Study and comparison of multi-criteria evaluation methods for farms for EUfarms : European network of Certified organic farms in agreocology

Engineering project summary report (October 2024 – February 2025)

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Context: The EUfarms

Collaborative network of European farmers, created by farmers in 2023, pioneers in organic agroecology, operating on large usable agricultural areas (UAA), through the deployment of a powerful tool for peer learning and sharing, action research programs, and a showcase of organic agroecology practices.

Characteristics of EUfarms farms:

- Organic certified;
- At least 30 ha of UAA;
- At least 2 separate production workshops and one processing unit.

Objectives of the study:

- Compare the many existing multi-criteria assessment methods based on the literature and an application on a farm in the network;
- Make recommendations on the method to be adopted to evaluate the farms in the network, taking into account the objectives and characteristics of the network.

Study approach:

Based on resources provided by EUfarms and an in-depth review of the literature, more than 270 multi-criteria assessment methods were identified and compared. Numerous discussions with the association made it possible to formulate criteria for selecting methods that were interesting and suited to the assessment objectives. The main objectives are first and foremost to promote the characteristics of the EUfarms farms mentioned above, particularly organic farming certification. Other criteria identified are also worth considering:

Ecosystem regeneration
Biodiversity, Soil regeneration, Regenerative hydrology, Agroforestry, Free-range livestock farming, Animal welfare

Financial/economic return
Preservation of added value, Local sales, Diversity of activities (processing), Transferability, Governance, Independence and autonomy

Social return
Job creation, Ability to feed the region, Inclusion of women, Participation in local networks, Creation of social ties, Product accessibility, Working/active time

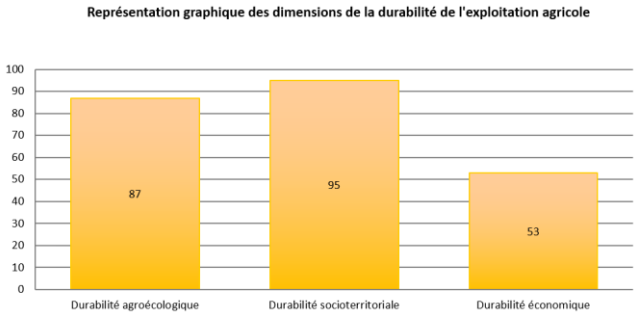
Inspiration
Motivation at work, Knowledge transfer, Reinventing the farm, Hospitality, Passion

Figure 1 - Important criteria for the EUfarms network

Five methods were deemed suitable and were then tested on a farm in the network: **OASIS, IDEA 4, CIVAM Sustainability Assessment, OpenCompass, and TAPE**.

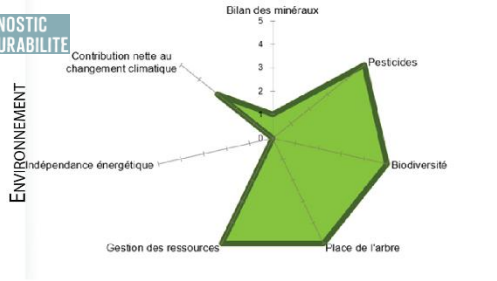
Results and recommendations:

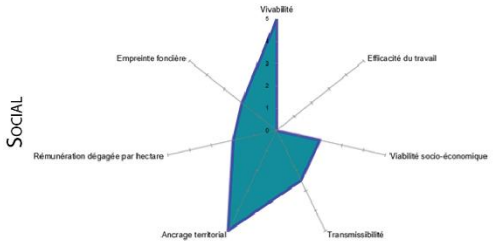
IDEA

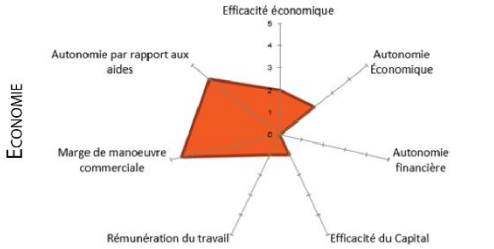


Structure: 3 dimensions→ 13 components→ 53 indicators
Pros: Scientifically approved, open-source, comprehensive, platform for aggregating the results of all assessments
Cons: Difficult to collect certain information, not well suited to multi-structure organizations

DIAGNOSTIC DE DURABILITE

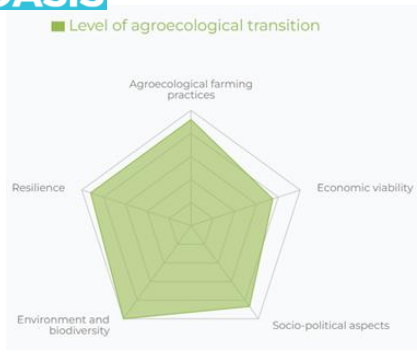






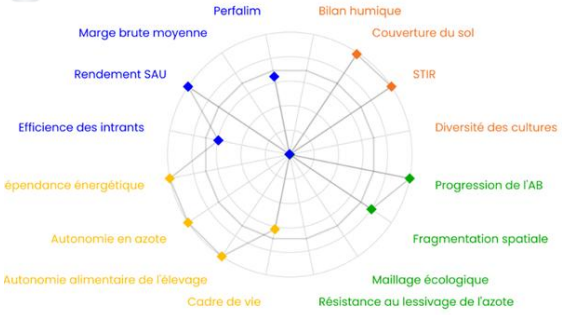
Structure: 3 dimensions→ 7 indicators per dimension
Pros: Easy to use and interpret
Cons: Social dimension based mainly on economic indicators, not well suited to large (and multiple) structures

OASIS



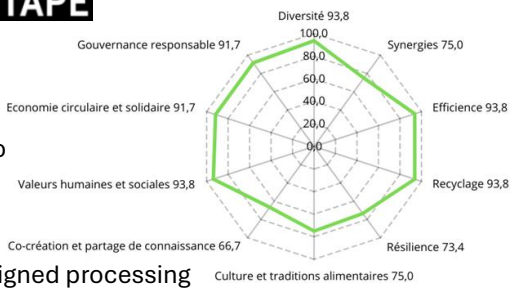
Structure: 5 dimensions→ 13 themes→ 57 criteria
Pros: Scientifically approved, open-source, suited to diversified activities
Cons: need to compare with regional averages, self-reported

Opencompass



Structure: 4 themes→ , 4 indicators per theme
Pros: Easy to interpret, impact calculation
Cons: Not very detailed, does not take economic and social aspects into account

TAPE



Structure: 3 stages→ 10 elements of agroecology with 35 indicators
Pros: Adaptable to diversification, scientifically approved
Cons: No pre-designed processing tool, less suited to the European context, self-declared

Figure 2 - Aggregate outputs of the evaluation methods applied to the study farm and advantages/disadvantages of each, taking into account the network's objectives

A comparison of the methods and their application allows us to draw an initial conclusion. Among the five methods studied, two approaches to multi-criteria assessment stand out: **one focused on measuring the impacts of agricultural operations and the other focused on the trajectory of operations towards agroecology.** The IDEA 4, Sustainability Diagnosis, and Opencompass methods belong more to the former, and the OASIS and TAPE methods to the latter. Next, after comparing the range of criteria taken into account in each of the methods, as well as their ease of use, IDEA 4 and OASIS appear to be the best candidates in their respective approaches in relation to EUfarms' expectations and objectives.

Conclusion and outlook:

The study compared a wide range of multi-criteria assessment methods for farms and provided input for selecting an appropriate method for assessing farms in the EUfarms network, a European network of organic agroecological farms. A scientific committee will meet shortly to make recommendations on the work carried out, after which a decision-making committee will decide on the selected method and an initial sample of 20 farms will be assessed using this method.

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