Co-design of novel contract models for innovative agri-environmental-climate measures and for valorisation of environmental public goods

contracts2.0

PRACTICE ABSTRACT № 13

Keywords

Results-based approach, Payment by Results, Policy Innovation, Policy Design, Indicators, MCA

Measuring Success in Results-based Schemes II – *How to Select appropriate Indicators*

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In results-based agri-environmental contracts, payment to the farmer is based on achieving specific environmental results. For fair payment, it is crucial that results are assessed using the most suitable indicators. Indicators can be composed of direct or proxy measures (see PA No.12 for the differences between these indicator types).

A possible method to select indicators is a Multi Criteria Analysis (MCA). In an MCA, different criteria are used to rank indicator sets. Criteria within an MCA have different dimensions: information on costs for monitoring, ecological representativeness, or social acceptance of indicators can all be used for the ranking. Criteria may differ in weight: costs may be considered less important than social acceptance, but these weights also differ among stakeholders: farmers may consider ecological representativeness less important than social acceptance, but non-governmental organizations may find the opposite.

A study in Münsterland, Germany, compared the direct indicator 'abundance per species' and the proxy indicator 'habitat quality' for four farm bird species. Literature shows that 'habitat quality' can be described by 'vegetation height', 'vegetation coverage', 'wet features', 'management' and 'other features'. Fifteen environmental, social and economic criteria were selected to rank the direct and proxy indicator for each bird species with an MCA. Bird experts scored the direct and proxy indicator on the environmental and economic criteria and other stakeholders (e.g. farmers, NGOs, government agencies) scored the indicators on the social criteria. All stakeholders assigned weights to each criterion. The MCA showed that the direct indicator ranked highest for most bird species.

ADDITIONAL INFORMATION

Tab.1 Criteria to evaluate the performance of the indicators (used for the study in Münsterland/Germany, © A. Elvers)

Ecological Criteria	**Definition**
Relevance	Determines the correct relation between the measuring instrument (indicator) and the measuring object (environmental/social quality) (Cloquell-Ballester et al., 2006): does the indicator defendably link a critical ecological component and its stressor to the assessment question? (Fisher, 1998)
Reliability	Assesses the soundness of the indicator outputs (Fisher, 1998)
Coverage/integrity	The amount by which the indicator covers all aspects of the investigated target (Niemeijer & De Groot, 2008)
Responsiveness	Responsiveness to (agricultural) management actions and accountability for natural variability; considers sensitivity, how easily is the indicator influenced by minor changes in management as well as resilience, the ability to return to its previous condition after a change occurred (Fisher, 1998; Landis & McLaughlin, 2000; Lieplapa & Blumberga, 2011; Niemeijer & De Groot, 2008; Park & Higgs, 2018; Timko & Satterfield, 2008)
Operational coherence	Determines the correct definition of the internal operations of the measuring instrument (formulation, data and units, measuring method) (Cloquell-Ballester et al., 2006)
Social Criteria	**Definition**
Information & Knowledge	Whether a person feels well or badly informed (Vlassenroot et al., 2008)
Usability	Perceived ability to use indicator successfully and with minimal effort (monitoring)(Vlassenroot et al., 2008)
Usefulness	Perception of how well the indicator will contribute in showing the results achieved (understandability) (Vlassenroot et al., 2008)
Satisfaction	Is the system: pleasant/unpleasant, nice/annoying, irritating/likeable, undesirable/desirable (Vlassenroot et al., 2008)
Economic Criteria	**Definition**
Labour	Time needed for fieldwork, travel, deskwork, taxonomy, reporting, data and management (Targetti et al., 2014)
Material costs	Consumables, equipment, resources required for monitoring and data management (Niemeijer & De Groot, 2008; Targetti et al., 2014)
Other costs	Other expenditures (e.g. crop damage due to indicator measurements) (Targetti et al., 2014)
Training	Time demand for educating and training for monitoring indicators (Niemeijer & De Groot, 2008; Park & Higgs, 2018; Targetti et al., 2014)
Quality checks	Costs of supervision by trained staff to make sure that sampling protocols are correctly and consistently applied (Cloquell-Ballester et al., 2006; Targetti et al., 2014)
Simplicity	Ease of the use of monitoring methods (Niemeijer & De Groot, 2008; Park & Higgs, 2018)

ABOUT CONTRACTS2.0

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Contracts2.0 aims to develop innovative contract-based solutions, which increase the motivation for farmers and land managers to produce more environmental public goods and allow them to reconcile the profitability of their farms with sustainability objectives. To do so, 28 research and practice partners closely cooperate to co-design and evaluate the novel contracts. Lessons learned from successfully tested contracts will also provide support for policy makers on local, national and EU-Level.

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Research partners

Action partners

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All Practice Abstracts prepared by the contracts2.0 project can be found here: https://www.project-contracts20.eu/practice-abstracts/ & https://ec.europa.eu/eip/agriculture/en/find-connect/projects/contracts20-co-design-von-innovativen