Policy brief No. 6:

Low cost improvements of the environmental monitoring programmes leads to big added value on the effectiveness of RDP evaluations

EU funded project ENVIEVAL highlights that improvements in the strategic design of environmental monitoring programmes are needed to generate robust evaluation results to enable further improvements of the effectiveness of RDPs. Improvements can be achieved at limited additional cost.

Context

The European Agricultural Fund for Rural Development is the main funding source for the promotion of environmental development in Europe's countryside. Many measures implemented within the Rural Development Programmes are, among others, targeted to the delivery of environmental public goods, such as ensuring biological diversity, agricultural landscapes and quality, improving water and soil quality and other public goods such as animal welfare. Regular evaluation of impacts, especially environmental ones, achieved by implementation of the measures provides an opportunity to improve RDP by making it more responsive to societal needs. Therefore, robust evaluation of RDP measures is of key importance to ensure effective policy tools to achieve goals set by the policy makers.

However, environmental monitoring data critically needed to assess the success or failure of rural development programmes in achieving their environmental objectives is either missing or not compatible with the needs of robust impact evaluations. Yet, while more than 96 billion Euros were budgeted in the RDP programming period 2007-2013 (EAFRD budget), in many cases member states used less than 0.3 percent of their RDP budget for evaluation.

Strategic design of environmental monitoring programmes is a key precondition for robust evaluation of RDPs impacts on the environment

The ENVIEVAL project, funded by the Seventh EU Framework Programme, concludes that improvements in the strategic design of environmental monitoring programmes are needed to generate evaluation results which enable further improvements in the effectiveness of RDPs. Following a review of cost-effectiveness methods in Deliverable 7.1, different scenarios for improving the strategic design of environmental monitoring programmes were assessed in Deliverable D7.2 of the ENVIEVAL project to reflect better targeting towards the needs of RDP impact evaluations, for example including:

- Climate stability case study in Italy: Additional efforts to improve the spatial coverage of different farming systems in monitoring programmes to measure GHG emissions from agriculture
- Water quality case study in Germany: Strategic design of monitoring programmes to increase coverage of different policy measures and to improve the spatial targeting of participants and non-participants to enable assessments of synergies between measures

Scenarios in both case studies tested the availability of additional survey or monitoring data and impacts of reviewing or introducing strategic sampling targeted at the needs of impact evaluations of RDPs. The strategic sampling approach improves the coverage of participants and non-participants and reduces the selection bias, which leads to a more robust net-impact assessment. The new CMES requires the evaluation of synergies and conflicts between measures and focus areas, which is important evidence for recommendations on particular territorial priorities in future RDPs. The strategic sampling approach enables integration of different combinations of measures, and analysis of synergies of combined implementation of measures under the same, or between different, focus areas. Moreover, a strategic sampling approach and an increased sample size improve the representativeness of the data and the

compatibility with local environmental and farm structural data which facilitates the upscaling of the results to the whole programme area.

In most cases the adaptation of a strategic sampling approach for environmental monitoring data for RDP evaluation purposes leads to increased sample sizes compared to the status quo. However, a review of the strategic sampling approach can also lead to a reduction in sampling sizes of existing monitoring programmes, and thus to cost reductions, for example in cases where particular sub-sets of the sample can be reduced without constraining the impact evaluation. Through the integration of multiple time periods, panel data can be created and elaborate-statistics evaluation methods applied, e.g. Propensity Score Matching combined with a Difference in Difference approach. The clearer attribution of environmental changes to the implemented measures and programmes enables more robust recommendations to improve the effectiveness of RDPs.

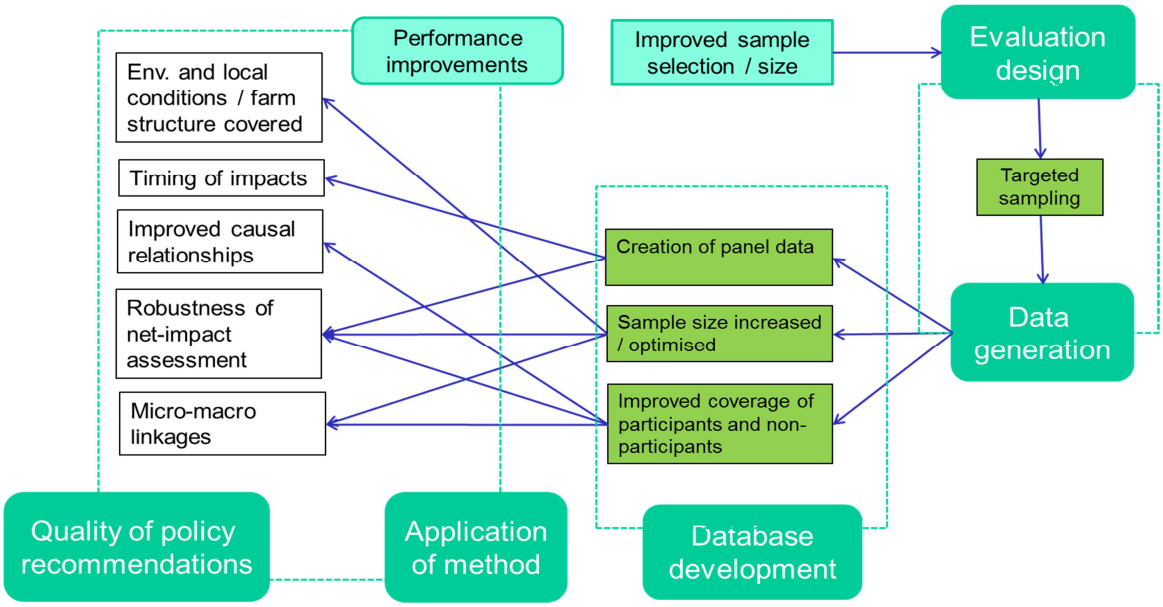

Figure 1 Impact of improved environmental monitoring programmes on the performance of evaluations

Added value can be achieved at relatively low cost

How much do these improvements in the effectiveness of environmental impact evaluations cost? Surprisingly little is the answer, at least if one puts the additional cost into the context of the overall RDP budget. The tested examples show that in some cases those improvements can be achieved with a small increase in cost. For example, the revisions to the strategic sampling applied to existing water quality data in Lower Saxony in Germany to increase the effectiveness of RDP evaluations of water quality impacts only resulted in an increase of 2 percent in monitoring costs. Also, small efforts such as the integration of alternative existing data sets or a more detailed analysis and processing of available data can already improve the effectiveness of evaluations. Further cost savings can be achieved by embedding additional data collection, or more generally, environmental monitoring for the evaluations of RDPs into a multi-purpose monitoring system.

Lessons learnt

To ensure evaluations enable further improvements of the effectiveness of RDPs in achieving their environmental objectives, a number of lessons can be derived for future environmental monitoring programmes:

- Setting data pre-requisites at the beginning of each programming period facilitates sound statistical analyses of environmental impacts and robust recommendations
- Planning of impact evaluations at the stage of scheme design helps to ensure necessary data availability for consistent evaluation
- Adjustments to sampling and monitoring methods targeted at RDP evaluation can improve cost-effectiveness of the evaluation process

- Embedding additional data collections for improving RDP evaluations into a multi-purpose monitoring system eventually leads to public resource savings and more comprehensive data sets.

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What is ENVIEVAL?

ENVIEVAL is developing and testing improved tools for the evaluation of environmental impacts of rural development measures and programmes in EU Member States. The project covers a representative set of EU member states, including Germany, Scotland, Greece, Finland, Italy, Lithuania, Hungary and regional case studies in the selected countries.

The main innovative aspects of the new methodological frameworks are that they enable the integration of micro- and macro-level evaluations (and their results) and provide guidance on the selection and application of cost-effective evaluation methods to estimate net effects of rural development programmes on the different main public goods from farming and forestry. In addition to the environmental public goods of climate change mitigation, biodiversity, landscapes, water quality and soil quality, the project will pay particular attention to animal welfare and include animal welfare case studies.

See the project website (www.envieval.eu) for additional information and documentation.

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