



**Farm Level Indicators for New Topics in policy evaluation**

**Intro and objectives meeting**

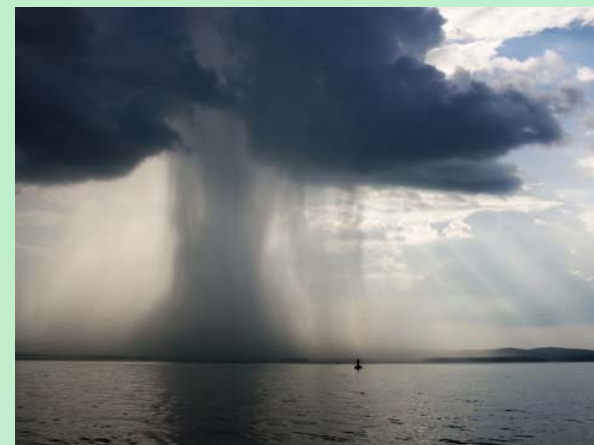
Krijn Poppe

Wageningen Economic Research, The Netherlands

Brussels, November 14. 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



# Farm level indicators for new topics in policy evaluation

Experiences with data collection

**Szilárd Keszthelyi, AKI, Hungary**

FLINT workshop, Brussels, November 14, 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                  |  |  |

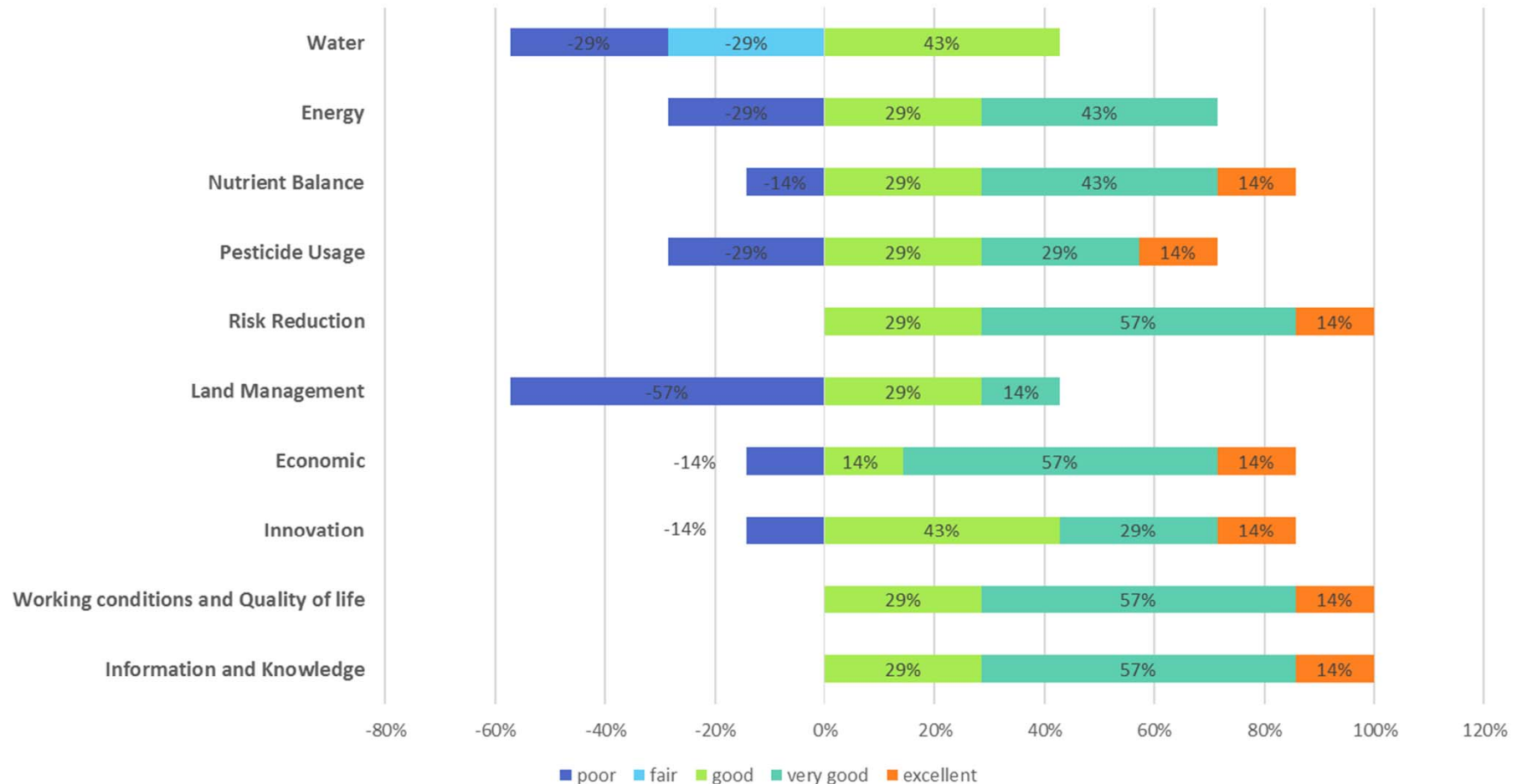
|                      | Ratio of already existing data  | Ratio of personal interview needed  |
|----------------------|---|---|
| Marketing contracts  |    |    |
| Risk reduction       |    |    |
| Pesticide usage      |    |    |
| Livestock (quantity) |    |    |
| Crops (quantity)     |    | 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



Source: online survey



# Assessment of data availability



Source: online survey

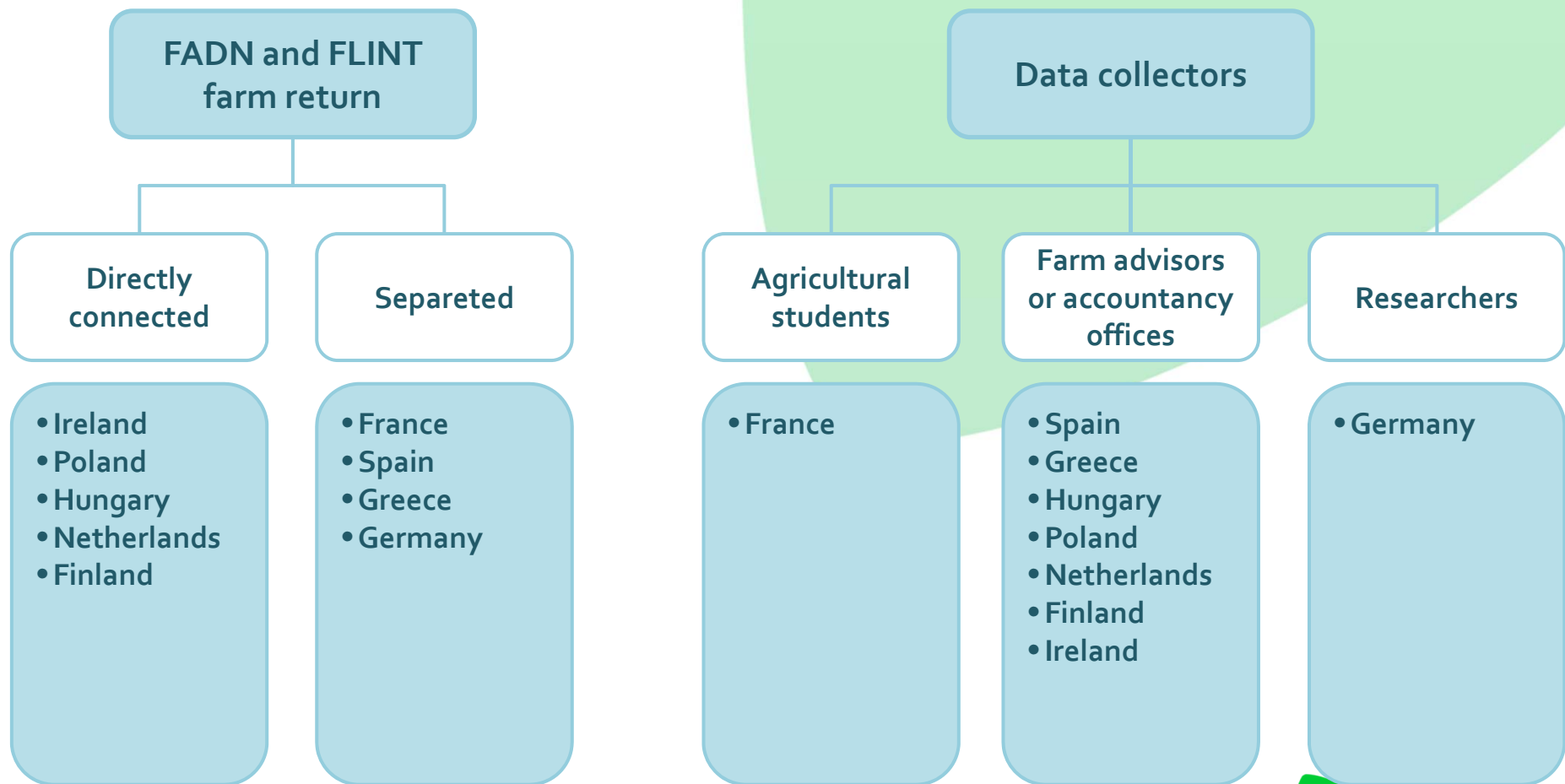




# Experiences in data collection



# Flint data collection



Source: online survey

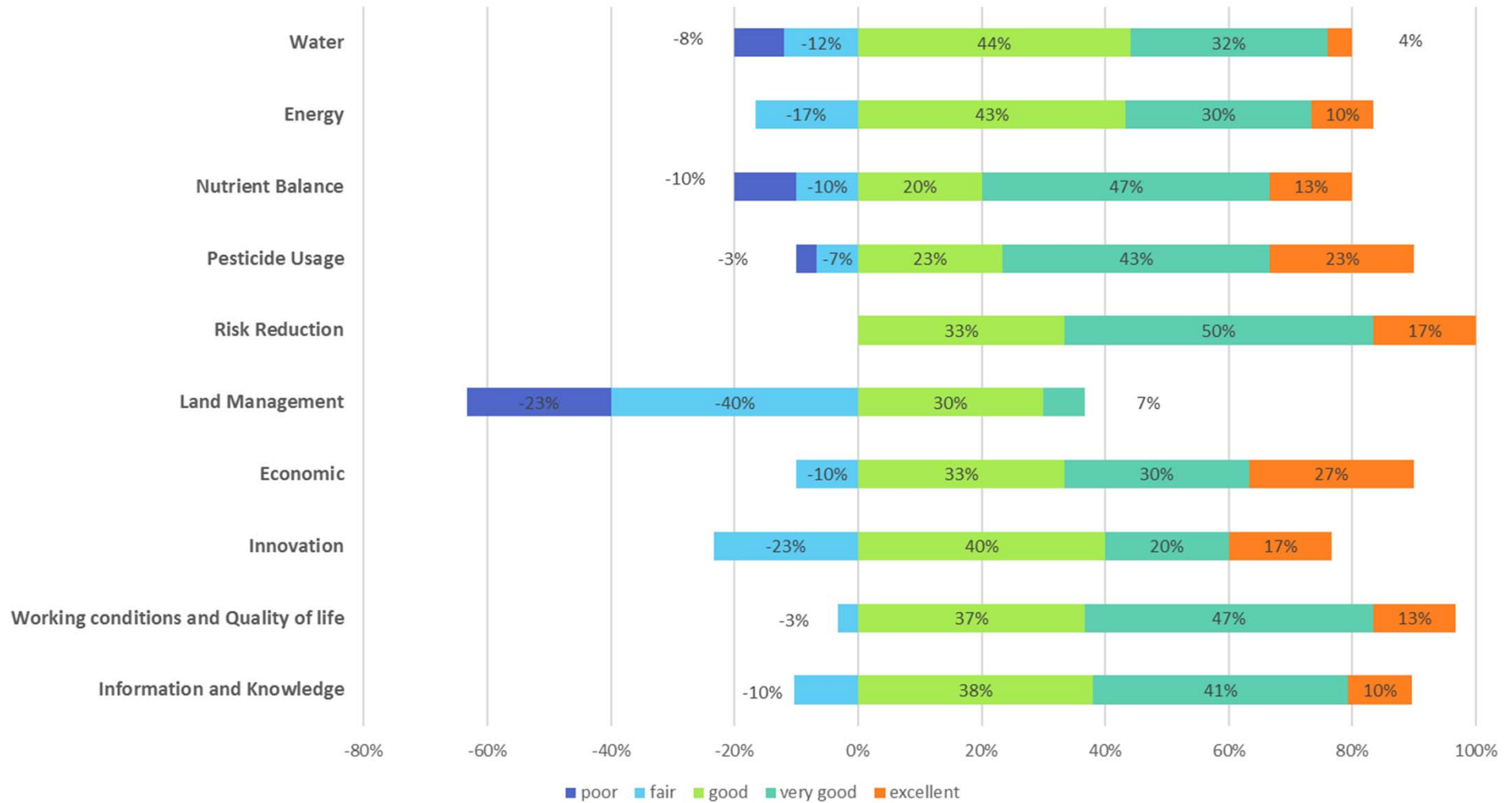
# Sample size and the year of data collection by Member States in the Flint project

|                        | 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/<br>2015 | 2015 | 2015 | 2015 | 2014/<br>2015 | 2015 | 2015 | 2015 |

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



# Feasibility of data collection

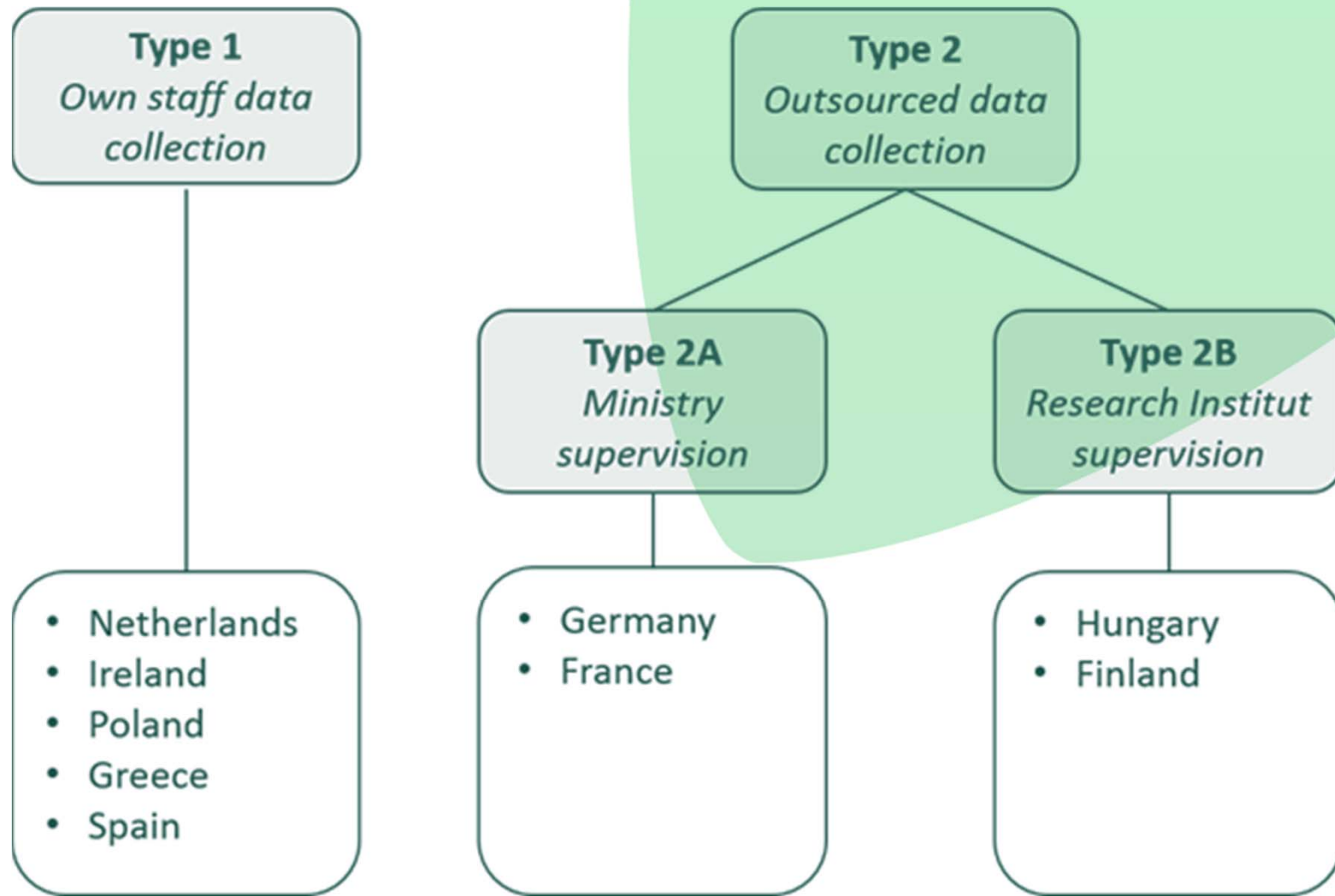


Source: online survey

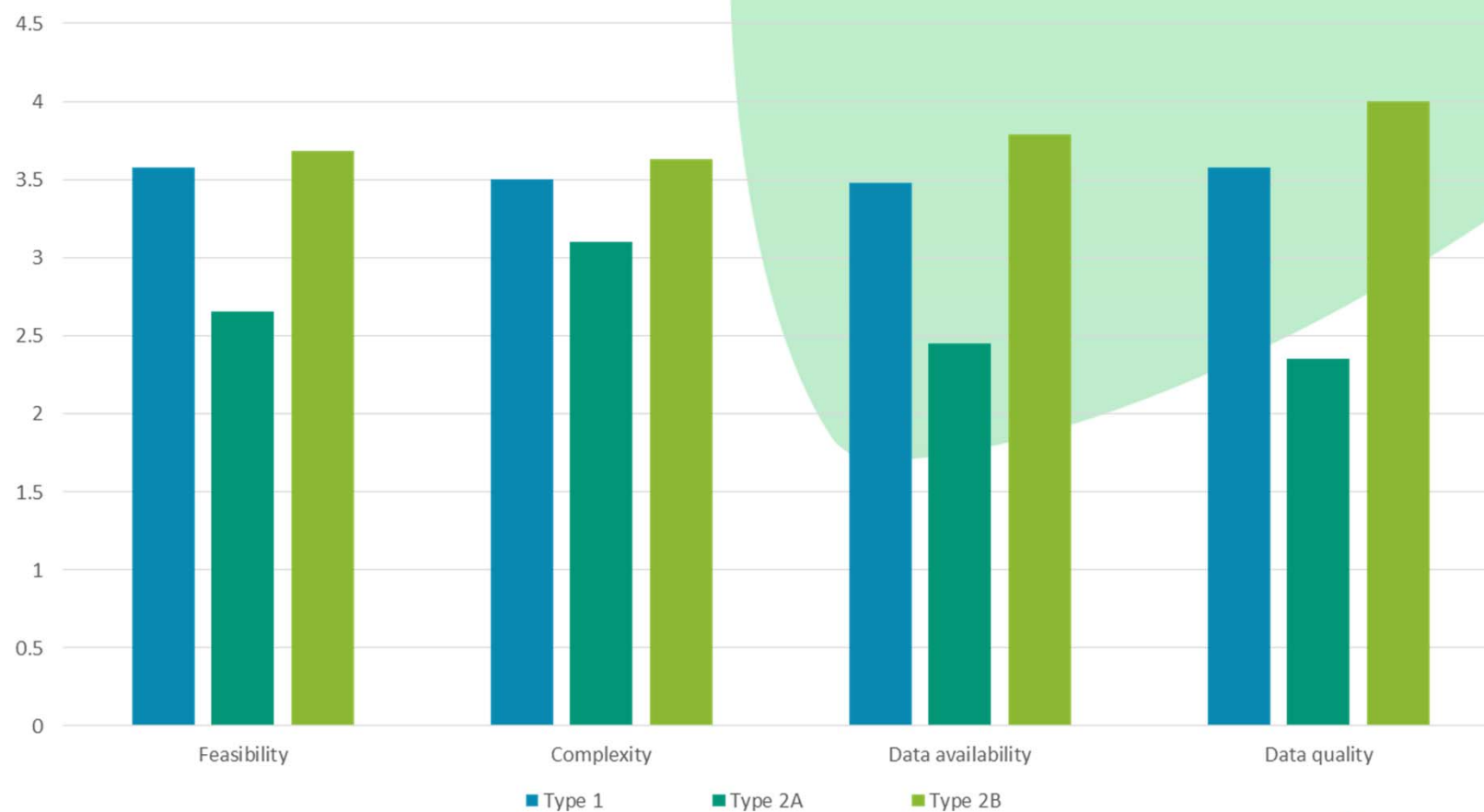




# FADN data collection systems



# Feasibility of data collection in different administrative environments



Source: online survey





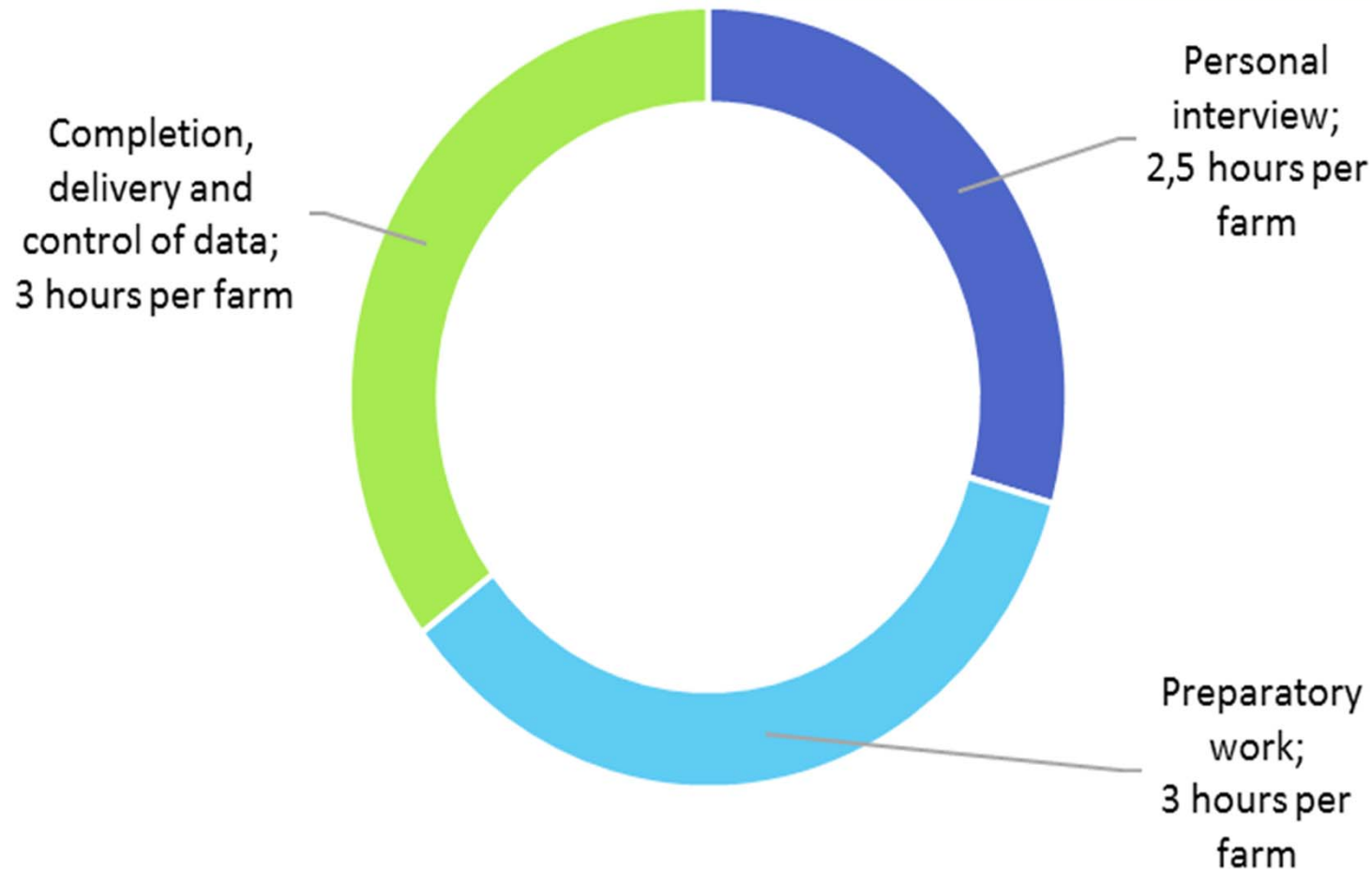
Cost of data collection



# 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

FILINT workshop, Brussels, November 14, 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.



# Future 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<br/>No need for change in legislation<br/>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<br/>Affects representativity at lower levels<br/>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<br/>Affects representativity at lower levels</i></p> | <p><b>Frequency of data collection</b></p> <p><i>Collection of FADN and FLINT variables but some variables not every year</i></p> <p><i>Needs a change of legislation<br/>Align with FSS years</i></p>                               |

