



Data for the assessment of environmental effects of the agricultural policy: Experiences from research projects in Germany

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Background / Context

- Assessment of the impact of the 2013 CAP reform on selected environmental indicators in Germany (Research project funded by federal or regional agencies)

Result, impact, context indicators covered

- “Land Cover” (C.31)
- “Farming intensity” (C.33)
- “Natura 2000” (C. 34)
- “Farmland Bird Index” (C.35 / I.08)
- HNV-Farmland (C.37 / I.09)
- “Soil organic matter” (C.41/I.12)
- “Soil erosion” (C.42/I.13)
- GHG-emissions (only from organic soils) (I.07 / C.45 / R.15_PI)
- Organic farming (R.10_PI)
- “Crop diversity” (R.11_PI)
- Share of grassland (R.12_PI)
- Share of EFA (R.13_PI)

Key issues identified (Land use data general)

Data source	Key issues identified	Solutions to address them	Solution that we applied
FSS / FADN / IACS	Differences between observation caused by differences in / changes of the terminology of activity data (esp. livestock categories and crops)	Carefully adjust the definitions (esp. purpose) in the dataset (ensure a clear hierarchy and wall-to-wall mapping)	1) Validation e.g. with external data (Land cover data from remote sensing or land surveying agencies) 2) Development of a mapping typology with associated rules on data aggregation and (more important) disaggregation
	Not one data source contains all relevant data: Direct linkage farm level data (e.g. by farm-id) prohibited by Data protection regulation (DPR)	Changing the respective DPR	Indirect linkage: 1) aggregating data to indicators or units that are not DPR-sensitive (e.g. farm type, regional aggregates, regression models); 2) applying the model / the indicators on micro-level data (normally IACS) 3) <i>Sensitivity analysis</i>

Key issues identified in IACS / FADN data

Data source	Key issues identified	Solutions to address them	Solution we applied
IACS / LPIS	Differences in data structure between Federal States and years	Increased standardization of data structure	“Ex-post”-homogenization of the data structure over Länder and time
	IACS / LPIS are a running system (continuously updated) ➔ Geographic and alphanumeric information do not perfectly match (loss of up to 8% of the area) ➔ differences in data between deliveries likely causing problems in securing code and data integrity	Having fixed “Release” dates at least for “historic” years	Searching for Geometries in other LPIS years (problems with less than 0.1% of the area remain)

Recommendations for ex-post evaluation

... to the EU-Commission and Managing Authorities

- **Extend the years covered** in ex-post evaluation by considering impacts of previous periods for similar interventions (be aware of the time lag between the intervention and the observable impact in natural resources)
- **Decouple impact evaluations from support periods and individual RDPs** since mid/long term effects as well as external shocks (weather, other support policies) are not captured
- Promote **cross-regional thematic evaluation studies with** uniform methods and comparable databases (exploit the potential of the different implementations and settings as natural experiments)
- **EU Evaluation Tenders** should have markedly longer time horizons and receive a better resource allocation, the value of the current studies is relatively limited esp. due these restrictions

Key recommendations for setting up the data management system for the CAP post-2020 ...

... to EU-Commission and Member States

- Ensure **long term storage & accessibility** of micro-level IACS / LPIS data and livestock inventories
- Establish clear **access rules** for research on IACS and comparable inventories
- Create “fixed” **release version of the databases** (e.g. once a year) to improve data and code integrity
- Clear guidelines and requirements for the storage of **metadata**

Key Recommendations for setting up the data management system for the CAP post-2020 ...

... recommendation to EU-Commission, Eurostat & Member States

- Decouple the process of defining impact / context indicators from the support periods
- Devote **resources** to the provision of data for **impact / context indicators**
 - Esp. for biodiversity additional S.M.A.R.T. Indicators are needed
at the moment we have at best 2 (Farmland-Birds-Index & HNV)
in next period we will just have 1 (Farmland-Birds-Index)
- Carefully **review** (avoid breaks in the time series as much as possible) the
 - **Definitions** in the different sources and try to homogenize them
 - **Sampling plans** and adapt them to the needs emerging in last two decades

Thank you

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