Establishing platforms of knowledge for agri-environmental assessment and programming

A case study from Rhineland-Palatinate, Germany

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outline

(1) conceptual framework & case study
(2) platforms of knowledge
(3) results / experiences
(4) importance of using a participatory approach

1. conceptual framework & case study

(1) assessing the AE performance of farms against both generic, European-wide and locally-specific objectives: common / generic structure & regionally adaptive
(2) multidimensional, multi-criteria based using indicators; farm-level
(3) intuitive, carefully structured, systematic ... allows coping with complexity
(4) transparent, facilitating consultation
(5) manageable resource demand

need to reconcile different landscape-related interests

- monitoring & assessment can help
  - to reduce conflicts between different land uses
  - to strengthen the *multifunctional* role of landscapes
- .... are vital in a continuous learning process
- evaluation is less control than contributing to a comprehensive process of attendance & valuation

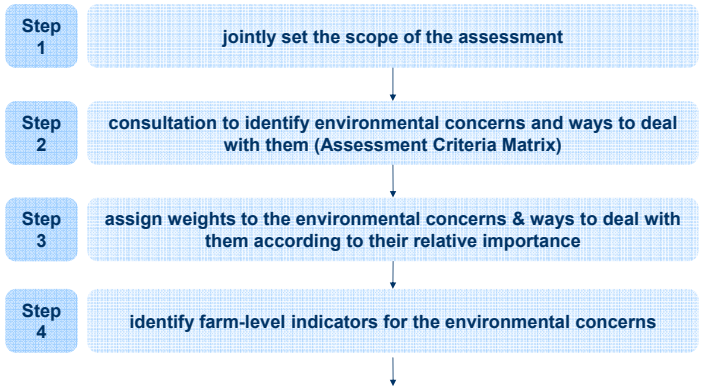
case study: Rhineland-Palatinate

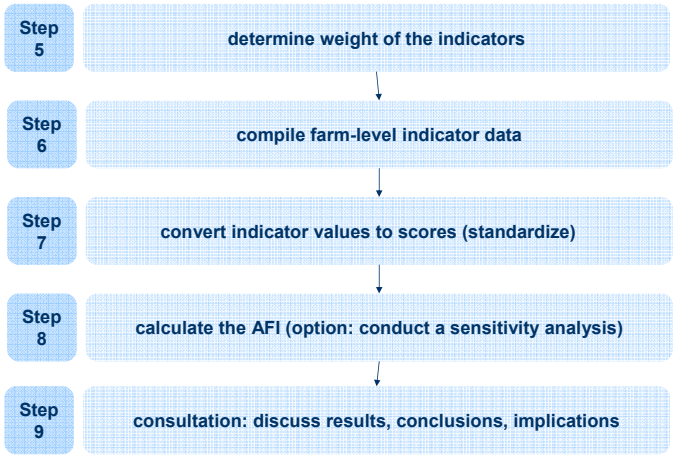
- 15 case studies
  (UK, IRL, HUN, DK, GR, FIN, DE)
  - used in wide range of geographic locations
  - different environmental issues
- DE: AEP in Rhineland-Palatinate
- 3 AEM:
  - organic farming support
  - extensification of grassland use
  - field strips in arable farming

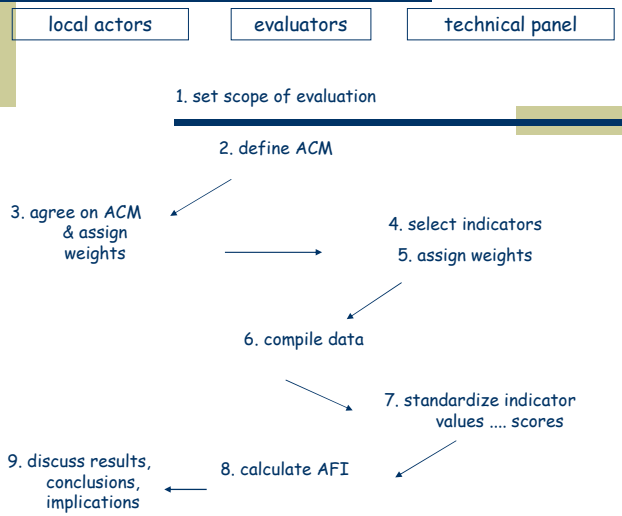
2. platforms of knowledge

- key features
  - bringing together different forms of knowledge
    - formalized / codified knowledge
    - practical knowledge & experience
    - local & external knowledge
  - carefully structured, consensus-oriented, transparent, consultation
  - platforms of knowledge allow to cope more effectively with complexity

integrating platforms of knowledge & stepwise implementation







step 1: set the scope of the assessment (framing)

- context & objectives / type of assessment
  - e.g. AES objective-oriented or wider environmental evaluation
- time frame
  - snap-shot, annual, start & end of policy implementation
- spatial scale
- sampling strategy
- comparisons
  - comparison to a baseline
  - participating vs. non-participating farms

step 2: identify environmental concerns & ways to deal with them

- environmental concerns
  - Natural Resources (NR)
  - Biodiversity (B)
  - Landscape (L)
- ways to deal with them
  - Crop & Animal Husbandry (CAH)
  - Physical Farm Infrastructure (PFI)
  - Natural & Cultural Heritage (NCH)

Assessment Criteria Matrix (ACM)

	AE Issues			
management options	**NR**	**B**	**L**	**Other**
CAH				
PFI				
NCH				

other concerns

- energy and food supply: energy crops, sustainability of local food supply
- environmental risk and control: flooding, fire, avalanches
- climate change: greenhouse gases, land use, irrigation

	NR	B	L
CAH	• Soil quality protected • Soil physical resource protected • Groundwater quality protected • Air quality protected	• Habitats provided for wildlife associated with arable land •Maintenance of extensive grassland systems	• Landscape character protected • Maintenance of livestock systems
PFI	• Groundwater quality protected	• Field boundary habitats protected • Effects of large field size mitigated	• Hedgerows protected • Traditional buildings conserved
NCH	• Watercourses protected	• Woodland habitats protected	•Historic & archaeological features protected

A single cell from this matrix is termed an AFI "Dimension"

steps 3 & 5: consultation aimed at assigning weights

Natural Resources	Biodiversity	Landscape	
0.25	0.25	0.50	∑1

	Natural Resources	Biodiversity	Landscape
Crop & Animal Husbandry	0.7	0.33	0.4
Physical Farm Infrastructure	0.2	0.33	0.4
Natural & Cultural Heritage	0.1	0.33	0.2
Totals	∑1	∑1	∑1

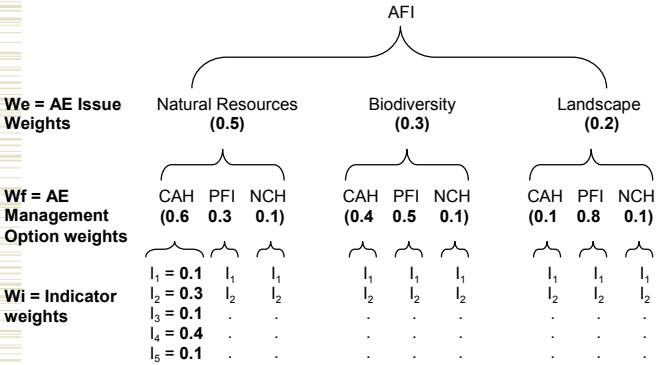
step 7: convert indicator values to scores (standardize)

- linear relationship; non-linear relationship; categorical; binary
- examples:

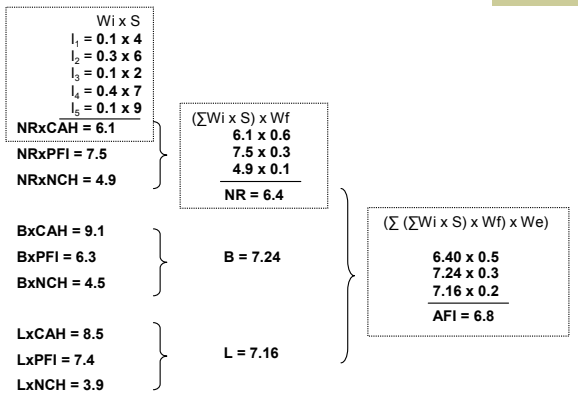
LU/ha	>1.8	<=1.8	<=1.4	<=1	<=0.6	<=0.2
Score	0	2	4	6	8	10

2. Frequency of cutting	Score
Annual	2
Left unmanaged	5
Mixture of annual and 2-3 years	6
Every 2-3 years	7
Mixture of 2-3 years and some unmanaged	10

overview weighting



calculation of index



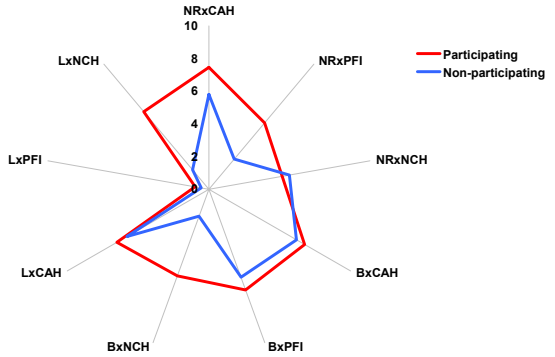
3. results / experiences

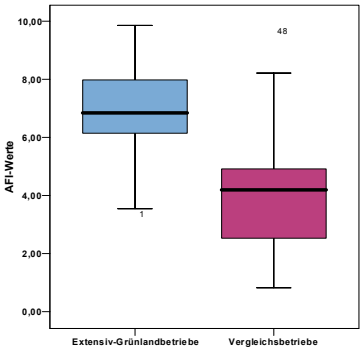
- approach succesfully tested in all 15 case studies (UK, IRL, HUN, DK, GR, FIN, DE)
- main AFI steps applied in each case with different degrees of participation & different types of actors involved
- some adjustments of approaches used within each step

...

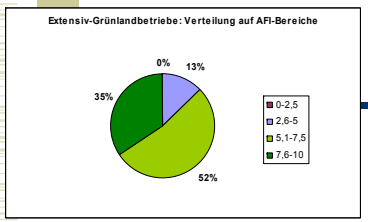
- AFI has been successfully adapted in each case study
  - broad steps are generic
  - context specific adaptations within each step can be agreed upon

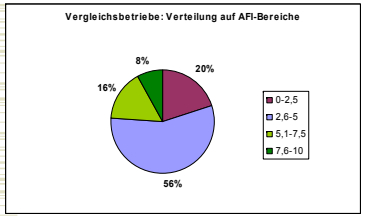
presentation of results





	MIN	MAX	mean	no. of farms
extensification of grassland	3,37	9,85	6,86	23
non-participants	0,84	9,67	4,21	25





AFI	extensive grassland	non-participants
0-2,5	0	5
2,6-5,0	3	14
5,1-7,5	12	4
7,6-10	8	2

4. importance of using a participatory approach

- engagement of farmers (organisations) in the decision making process is critically important
  - it forges stronger links between farmer's perception of AE issues & their awareness of their role as managers of the rural landscape
- approach reinforces the use of monitoring, assessment and evaluation for future decisions
  - it can be customised to locally relevant AE targets, public goods issues & circumstances
  - methodological framework is responsive to changing local needs

principles related to stakeholder engagement

personality & passion ..... bureaucratic procedures / guidelines

Thank you !

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