

# Farm Level Indicators for New Topics in policy evaluation

## Intro and objectives meeting

Krijn Poppe

Wageningen Economic Research, The Netherlands

199<sup>th</sup> FADN Committee, Brussels, November 2016



# SDG's, COP21 (Paris' Climate change): new policy goals asks for new data



- European policies are (being) adapted:
  - Common Agricultural Policy: Cross Compliance, Greening
  - CAP Rural development: innovation (EIP Agriculture)
  - Nitrate directive
  - Water directive
  - Etc.
- Policy evaluation has a need for data on these topics

# Current situation

- Information needs on sustainability from private sector, government, NGO's and research
- Official agricultural statistics (slowly) adapt to new information needs
- No agreement on what the future data infrastructure at EU level should look like.
  - Extend FADN, link FADN to other administrative data or separate environmental data network
- 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.)

# Need for an Integrated data set

- Measurement of different sustainability indicators on the same set of farms
- Allows the analysis of the full chain from: Policy objective -> policy measure -> impact on farm -> farm management decisions -> up to: sustainability performance of farms
- Trade-off and jointness of performance on different sustainability measures as a consequence of policy measures
  - (for example is the economic performance at the expense of environmental performance, sustainability performance of large farms etc.)

# Objectives FLINT

- To demonstrate the feasibility of collecting policy-relevant data in different administrative environments
  - with newly developed farm-level indicators of economic, environmental, social issues.
- To demonstrate how the new farm level indicators can be used to evaluate policies and improve the targeting of policy initiatives

Environmental

E1: Greening

E3: Semi-natural areas

E4: Pesticide usage

E5: Nutrient balance

E7: Indirect energy use

E8: Direct energy usage

E9: On-farm RE prod.

E6: Soil organic matter

E10: Nitrate leaching

E11: Soil erosion

E12: Use of legumes

E14: GHG calculation

E16: Water usage,  
storage

E17: Irrigation practices

Economic,  
innovation

EI1: Innovation

EI2: Producing under  
label

EI3: Market outlet

EI4: Farm duration

EI5: Efficiency field parcel

EI7: Insurance

EI8: Marketing contracts

EI9: Risk exposure

EI6: Modernization

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

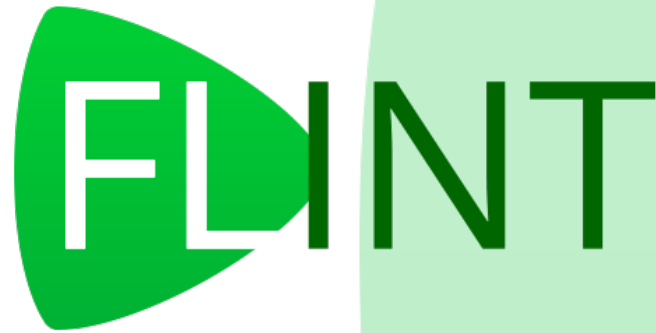
# Why we use FADN in the pilot

- Interest is at the farm-level
- Need multi-dimensional data source – economic, social, environmental (& innovation)
- EU harmonised data
- Implemented annually
- Indicators must be credible
  - Objective, verifiable and empirical data
- BUT: where possible, link to existing data

# Questions for this meeting

- **Feedback on data collection experiences**
- **Your opinion on the scenarios for the future.**
  - How to ensure that sustainability issues are take into account in policy evaluation
- **Input on country specific circumstances to further quantify scenarios**
  - Cost and time for data collection
  - Organisational structure in your country





# Farm level indicators for new topics in policy evaluation

Experiences with data collection

**Szilárd Keszthelyi, AKI, Hungary**

199<sup>th</sup> FADN Committee, Brussels, November 2016



# Content

- Availability of data at farm level
- Experiences in data collection
- Cost of data collection

# Availability of data at farm level

# Ratio of existing data and ratio of personal interviews needed

	Ratio of already existing data	Ratio of personal interview needed
Information and knowledge		
Quality of life		
Innovation		
Machinery and buildings		
Labelling		
Market outlet		
Greening		
Nitrate leaching reduction		
Soil erosion		
Land fragmentation		
Soil organic matter		
Insurance		

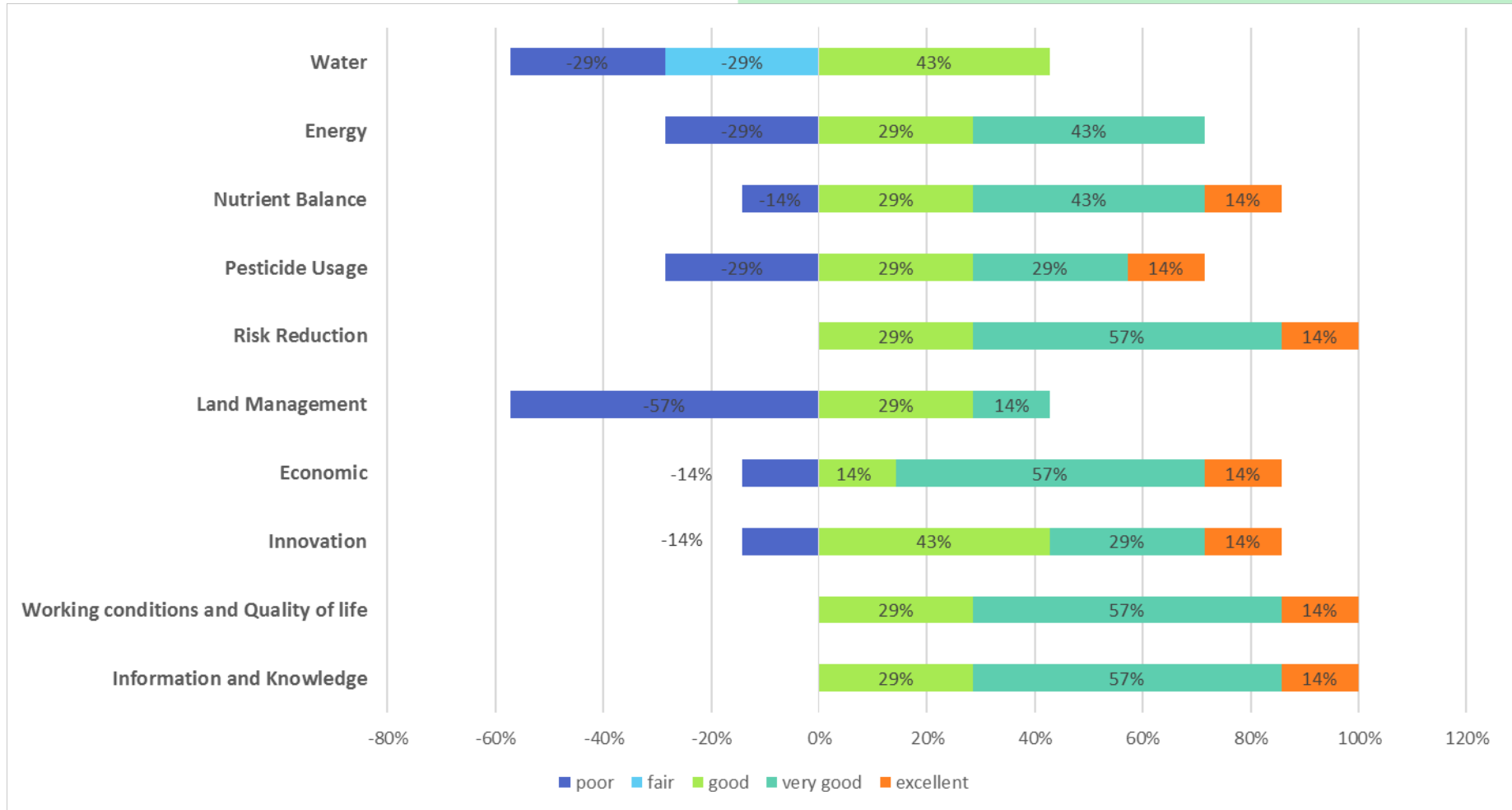
	Ratio of already existing data	Ratio of personal interview needed
Marketing contracts		
Risk reduction		
Pesticide usage		
Livestock (quantity)		
Crops (quantity)		
Purchased feedstuff		
Purchased seed		
Manure		
Slurry		
Energy		
Water		



Source: online survey



# Assessment of data availability



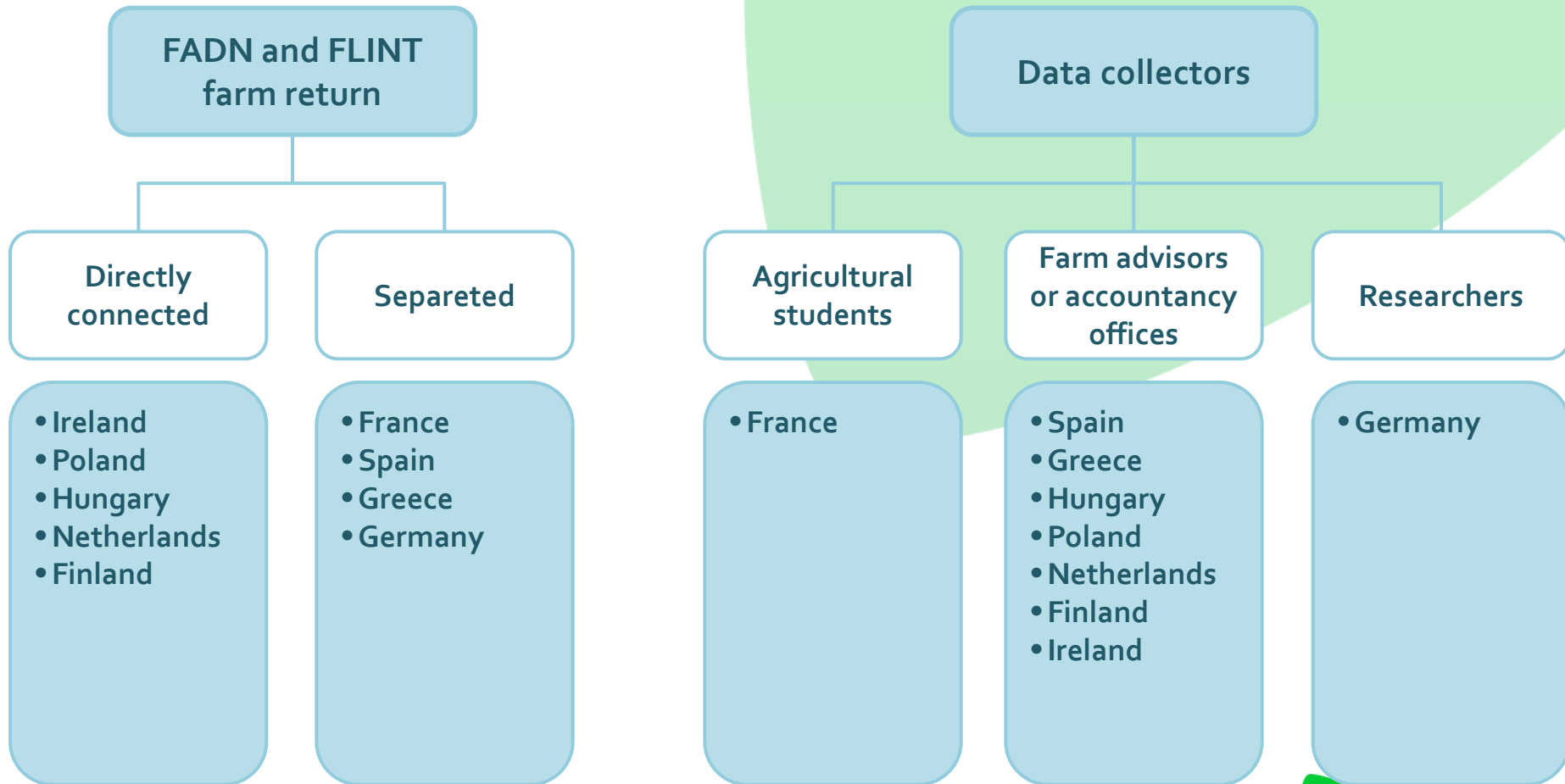
Source: online survey



# Experiences in data collection



# Flint data collection



Source: online survey

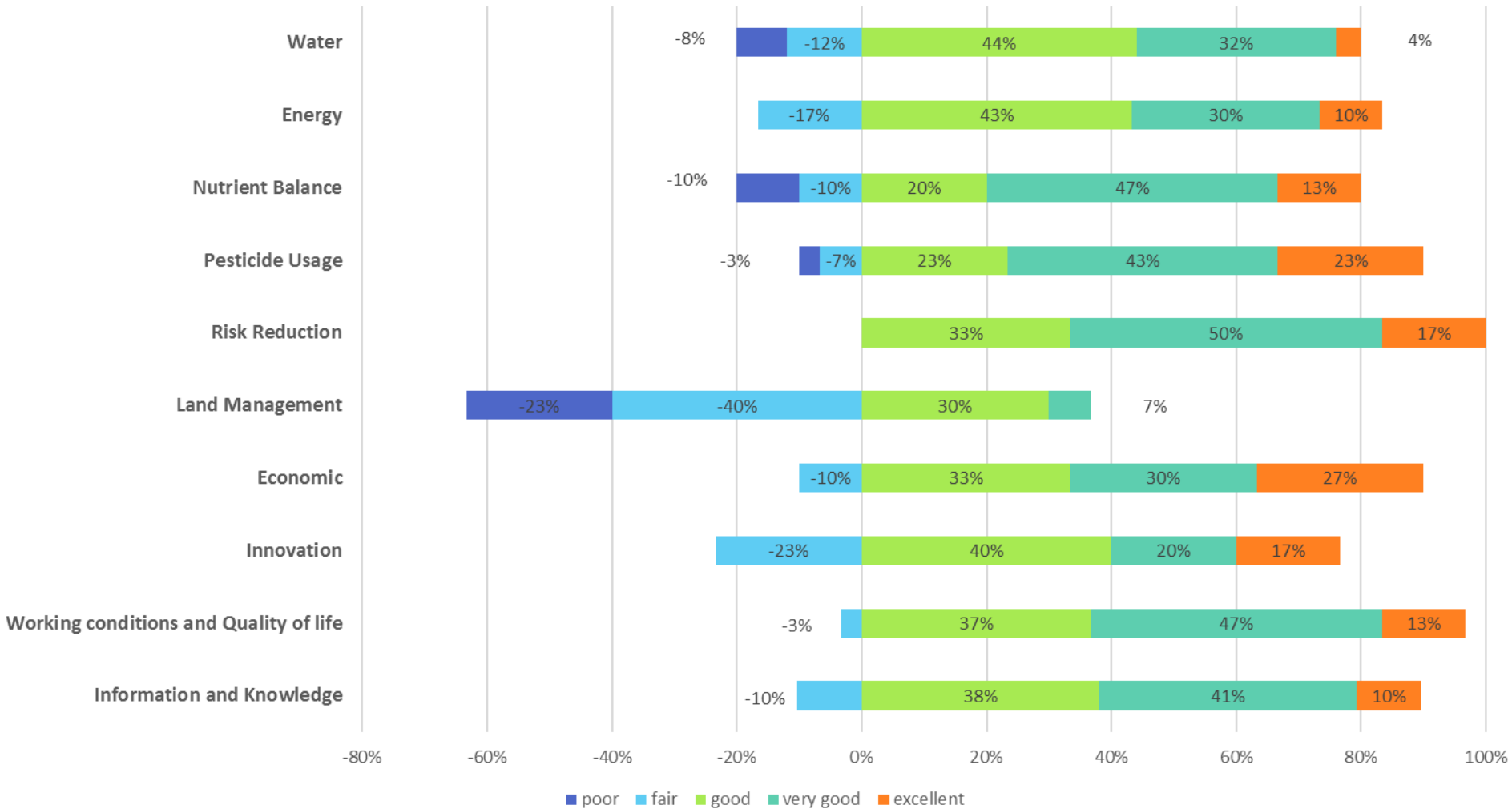
# Sample size and the year of data collection by Member States in the Flint project

	FRA	IRE	ESP	POL	ELL	DEU	HUN	NED	FIN
Sample farms for FLINT	150	65	165	140	110	95	100	150	50
Collected (3/11/2016)	297	64	165*	146	124	52	102	155	49
Accounting year	2014	2014/ 2015	2015	2015	2015	2014/ 2015	2015	2015	2015

\* Partly (25%) FADN missing  
 Source: online survey



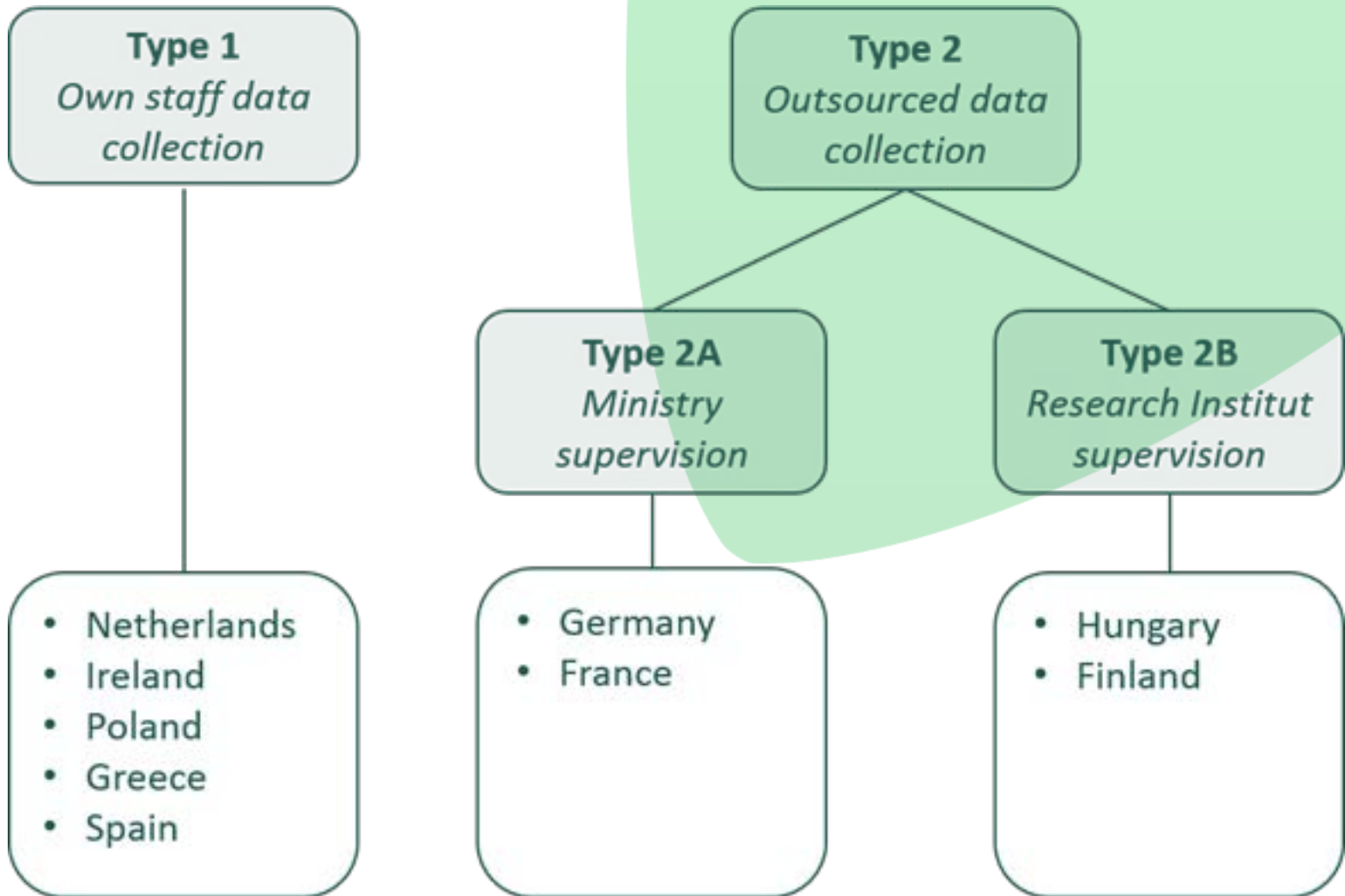
# Feasibility of data collection



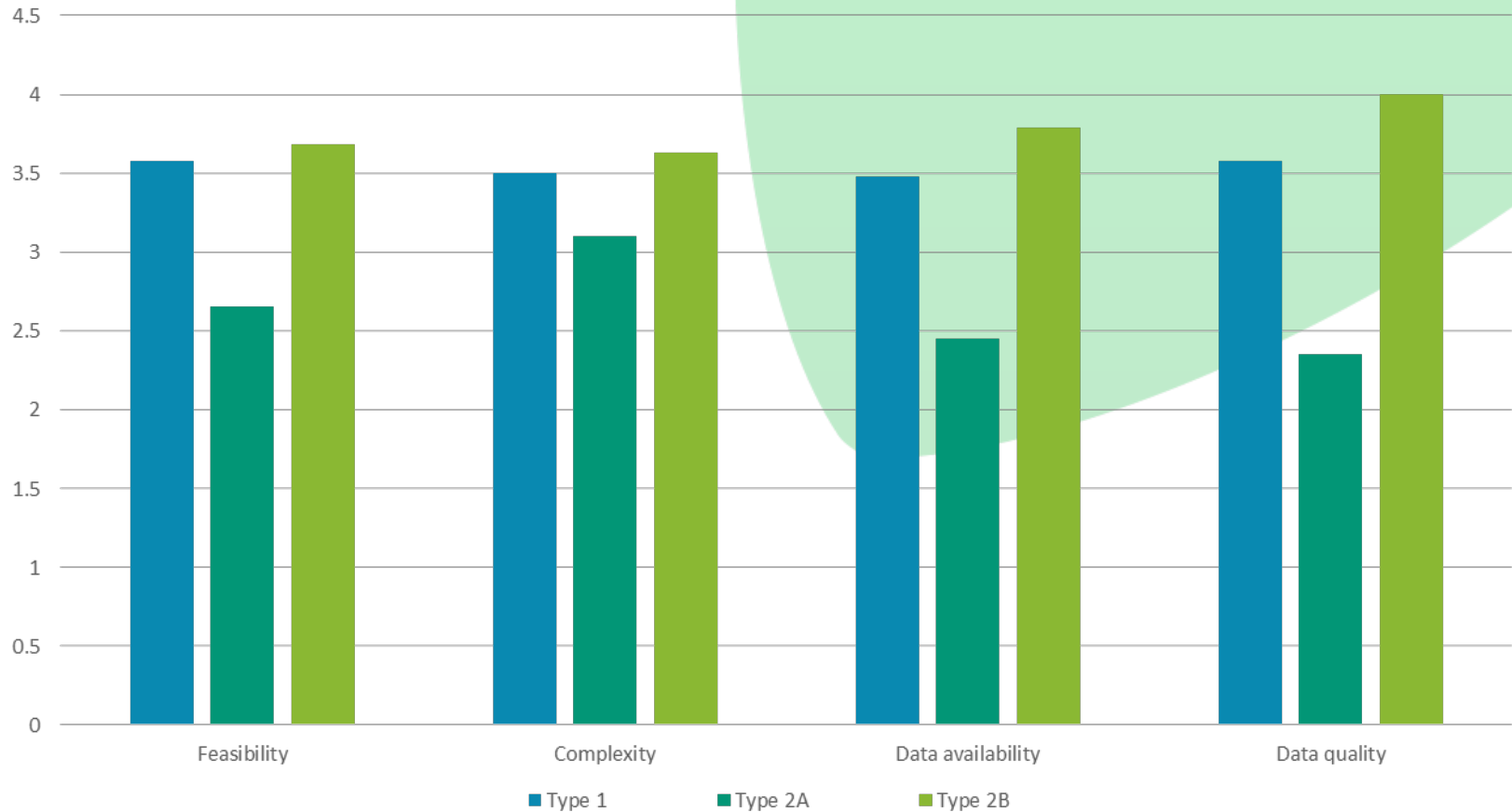
Source: online survey



# FADN data collection systems



# Feasibility of data collection in different administrative environments



Source: online survey



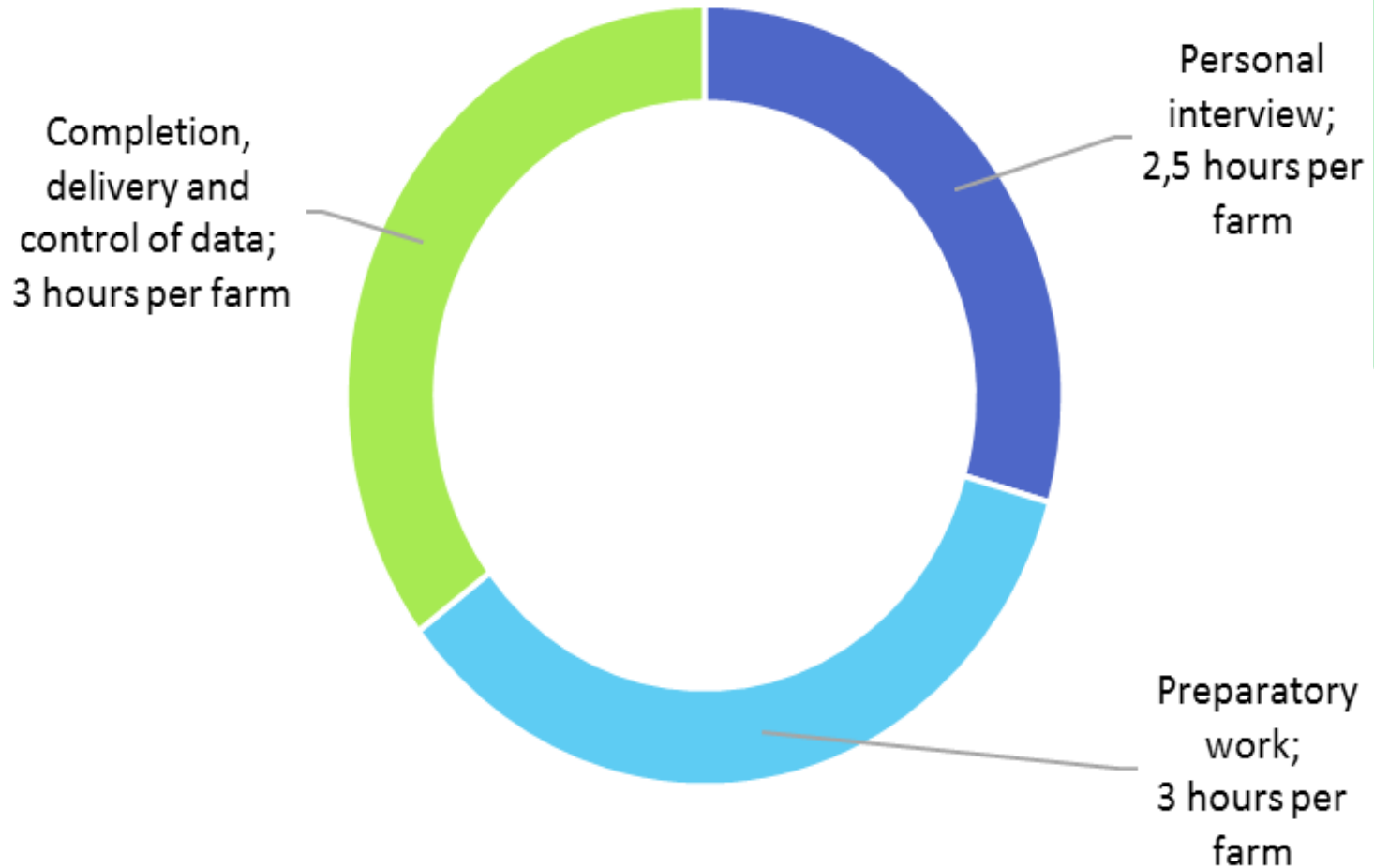
# Cost of data collection



# Incentives for farmers

- No special incentives in 7 Member States
  - good relationship between farmers and data collectors encouraged participation (feedback report)
- Germany (EUR 150-500 per farm)

# Time required for data collection per farm



Source: online survey



# Cost of data collection

- Poland EUR 100 per farm return (data entry not included)
- Spain, Hungary, Finland EUR 300 per farm return

# Experiences (data collection)

- Some countries already collecting more data than required by FADN – experienced
- Many FLINT variables already indirectly available in FADN information flow (eg. quantities on invoices)
  - reduce information collected from farmers
- Knowledge/skill of data collector important
  - Explain how data will be used
  - Explore where data may be already available
  - Ensure quality of data collected

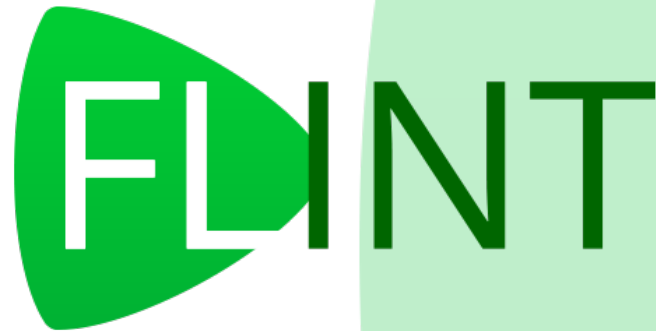


# Experiences (farmer participation)

- Relationship with normal data collector important for participation
- Perceived importance & awareness of sustainability varies by country
  - Impact on willingness to participate
- Some variables are 'threatening' or 'private' – country specific
  - Reconsider in recommendations, skip or explain.

# Experiences (overall)

- Data collectors attitude changed from hesitant to more enthusiastic
- Collection of new data always causes some initial problems and need for adaptation –
  - Despite reviews and prior testing, still some issues need to explained more clearly
- However, first year collection of sustainability data seems far less complicated than first year FADN data collection
- Collection in scope of FADN provides advantages in terms of farmer participation and quality assurance



## Farm level indicators for new topics in policy evaluation

Recommendations for the future

Hans Vrolijk,  
Wageningen Economic Research, The Netherlands

199<sup>th</sup> FADN Committee, Brussels, November 2016



# Content

- Feedback from the previous meeting
- Pacioli discussion
- Meetings with ministries
- Most promising scenarios

# Starting from a wide set of Scenarios for the future

Budget/workload	Data collection on full FADN	New variables on a sub sample of FADN farms	Reduced FADN sample for old and new variables	Reduced frequency of some variables (once every X year)	Alternative farm level data collection system
Scope of data collection					
No change in data collection					
Extension of FADN with new data with fully integrated data collection					
Extension of FADN with additional data on same farms but separately collected					
Separate environmental network with fully separated data collection					

# Additional data collection for national purposes

- Succession
- Water usage
- Information on livestock housing to calculate manure applications
- Pesticide usage and nutrient balance
- Use of fertilizer amounts
- Education and training
- Advisory service
- Ownership management
- Market outlet
- Greening
- Insurance
- Amounts of feedstuffs for animals
- Energy (types, quantity)
- Household economics, private consumption, taxes paid
- Soil type
- Energy use
- GHG calculation
- More detailed variables than FADN (e.g. crop categories, animal categories)

# Bottlenecks additional data collection

## Costs

- Who will pay for extra work
- Costly changes in software

## Reaction farmers

- A burden for farmers to answer the questions
- Many farmers available for FADN selection. More sensitive questions could endanger this
- Farmers do not want to give additional data (e.g. fertilizer used)

## Knowledge & resources

- Skills and education of data collectors
- Data collector needs deep knowledge in a number of areas.
- Not enough resources (data collectors)

## Other

- Political support
- Sample is not chosen for the purpose of environmental and social indicators
- New selection of farms to represent wider topics

# Findings groups discussions

- Everything is feasible, but at which costs
  - In terms of budget
  - In terms of burden on farmers
- Most discussion on social indicators
  - Qualitative nature, frequency of collection, expertise of data collectors
- Implications for knowledge and training of data collectors
- Support for sub sample approach
- Costs is the major limitation
- Potential to strengthen FADN
- No large differences between different organisations models of FADN



# Consequences (Pacioli workshop)

- Users
  - Increases the value of the FADN Data; Large possibilities for analyses because of the combination with FADN data
  - Environmental indicators very important for politicians and public
  - Implications focus of FADN (social aspects small farms, environmental aspects large farms)
- Data collector perspective
  - Stimulate interoperability and exchange of info between databases (especially in less experienced countries)
  - Co-ordination between fadn-fss sample
  - Digital by default, once only
- IT perspective
  - Lot of home built systems. Possibilities for cooperation. Opportunities for cooperation with modular design and open source principles

# Meetings with national Ministries

- Common feeling that there is a need for sustainability data. Some ad-hoc data collection takes place
- Having an integrated dataset would be crucial for policy analysis (even it is not optimal for certain aspects)
- Monitoring costs are limited compared to subsidy payments
- Diverse opinions on decreasing FADN sample size based on starting situation. Broad support for sub sample
- Agricultural policy is mainly EU policy, monitoring needs are also at EU level
- In case out-sourced data collection, incentives should be clear
- Data collection (and exchange of data) affected by privacy laws in a country
- Willingness of farmers is important, interest of farmers differs between countries
- Make use of existing data where possible, also strengthen legal framework
- The environmental indicators as defined by the flint project are all relevant. For social indicators farm succession is an important issue.

# Discussion: Promising scenarios

<p><b>FLINT 2: policy research infrastructure</b></p> <p><i>Project like FLINT with all 28 countries</i></p> <p><i>Flexibility at country level No need for change in legislation Could act fast</i></p>	<p><b>FADN sub sample</b></p> <p><i>Collection of FLINT data on a subsample of FADN farms in each country</i></p> <p><i>Needs a change of legislation Affects representativity at lower levels Two different systems</i></p>
<p><b>FADN full sample</b></p> <p><i>Collection of FADN and FLINT variables on all farms (on less farms than now)</i></p> <p><i>Needs a change of legislation Affects representativity at lower levels</i></p>	<p><b>Frequency of data collection</b></p> <p><b>Collection of FADN and FLINT variables but some variables not every year</b></p> <p><i>Needs a change of legislation Align with FSS years</i></p>