Background Information

Working Groups - Session I

Source: European Commission , Joint Research Centre, Institute for Environment and Sustainability – Staff working document "Assessing the risk of farmland abandonment in the EU".

The list of the main drivers, the rationale, thresholds and sources proposed hereinafter as background document for the working group session are preliminary results from an ongoing research work carried out by the JRC and an expert panel. They cannot be considered nor as final results or in any circumstances be regarded as stating an official position of the European Commission.

List of main drivers:

1. Farm income under regional average (FNVA/AWU)

- Rationale:

Farmland is typically abandoned as an economic resource when it ceases to generate an income. Although this is not a sole cause, and although it can be triggered by a number of factors (described in/by the other indicators), there is a powerful link.

The farm net value added (FNVA) is used as income indicator. The FNVA measures the amount available for the remuneration of the fixed factors of production (work, land and capital). As such it is the most comparable indicator between MS because the measure is not different whether factors of production are external or family factors. It is usually expressed per farm or per annual working unit (FNVA/AWU).

Farm Net Value Added per Annual Work Unit/ Regional average (and variation over past years)

Result could be weighed by the proportion of other gainful activities since broader non-agricultural income can keep farmers going on.

- Threshold proposed (IRENA):

More than 40% of holdings have a FNAV/AWU below 50% of the regional average

- Data source: FADN (DG AGRI) and FSS (Eurostat)

2. No investment in the farm (yes/no, in the last 3 years)

- Rationale:

Investment behaviour reflects farm dynamism, its adaptation capacity and expectations about the future. New investments are a signal of a medium/long term strategy and can be a proxy of the willingness to continue farm activity.

Percentage of holding with no investment in the last 3 years (yes/no)

- Threshold proposed:

There is risk when the % of holdings with no investments in the last 3 years is above 40%

- Data source: FADN (DG AGRI)

3. Age of farm holder (> 65 years old)

- Rationale:

Some studies highlighted the relationship between farmer's age and landscape changes. In particular, farmland abandonment is more likely to occur when the farmer is old and close to retirement.

Share of farmers >= 65 years old (and variation over past years)

Shall be linked to the farm income and the level of investment. Both criteria are good proxy in succession probability. Retirement age in MS and age for early retirement schemes, older farmers will probably continue (thoughtless activity) since changing activity is much less probable – proposed to keep 65 but give lower priority

- Threshold proposed:

risk exists when more than 40% of holdings are managed by farmers who are 65 years old or more.

- Data source: FSS (Eurostat)

4. Farmer qualification (education/training)

- Rationale:

Education/training and use of advisory services can be assumed as a proxy for the professionalism of the farm, and willingness to invest in terms of human capital and knowledge with a sufficient time horizon. An Inverse correlation exists between the level of education/training and the use of advisory services and risk of land abandonment (but seems not to be linear).

- Education: Max level of education in the household: 1= None and primary; 2= Lower Secondary; 3= Upper secondary; 4= Post-secondary; 5= Degree; 6= PhD. Number of categories to be reduced since there is no need to know if the holder as a Degree or a PhD… It has been argued that a high level of education improves employability and give opportunities outside the agriculture. But on the contrary, higher education could lead to diversification and if we have a farmer with high education level, he/she has probably made the choice to become farmer (more stable).

- Training: 1 if a member of the household has undertaken a professional training course, 0 otherwise.

- Advisory services: 1 if the holding is assisted by a farm advisory, 0 otherwise.

Agreed to lower priority

- Threshold proposed:

(Under research)

- Data source: FSS (?)

5. Remoteness and difficult access

- Rationale:

When farms are influenced by remoteness and difficult access, in any aspect (factual and measurable or subjective) farm land abandonment is likely to occur. When distance grows farmers are more likely to give in. Distance is also a matter of perception and a feeling is hard to capture (survey)

Distance to city centres, available roads and distance to other centres for service for citizens. Proxy: Travel time to reach an urban centre with at least 50 000 inhabitants

- Threshold proposed:

Travel time to reach an urban centre with at least 50 000 inhabitants, (considering travel speed for each category of roads, slope and congestion in cities) is longer than 45 minutes

- Data source: JRC report[1]

6. Size of the farm / average for the same farm type (UAA)

- Rationale:

The size of a farm / parcel refers to its Utilized Agricultural Area (UAA). In general, larger farms can benefit from lower production costs, allow better farming techniques, are more suitable for most of the competitive agricultural practices (use of machinery or a better efficiency in the use of inputs), they are more frequently related to innovation and usually more competitive and viable in economical terms.

- Farm average size (UAA) at municipality level compared by farm type (8 different farm type)to regional average(by farm type).

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[1] Jonard F., Lambotte M., Ramos F., Terres J., Bamps C., 2009. Delimitations of Rural Areas in Europe Using Criteria of Population Density, Remoteness and Land Cover . EUR 23757 EN

Fragmentation has a general negative effect on the farm output and it can simply be stated that, the more fragmented farms are, the more significant is the negative impact on their economical results and, therefore, the risk of FLA is higher.

Average size of farms / average size of parcels (at municipality level) and compared to regional average.

Farm average size (UAA) compared by farm type (8 different farm types)

- Threshold proposed:

40% of holdings have a size that is below 50% of the regional average by farm type

- Data source: FSS 2000

7. Farm enrolment in specific schemes

- Rationale:

It can be argued that the risk of land abandonment is zero or close to zero in the case of presence of a payment which is linked to a commitment to continue farming, or to manage the land in a prescribed manner.

Type of farm commitment to take into consideration: AEM, LFA, Natura 2000 and WFD.

Share of area under one or more farm commitment mentioned above / total UAA

- Threshold:… (?)

- Data source: Natura 2000 database, other AEIs databases, CMEF?

8. Land market (rent pay per ha/ regional average and compared to income)

- Rationale

Increase in land sales and rental prices is generally linked to a high incidence of land transactions which typically signals a high demand for agricultural land and hence a lower risk of land abandonment.

Land sales and land rental prices compared to the agricultural income (or cost of living) in a specific region and fluctuation over a long period of time

To be excluded: high prices (variation) due to real estate land speculation

Co-ownership could be tackled in the rationale even if we have no data available to include this criterion in the sub-indicator

- <u>Threshold proposed</u>:

Risk when 40 % of the holding pay a rent per ha with is lower than 50 % of the regional average

- <u>Data source:</u> FADN, Agricultural prices statistics (Eurostat)

9. Previous trend of FLA (methodology from JRC report)

- <u>Rationale</u>:

Previous trend of farmland abandonment could be a good proxy for assessing the risk for the coming years. If a region has already faced farmland abandonment, it could be argued that the area is more sensitive to this phenomenon. The main weakness of this sub-indicator is that it doesn't consider changes in agricultural policies and agricultural markets. Therefore, it should be linked to other drivers.

Recent farmland abandonment = UAA loss that has not been converted into artificial areas. This non-utilised agricultural land is no longer farmed for economic, social or other reasons, and is not included in the crop rotation system. Because no data is available, this flow includes also the properties purchased to develop private hunting grounds or for leisure and also artificial afforestation.

UAA loss (FSS) in rural areas (municipalities with a population density over 150 inhabitants per km2 or an increase of the population of more than 10% between the two last population censuses (ratio to be adapted to the length of period between the two censuses)).

- <u>Threshold proposed</u>:

As some farmland is also converted in artificial uses in rural areas, only the medium, high and very high level of UAA decrease is considered as farmland abandonment (>100ha/year or >0.6%/year)

This threshold can be adapted to the condition of each Member States taking into account the average size of the municipality.

- <u>Data source:</u> FSS (Eurostat)