FADN IT systems, feasibility of a unique ID and of a single EU IT-system

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IT-solutions for data collection and submission

Identification and presentation of pros/cons of novel IT systems to facilitate data recording and data submission

- Many national systems contain valid sources of farm-level sustainability data.

- There is no one-size-fits-all technological approach to provide all necessary data. In some cases, there is an overlap in data captured across systems.

- Data collection tools that collect data without significant interventions from the data provider (farmer) are required to reduce the burden in data collection. Some initiatives exist in this field, but most of solutions are not mature.

IT-solutions for data collection and submission

Identification and presentation of pros/cons of novel IT systems to facilitate data recording and data submission

- **FMIS (Farm Management Information Systems) seem to be the most complete systems** that envisage the complementarity of more technologies within one system.

- FMIS Systems are potentially the most versatile tool capable of detecting a considerable amount of sustainable data at the farm level.

- However, current FMIS systems do not sufficiently integrate **automatic recording** and this makes most of them an extra tool in which data needs to be typed in (low added value)

Unique farm ID
Lack of clear understanding of the current situation

- **Data compatibility** approaches and **interoperability between IT systems** have been reported in several Member States (8) but deeper analysis of the situation shows that such compatibility is obtained "manually" (by asking FADN farmers to provide their IACS or IFS ID during data collection by accountants – authorities then request data from IACS or IFS to match these IDs)

- There is only one current initiative (HU) to implement a unique ID across different IT systems; Italy is starting to work on it too

- Past initiatives of improving interoperability (e.g. in FR) have not been positive. In the NL, it has been decided to keep 8 different IDs and establish relationships between datasets

Unique farm ID

Challenges to set-up a unique farm ID at the EU level

The large majority of the interviewees recognise that data analysis could be significantly improved if various datasets containing farm level data are connected/interfaced via a unique Farm ID. However, major challenges exist:

- Need to create a national mandatory registry to list all agricultural holdings ("farms").

- Government public bodies may be reluctant to implement the necessary changes to leverage the unique Farm ID.

Unique farm ID

Challenges to set-up a unique Farm ID at the EU level

Reasons why Government public bodies are reluctant to arrive at a unique farm ID:

- Inability to see the benefit for their organisation. Benefits for FADN/FSDN are well understood for FADN, but less obvious for other DBs
- Potential impacts to administrative processes in places are unknown
- A need to adapt legal texts
- Data sharing and data protection issues need to be faced
- Lack of funding or resources
- Interviewees (mainly LAs) provided multiple examples of technical difficulties, not to create a unique Farm ID but, to assign such ID to a given data set
- There is no governance established at national levels to work across DBs and legal frameworks. Who should initiate the initiative? Who should lead it? Where should resources come from?

Unique farm ID
Preliminary good practices to set-up a unique Farm ID

- **Implement a step-by-step approach**: the unique farm ID should be established at Member State level and implemented in a limited number of DBs (2-3 DBs to be identified). Then a European approach should be considered

- Ensure **effective leadership and vision**

- Carry out a **national legislative review early in the project** as legal changes will be required to implement the unique Farm ID

- **Plan for implementation** as well as **long-term management of the unique farm ID "solution"**

- Implement effective **data governance policies**

Feasibility of one single IT system for data collection and submission

Objectives and background information

- Perform a feasibility study of setting-up a single European FSDN IT system at Member State level

- It is very difficult to arrive to a single IT system between the Member States.

- Great heterogeneity in terms of IT technical solutions between FADN at Member State level

Background information (lessons learned from IT systems analysis)

- Lack of interoperability and compatibility between FADN systems and other relevant systems such as the national IACS, or other IT systems, some of which may have already been adapted to accommodate sustainability data

- Difficulties in establishing a unique farm ID at the EU level

- Infeasible to develop a unique FADN IT system in a short period of time

Feasibility of one single IT system

The best practices which can be seen as models to identify the possible unique FADN/FSDN IT system

➢ In our study, we selected existing FADN systems as "best practice" which can embrace several characteristics

➢ In our analysis we considered two different models: The Netherlands and Italy

- **Why the Netherlands?** The system encompasses a wide variety of data sources; it is interoperable with local data flows, systems and definitions; it employs a flexible, configurable approach.

- **Why Italy?** It is already at an advanced stage in collecting environmental and social variables; it guarantees interoperability with institutional IT systems; it is testing data collection by FMIS.

Feasibility of one single IT system
Challenges to set-up a unique IT-system at the EU level

Setting up one single IT system is not feasible for the time being for the following reasons:

➢ **Technical and methodological challenges** (which reflect the difference in the technical and methodological characteristics of the FADN systems at the national level):

➢ **Political challenges** (which identify the other variable which may impact the situation):

- Uncertainty on a new start; No need for sophisticated system; Lack of skills; Higher workload; High investment cost; Willingness to change the system; Different organisational structure in the Member States; User acceptance on data sharing; Legal restrictions in combining data sources; and Level of maturity of other data sources.

Feasibility of one single IT system
Conclusions

➤ The conclusion of this analysis is: developing a unique FADN/FSDN IT system in a short period of time is not feasible. There are too many differences between countries, also in terms of needs.

➤ Arriving to a unique FADN/FSDN IT system requires deep changes in Member States since agricultural sectors, taxation rules, legal obligations to keep accounts, the use of IT in the agricultural sector and their level of development, and the extent of electronic data exchange differs among them.

Recommendations on IT tools, unique farm ID, and feasibility of unique IT systems

➢ Current FADN IT systems are evolving and while there have been challenges in compatibility with other databases, this has highlighted the opportunity for greater coordination. With the transition to FSDN on the horizon, there is a promising potential for a more harmonised and integrated approach, paving the way for enhanced efficiency in the future.

➢ The development of data collection systems can be resource-intensive, but the introduction of machine sensors and linking farm management logbooks to accounts can facilitate the process.

➢ Despite the challenges, two existing systems – the Dutch system for its flexibility and the Italian GAIA software for its connectivity – can serve as models for future development.