP SP:

– The previous mainly evaluated measures are 1-year in the new CAP SP (support for environmentally friendly management farms and organic farming) – how to identify the impact in this case?

– How to assess the impact on the environment if the measures can change from year to year (in addition to the variation of weather conditions and all other impact factors)? The environmental effects themselves appear already with a time shift, now the effects are even more complex. So it can be very difficult to conclude anything after a few years of monitoring.

Thus, our long-term monitoring and evaluation itself has already filled a large data gap – there is data on the time before CAP SP that can be used.

Challenges for CAP SP evaluation (2)

The selection of interventions is much more diverse in the new CAP SP – what and how do we want to evaluate specifically?

– Map the success factors corresponding to the evaluation question and the corresponding EU common indicators.

– Review common EU indicators to identify if these are suitable and sufficient to meet success factors + if data is available. What problems occur and how to eliminate them?

– If the EU's common indicators are not sufficient, should national indicators be added? If yes, which indicators?

– Investigate whether there is enough evidence for a certain activity that it has a positive effect on the target group being studied – every proven activity does not need to be monitored separately with limited resources.

Challenges for CAP SP evaluation (3)

- If decided that there is not enough information about the impact of the intervention activity, but it is needed, where does the data come from?

- Do we already have it or do we need to collect more?

- How resource intensive would it be and would it pay off? Including how the previous RDP evaluation studies fit here.

Example: monitoring of butterflies in agricultural land
The current national indicator is sufficient for the grassland butterfly index of the nature restoration plan but not for evaluating CAP SP
   - not detailed enough to provide information we could use to evaluate CAP SP interventions – too few monitoring areas in the national butterfly monitoring for this;
   - the location of the areas does not take into account the presence of interventions.

Data gaps in the background data/context data

Data gaps in the background/context data to interpret the research results:

Example: use of pesticides and fertilizers:
- In order to assess biodiversity, on some occasions separate field book data has been collected – it is difficult to obtain the data & extra work for both the data collector and the farmer.
- A national digital field record book will be available as part of the new CAP SP (from 2024?) – potentially additional data. Data can be analyzed together with biodiversity data collected from the field.

Landscape data

The new CAP SP pays more attention to landscape elements, so the LE changes should also be analyzed.

Several data sources, but all have some shortcomings…

- Landscape data – data from the Estonian Topographic Database (ETD) have been used, but
  - the data is updated with a certain step;
  - not all elements are updated.
- The Copernicus data is not accurate enough (the grass strips at the edge of the field can be only 5 m wide and thus remain undetected).
- On-site landscape monitoring is time- and resource-intensive.
- LIDAR data (on height differences) is considered to be used as a more accurate option.

Land use data

- Land use – comprehensive information from paying agency`s (IACS/LPIS) area subsidies applications.

- In other respects, we get land use info from the Estonian Topographic Database layer, but it is not so accurate – no information about the crops grown on agricultural land where subsidies are not applied for.

Ideas for discussion

– One of the goals of the current CAP period should also be carrying out the necessary studies for designing the next CAP

   – In particular, results-based measures, implemented in cooperation with farmers in the region, more precisely targeted (which we do not currently have).

   – In order to implement these measures in the future, at first it should be investigated which possible design and unit rate of the measure would ensure sufficient application and thus also sufficient impact (one possible method is the so-called choice experiment).

– Another important topic could be the use of remote sensing (in Estonia so-called automatic surface monitoring is being developed by paying agency) possibilities also in the evaluation. The next 5 years are likely to see much further development in this area compared to 2023.

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Thank you!

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