

FLINT: Farm Level Indicators for New Topics in Policy Evaluation

Monitoring and evaluation of sustainability goals

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Overview

- Background of FLINT
- FLINT selection of indicators
- Different approaches in data collection
- Value added of FLINT indicators in evaluations
- Lessons for adoption in Member states
- Recommendations for future monitoring



Background: New policies ask for new data



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21-CMP11

- European policies are (being) adapted:
 - Common Agricultural Policy: Cross Compliance, Greening
 - Rural development, innovation, risk management, viability, sustainability
 - Nitrate directive; Water directive
 - Green deal, farm to fork strategy, bio-diversity strategy
- Policy evaluation has a need for data on these topics

Assessment 'current' situation

- Information needs on sustainability from private sector, government, NGO's and research
- Official agricultural statistics (slowly) adapt to new information needs
- Several initiatives on indicator frameworks, collection of sustainability data still in its infancy
- Developments
 - Combining statistical and administrative data
 - Farmers often have to collect and provide data on sustainability and food safety issues (Global Gap, BRC, SAI initiative, cool farm tool etc., sustainability schemes)



Objectives FLINT

- To demonstrate the feasibility of **collecting policy-relevant data** in different administrative environments
- To demonstrate how the new farm level indicators can be used **to evaluate policies** and improve the targeting of policy initiatives



Indicator selection and definition

- Policy Needs

CAP Rural Development Policy, other CAP policies, competitiveness policies, other policies that affect Agri-Food sector.

- Literature Review

Overview of sustainability indicators based on international literature and national initiatives





ENVIRONMENTAL

E1: Greening

E2: Ecological focus areas

E3: Semi-natural areas

E4: Pesticide usage

E5: Nutrient balance

E6: Soil organic matter

E7: Indirect energy use

E8: Direct energy usage

E9: On-farm renewable energy production

E10: Nitrate leaching

E11: Soil erosion

E12: Use of legumes

E13: GHG emission per ha

E14: GHG calculation

E15: Carbon sequestering land uses

E16: Water usage, storage

E17: Irrigation practices

ECONOMIC,
INNOVATIVE

EI1: Innovation

EI2: Producing under label

EI3: Market outlet

EI4: Farm duration

EI5: Efficiency field parcel

EI6: Modernization

EI7: Insurance

EI8: Marketing contracts

EI9: Risk exposure

SOCIAL
SUSTAINABILITY

S1: Advisory service

S2: Education and training

S3: Ownership management

S4: Social engagement

S5: Working conditions

S6: Quality of life

S7: Social diversification



Why data collection in connection to FADN

- Increasing importance of the farm-level
- EU harmonised data, implemented annually
- Need for measurement of different indicators on the same set of farms
 - To evaluate cost effectiveness of measures
 - To evaluate trade off and jointness of sustainability measures
- Indicators must be credible: Objective, verifiable and empirical

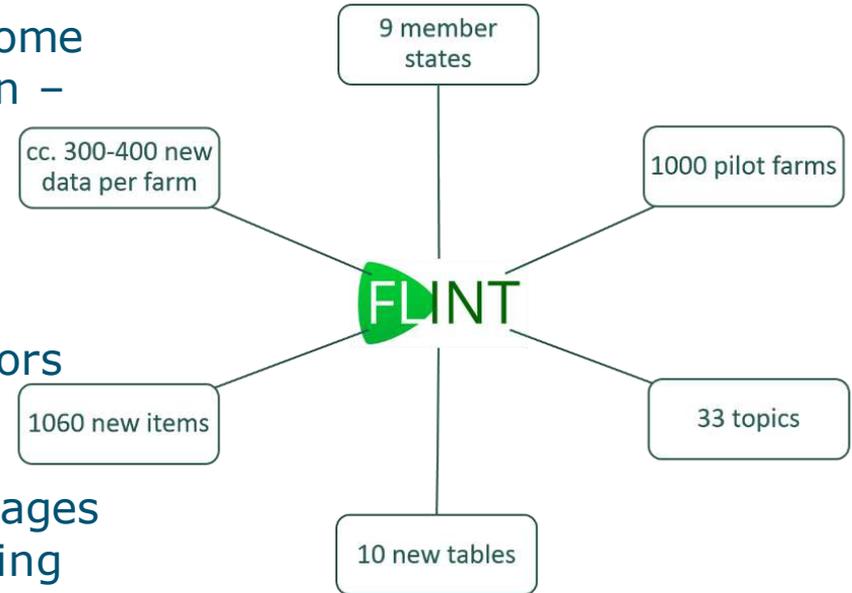
Structure of the FLINT farm return (example)



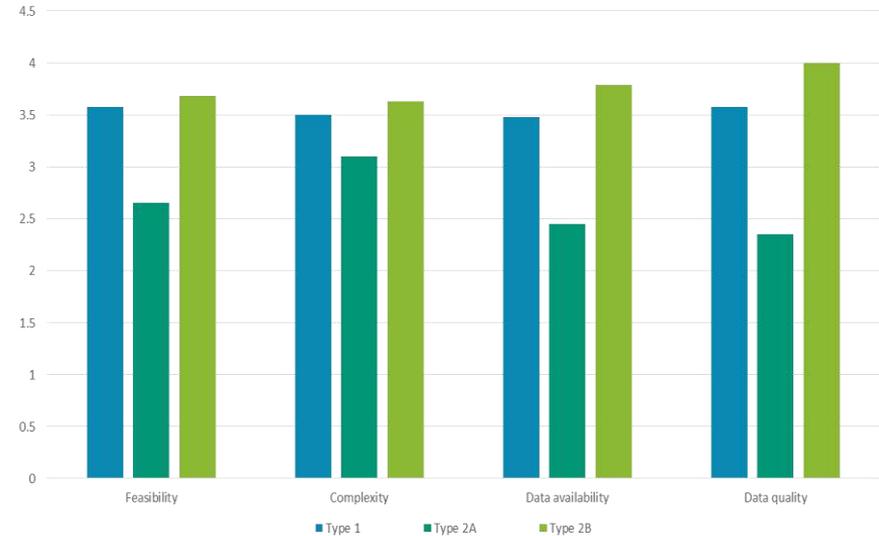
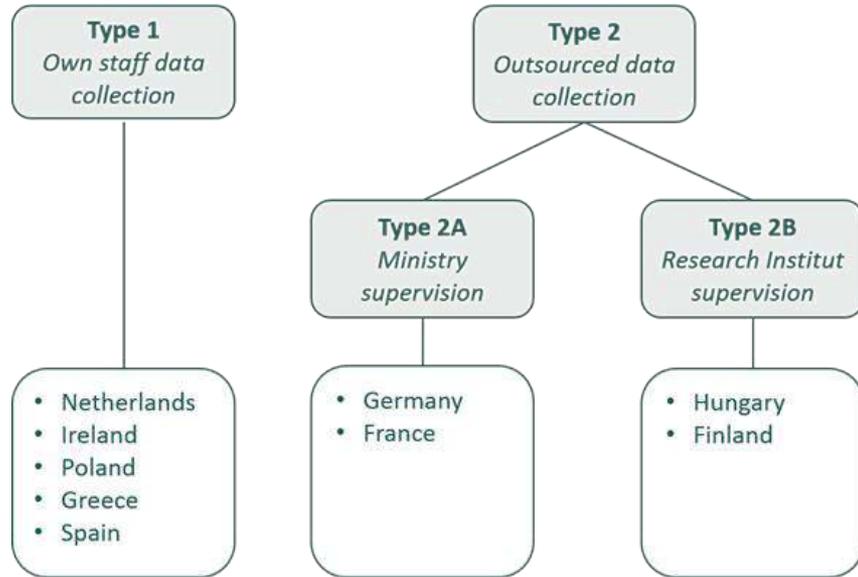
| Category | Column | Notes |
|--|------------------------------|--|
| Group of information AS - Advisory Services | | |
| Consultancy Cat. 1011 to 1016 | Type of Advice Z1_AS_*_VT | <p>Public Advisor (1011): It includes all public advisory services or public extension agents offering direct advice services to the farmers: e.g. advisory centre, chambers of agriculture, agricultural authorities, state-owned advisory firms, public research institutes.</p> <p>Farmers' Cooperative (1012): It includes farmers' cooperatives or its organizations which offer direct advisory services to the farm.</p> <p>...</p> <p>Others (1015): Includes all the providers not covered on the previous categories: universities, environmental NGOs, private research institutes, religious organizations.</p> <p>Allowed values for value type (column VT), multiple selections are allowed:</p> <p>1 = Accountancy, bookkeeping, taxes: includes advisory service for bookkeeping; accountancy, taxes, FADN.</p> <p>2 = Management, business planning, and marketing: includes advisory services for planning, monitoring or executing plans. It includes: business/financial/marketing planning, human resources, management, marketing advice, marketing information service.</p> <p>3 = Crop production: it includes advisory service with the aim to solve problems and implement solutions of all the categories of crops contemplated in Table I (Crops)</p> <p>4 = Livestock production: it includes advisory services with the aim to solve problems/ implement solutions of all the categories of livestock described on Table J (Livestock production)</p> <p>...</p> |

Experiences on data collection

- Data collectors attitude changed from hesitant to more enthusiastic
- Collection of new data always causes some initial problems and need for adaptation –
 - Land management
 - Innovation
- Feasible to collect sustainability indicators in different countries
- In connection to FADN provides advantages in terms building trust and cross checking data



Feasibility of data collection in different administrative settings



Evaluations to show added value

- Range of studies conducted (partly published in scientific journals and accepted for conferences)
- Taking into account the pilot project limitations: sample size, representativity, one year data, time pressure
- To illustrate added value of these type of data
 - **Filling gaps** in research methodology (i.e. social performance, economic viability)
 - Provide better **understanding in the sources of sustainability** performance (i.e. impact advisory services, age of assets, age of farming population).
 - Additional insights in **challenges faced by farmers** (i.e. trade-offs between environmental and economic performance)
 - Provide **more precise recommendations** for policy makers (i.e effect of CAP subsidies on technical efficiency; impact investment subsidies on age of assets and sustainability)



Evaluations conducted

| | |
|---|--|
| Risk management | the adoption of risk management strategies in european agriculture |
| Technical efficiency | the Cap subsidies and technical efficiency including environmental outputs: the case of european farms |
| Innovation | the adoption of innovation in european agriculture |
| Farm fragmentation | evaluates farm fragmentation, performance and subsidies in the european union |
| Social indicators | the social indicators of farm-level sustainability |
| Age of assets | effect of age of assets on farm profitability and labour productivity |
| Economic sustainability | evaluates the farm economic sustainability in the eu: a pilot study |
| Farmer age | impact of farmer age on indicators of agricultural sustainability |
| Extension | the role of extension in agricultural sustainability |
| Greening | investigation of indicators for greening measures: permanent grassland and semi-natural area |
| Nutrient use | develop nutrient use efficiency indicators for milk production |
| Trade-offs | tradeoffs between economic, environmental and social sustainability: the case of a selection of european farms |
| Advisory services | advisory services and farm level sustainability |
| Soil organic matter | indicators for soil organic matter management from flint data |
| Water usage | water usage, source and sustainability: examples from the region of navarra (spain) and greece |

Lessons for adoption in Member States

- Collection in scope of FADN provides advantages for farmer participation and quality assurance
- Having an integrated dataset is crucial for policy evaluation (even if it is not optimal for certain aspects)
- Allows the analysis of the full chain from: Policy objective -> policy measure -> impact on farm-> farm decisions -> sustainability performance farms
- Including FLINT data on all FADN farms would increase total running costs with 40%
- Feasible option to collect FLINT data on a subsample of farms

Recommendations for future monitoring - evaluators

- Evaluation poses higher demands than monitoring
- Evaluators often need to understand relation between policy measure and farm management exact relation between inputs, outputs and results
- Consider monitoring and evaluation needs as soon as possible
 - By policy makers as well as evaluators
 - In connection to Green Deal, Farm to Fork and national policies
- FLINT shows feasibility of data collection, but it takes some time

Recommendations for future monitoring – data collection

- Willingness of farmers to cooperate depends on trade-off between (administrative) burden and value of information, so:
 - Consider information needs of different stakeholders, especially farmers (benchmarking, farm decisions, reporting needs)
 - Be aware of rights and interests of farmers
 - Make use of link between economic and environmental accounting
 - Integration instead of duplication
 - Be open to consider new technologies (H2020 project MEF4CAP assesses the potential of technological developments to meet monitoring needs)

Further information

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Poppe, Krijn & Vrolijk, Hans & Dolman, Mark & Silvis, Huib, 2016. "[FLINT – Farm-level Indicators for New Topics in policy evaluation: an introduction](#)," [Studies in Agricultural Economics](#), vol. 118(3), pages 1-7, December.

Vrolijk, Hans & Poppe, Krijn & Keszthelyi, Szilárd, 2016. "[Collecting sustainability data in different organisational settings of the European Farm Accountancy Data Network](#)" [Studies in Agricultural Economics](#), vol. 118(3), pages 1-7.

