


Farm level indicators for new topics in policy evaluation

Indicator Selection
Teagasc, Ireland

Presentation to the Expert Group for Monitoring and Evaluating the CAP
Brussels
May 10 2017



Objective

- Review of Policy objectives (Teagasc)
 - Literature Review (INRA & Teagasc)
 - International initiatives
 - National initiatives (grey literature)
 - Indicator Review – wish list..... (Teagasc & Zalf)
 - Wish List Reduction
 - Eliminate duplication
 - Eliminate regulatory issues e.g. cross compliance
 - Combine similar indicators
 - Identify gaps
 - Other sources of data?
 - Potential to merge datasets?
- 

- Stakeholder Process to Refine Wish List: (WP2 – Hohenheim)

Indicator Development

- **Identify policy evaluation needs for the future**
- **Review of literature on farm level indicators**
- **Develop list of indicators/additional variables for collection in the pilot**

RDP₁ & FLINT measurement need: Innovation

- *Technology Adoption/Use*
- *Product & Process*
- *External Relations Marketing and Organisational*
- *Investment*



RDP2 & FLINT measurement needs: Market Stabilisation and Income support

- *Profit & Product Outcome Measures*
- *Market Engagement*
- *Strategic Risk Aversion*

- *Subsidies & Grant Aid*
- *Accounting Measures*
- *Social & Non-Market Issues*
- *Labour and Wages*



RDP₃ & FLINT measurement needs: Market Stabilisation and Innovation

- *Profit & Product Outcome Measures*
- *Market Engagement*
- *Strategic Risk Aversion*
- *Technology Adoption/Use*
- *Product & Process*
- *External Relations Marketing and Organisational*
- *Investment*



RDP₄ & FLINT measurement needs: Environment

- *Biodiversity*
- *Nutrient Management*
- *Water*
- *Energy*
- *Soil*
- *Plant Protection*
- *Climate*
- *Cross Cutting Issues*



RDP₅ & FLINT measurement needs: Environment, change adaptation and mitigation and resource efficiency

- *Biodiversity*
- *Nutrient Management*
- *Water*
- *Energy*
- *Soil*
- *Plant Protection*
- *Climate*



RDP6 & FLINT measurement needs.

Social indicators relevant to: market stabilisation, innovation, income support.

- Social needs
- Quality of life
- Decision making
- Succession*



Informing indicator selection....

- Policy Needs
 - Working paper identifying and describing policy evaluation needs of CAP Rural Development Policy, other CAP policies, competitiveness policies and other policies that impinge on the Agri-Food sector.
- Literature Review
 - provides an overview of sustainability indicators based on international literature and national initiatives, and discusses practical aspects to be considered when calculating them from farm level data.
http://www.flint-fp7.eu/downloads/reports/FLINT%20WP1%20_D1_2.pdf

Challenges for EU Sustainability Indicator Development

- Heterogeneity - existing data, farm systems, cultural differences
- “Tricky indicators” - largely environmental “wicked problems”
- 2021: concentrate on measures where impact can be readily assessed
 - targeting of future funding for max impact
 - soil = critical measure (EU commission)
- Composite Indicators???? - complexity
- Linking with other datasets
 - LPIS / marketing and quality labelling info

FLINT: SUSTAINABILITY CONCEPTS

Economic

Production of goods and services

Income Support
Market Stabilisation
Innovation

Environmental

Environmental management

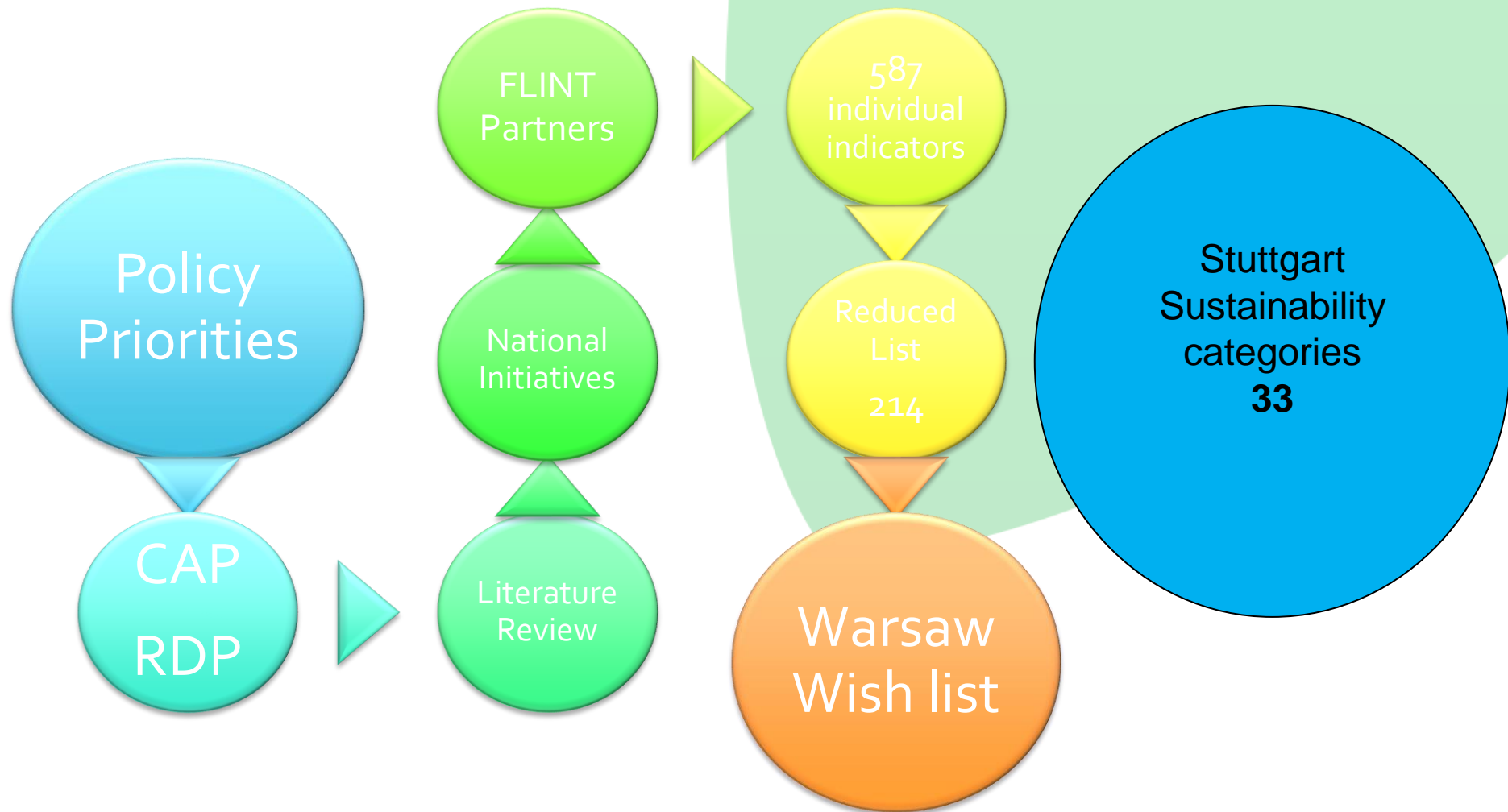
Climate
Soil
Water
Biodiversity
Energy
Resource efficiency

Social

Contribution to rural dynamics

Decision making
Health and well-being
Social engagement
Education

FLINT: INDICATOR SELECTION



Evaluation Needs

G51						
	A	B	C	D	E	F
2	Thematic area	Indicator theme - please also include national initiatives outside of your own organisation	Policy (specify EU or National)	Indicator title	Evaluation need /information need addressed by indicator	
3	market stabilisation	risk management	EU CAP/RDP	participation in risk management schemes	% participation in risk mgt schemes	
4		profitability	EU	agricultural factor income	total factor productivity	
5		structure	EU	organic farming	% area under organic farming	
6		structure	EU CAP/RDP	investment in restructuring	% of holdings with RDP support for restructuring	
7		profitability	EU CAP	participation in EU quality schemes	value of production under EU quality schemes	
8	income support	social	EU RDP	quality of life of the farming community	demographic viability of the farm household	
9		employment		LEADER assisted employment	jobs created in Leader supported projects	
10		employment	EU RDP	off-farm employment	rural employment rate/employment by economic activity/urban or rural employment	
11		social	EU RDP	risk of social isolation	quality of life of the farming community	
12		non-agricultural income	EU RDP	tourism income	tourism infrastructure	
13		social	EU RDP	ages of farmer/farm family members	age structure on farms	
14		social	EU RDP	work-life balance	agricultural entrepreneurial income	
15		social	EU RDP	quality of life of the farming community	education level	
16		income equity	EU - CAP/RDP	quality of life of the farming community	degree of rural poverty	

Indicator wish list Evaluation needs

Ready

Additional comments

- Matching of policy priorities to measurement needs
 - many of the RDP indicators are not at farm-level
- Further disaggregation within farm (system level)?
 - Greening: disaggregation of agri-environment payments by environmental topic
 - Use of (carbon) foot-printing per unit product vs per ha
 - N Balances per ha/system/product (example)
 - Use imputed data coefficients where possible

Indicator "wishlist" template

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	FLINT partner:			Contact email:													
2	Please complete this section for all wishlist indicators (both currently implemented and new indicators)																
3	Thematic area	Indicator			Evaluation need				Data/Variables		Desirability			Feasibility			
4		Indicator theme - <i>please also include national initiatives outside of your own organisation</i>	Policy addressed (specify EU or National)	Indicator title	Indicator unit	Evaluation need information need addressed by indicator	Additional evaluation information need addressed by this indicator e.g. energy efficiency could address both GHG emissions and resource efficiency	If there is currently no relevant indicator on the evaluation need, please state - not relevant	Has this indicator already been used within a policy evaluation context? If yes, specify source e.g.	Please list the variables/data a required to develop this indicator	Variable units (e.g. tonnes per hectare per year; megaboules per year; number of farmers etc.)	Would this indicator be desirable within the FLINT context? (1-5, where 5=very desirable)	Justification of desirability score: policy need/scientific quality/other	Relevance of this indicator to assess the policy issue (1-5, where 5=very relevant)	Feasibility of implementation of indicator across FLINT partners (1-5, where 5=very feasible)	Justification of feasibility score: specify why or why not feasible	Additional data collection beyond FADN requirements? If yes, specify if marginal/co.
5																	
6																	
7																	
8																	
9																	
10																	
11	Income support	Social	EU- RDP	Economic vulnerability of the farm,	binary. Yes=1, No=0	Quality of life of the farming community	People		http://www.teagasc.ie/publications/view_publication.aspx?PublicationID=3042	an economically viable farm has the capacity to (a) remunerate family labour at the average agricultural wage and (b) provide an additional 5% return on non-	spreadsheet	5	addresses specific policy need	5	5	data already within FADN dataset	no
12																	
13																	

Indicator wish list Evaluation needs

Ready

80%

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Current indicators template

	A	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	A
1	FLINT partner:															
2	Please complete this section for all currently implemented indicators (please complete also if you have relevant information for new indicators)															
3	Thematic area	Development of the indicator			Data collection				Implementation							
4		Method of indicator computation: manual/spread-sheet/models/other (specify)	Indicator calculation details (formula)	Composite or simple indicator? If composite, please specify normalisation, aggregation and weighting processes	Data collected by: specify if partner organisation for FADN or external agency	Specify data collection method: questionnaire/estimated by the farmer/invoice verified/ data from farm management	Validation of the indicator: by experts/through scientific publication/ by comparison to 'real' data	Do some of the variables used to compute the indicator already exist? If yes, specify database: National/FADN	Implementation status: specify implemented/not implemented/proposed	If indicator is implemented, specify on which FADN farming systems	If indicator is implemented, specify scale of implementation (e.g. <20 farms, 20-50 farms, 50-500 farm, >500 farms)	If indicator is implemented - specify in which country?	If indicator is implemented - specify in which years?			
9																
10																
11	Income support	spreadsheet	((labourunitsunpaid_family_)* (averageannualagw age))+ ((0.05)* (investmentinmachinery+investmentinlivestock))	Simple	Teagasc National Farm Survey = FADN Liaison Agency	farmer questionnaire	by experts	Yes - national database	implemented	Dairy (450), cattle rearing (460), cattle other (460), sheep (481), tillage (151), mixed livestock (470)	>500	Ireland	2012			

Indicator wish list Evaluation needs

Ready

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Environmental Sustainability Indicators

E1: Greening: Permanent grassland

E2: Greening: Existing/created areas of EFA

E3: Semi-natural farmland areas

E4: Pesticide usage (Pesticide risk score)

E5: Nutrient balance (N, P) (farm-gate balance)

E6: Soil organic matter in arable land

E7: Indirect energy usage

E8: Direct energy usage

E9: On-farm RE production

E10: Farm management to reduce nitrate leaching

E11: Farm management to reduce soil erosion

E12: Use of Legumes

E13: GHG emissions per product

E14: GHG emissions per ha

E15: Carbon sequestration in FADN

E 16: Water usage and storage

E 17: Irrigation practices

ECONOMIC/INNOVATIVE

El 1: Innovation (CIS)

El 2: Producing under a label or brand

El 3: Types of market outlet

El 4: Past/Future duration in farming (Survival propensity)

El 5: Efficiency field parcel (LPIS)

El 6: Modernisation of the farm Investment

El 7: Insurance (events outside control of farm) - also to include personal (disability) & farm (building structure) insurance

El 8: Share of output under contract with fixed price delivery contracts

El 9: Risk exposure (non-agricultural activities)

Social Sustainability

S1: Advisory services provided to the farm

S2: Education and training

S3: Ownership/management

S4: Social engagement/participation

S5: Employment and working conditions

S6: Quality of life/Decision Making

S7: Social diversification: improving the image of farmers/agriculture in local communities