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STUDY "UPDATE OF ANALYSIS OF PROSPECTS IN THE SCENAR 2020 STUDY: PREPARING FOR CHANGE"

Analytical Note

This analytical note presents the main findings of the study report as well as the quality assessment established by the steering group.

The study was carried out by ECNC-European Centre for Nature Conservation, Landbouw-Economisch Instituut (LEI) and Leibniz-Zentrum für Agrarlandschaftsforschung e.V (ZALF).

The responsible technical manager was *Sylvain Lhermitte*. The steering group involved active participation from DG AGRI (L.1, L2, L3, L4, L5, G1, H1, H4), ENV, RDT, REGIO and EEA.

1. OBJECTIVES AND SCOPE OF THE STUDY

The objective of the Scenar 2020-II study was to refine and improve the identification of major future trends and driving factors – and the perspectives and challenges resulting from them – provided by the initial Scenar 2020 study (published in December 2006) on the future of European agriculture and the rural world. In this respect the study does not aim at evaluating the impact of potential policy changes but to compare how the agricultural sector might evolve under different, and somewhat extreme, pathways which, to a large, although not full extent, follow the assumptions of the first study.

To reflect elements of the public debate, without prejudging future policy proposals, three policy scenarios are proposed within Scenar 2020-II. The first is a ‘Reference’ scenario, in which reference policy decisions are carried forward in the time period of the study. For illustrative purposes it assumes a 20% reduction of CAP budget in real terms, the implementation of a Single Payment System (SPS) as of 2013, full decoupling, a 30% decrease in direct payments (DP) in nominal terms and a 105% increase of the European Agricultural Fund for Rural Development (EAFRD). Trade agreements are synthetically

represented, e.g. the WTO Agreement is based on the December 2008 Falconer paper. To some extent this reflects similarities with the 'baseline' scenario of the first study.

The second is a 'Conservative CAP' scenario (terminology chosen by the authors), which refers to a situation in which Pillar 1 payments remain higher than currently assumed, and where as a consequence – to achieve a financial balance in the assumed budget for the period – the Pillar 2 payments are commensurably less. This means a 20% reduction of CAP budget in real terms, the continuation of the results of the Health Check (HC) after 2013, a flat rate (regional model) implemented at national level, coupling as HC, and a 15% decrease of direct payments in nominal terms, a reduced (45%) increase of EAFRD. Trade policies are maintained as in the Reference scenario. In other words this scenario keeps the overall level of the budget but changes the balance between pillars.

The third is a 'Liberalisation' scenario, in which all trade-related measures that trade flows of agricultural products are discontinued. The CAP budget is reduced by 75% in real terms, all direct payments and market instruments are removed, and there is a 100% increase of EAFRD.

Like in the previous study extreme scenarios were chosen in order to test what would be the maximum range of impacts the agricultural sector would be faced with over the medium term.

The comparison between scenarios occurs in two steps. The first step is a modelling exercise that analyses the likely outcome of each scenario using simulation models and other quantitative analyses. This is done to understand the range of potential shifts in agricultural production, income and markets which is the first purpose of this study. Where appropriate and necessary, these in-depth scenario analyses are complemented by qualitative analyses and expert judgement. The result is a description about how each scenario is expressed in spatial terms, across the EU-27. This first type of analysis is all of a macro-economic nature, but the rural world is shaped by far more elements that in particular relate to socio-cultural and biophysical conditions. In order to capture the interplay between the possible pathways for change in the economy with the possible adjustment of the other factors that compose the framework of rural life and work in the EU, a second type of analysis is required. The choice made in the two Scenar 2020 studies is to use a 'SWOT' analysis approach – using a regional breakdown of the EU-27 into 857 territorial units. A contrast is made among a series of 'strengths' and 'weaknesses' that can be associated with a group of social and environmental conditions that appear – to a varied degree – at the regional level. For this reason, the phrase 'regional reactions' is used to connote a response that may be expected at the regional level to specific changes in the agricultural economy at the EU level. To better understand the range of regional responses is the second purpose of Scenar 2020.

2. SUMMARY OF MAIN FINDINGS

Overview of changes in the agricultural sector within the European Union

The overall results of the study indicate that structural changes in the agricultural sector, i.e. decline of agricultural contribution to total income and employment, will continue at the national level. In the Reference scenario the process of structural change continues in the near future throughout the EU-27. The share in total income of the agriculture and food processing industries, as well as manufacturing industries, continues to fall until

2020 and the share of services is increasing. Compared with the EU-15, the macro-economic significance of primary agriculture is higher in the EU-12 in the Reference scenario. Therefore, the structural change process is more severe in the EU-12 than in the EU-15 countries. The strong decline in contribution of the agricultural sector in the EU-12 implies that more labour will be released from the agri-food sectors in these countries.

Regions with high shares of agriculture and industries may be vulnerable to this process with regard to employment and income growth, as structural change in the agricultural sector is often characterised by adjustment processes and related costs that have an impact for the economy as a whole. Under these adverse circumstances structural change in these regions leads to lower income and 'hidden unemployment'. Out-migration is another option to suboptimal employment within rural areas generally. Structural change of the agricultural sector is evident across the world, as in all regions the share of agriculture and food processing in the economy is declining.

Land prices play a key part in this adjustment process. They absorb the positive and the negative influences on product (inputs and outputs) prices, as they are the fixed factor in production, in comparison to capital and labour. In the case of a negative development of the ratio of output to input prices, land prices will decrease as well and this enables growing firms to maintain their income from farming.

Generally positive socio-economic performance of EU-27 regions

The dynamics of rural economies have been assessed with regard to two themes: (i) the overall economic dynamics of a region in terms of employment growth and (ii) the relevance of the agricultural sector for the regional economy, again in terms of employment. The general picture of the socio-economic reactions of the EU-27 regions in 2020 is that of rather small changes.

There is no evidence that the EU-27 regions with an above average agricultural employment are generally revealing negative reactions. Hence, it can be emphasised that rurality and agricultural vocation are not a sign of weak development perspectives.

Global dynamics impacting upon agricultural commodities

Outside the EU, growth rates for crop production are lower than for livestock, the latter being driven by an expansion in consumption that corresponds to an increase in GDP per capita in Latin America, Asia and Africa.

In the other high income countries (the non-EU countries of the OECD) agricultural land use decreases a little, while in the developing countries agricultural land expands. The increase in agricultural land use is likely to be highest in those countries where there are still possibilities to expand agricultural land, such as Central and South America (especially Brazil) and Africa. Another factor is the pressure by increased demand from domestic sources (e.g. Africa) or exports (e.g. Central and South America).

With regard to trade, the amount of imported products into the EU grows significantly due to macro-economic growth and the Renewable Energy Directive. The impact of reducing border support under the Falconer proposal on imports is relatively limited. In the case of full liberalisation, exports and especially imports increase substantially.

Macro trends affecting the agricultural labour force in the EU

The agricultural sector in the EU loses its share of gross value added within the economy – along with industry – reinforcing the pre-eminence of services; this trend for the agricultural sector is similar throughout the world and is caused by a limited growth in demand when income increases further in combination with a high productivity growth.

Ongoing structural change in the EU economy leads to adjustments of agricultural labour force, particularly in the new Member States, which maintains the gap of agricultural wages compared with non-agricultural wages; this is accompanied by a decrease in land prices. The decrease in land prices is substantial in the Liberalisation scenario and therefore the land market will have an important buffer function easing the adjustment of production with regard to the other factors of production: capital and labour.

Influence of EU agricultural policies on production and land-use dynamics

Production growth of all agri-food products is limited in the Reference scenario and mainly driven by income and population growth. The major policy impact is the negative impact of reducing import tariffs and the abolition of export subsidies due to the Falconer proposal. A small positive contribution is due to the EU Renewable Energy Directive and all rural development measures. The growth of agri-food production is lowest in the Liberalisation scenario due to abolition of all import protection. The impact of the cut in direct payments is very small in all scenarios.

Production growth of crops (grains, oilseeds, sugar) that can also be used for biofuels is substantial and mainly caused by the positive contribution of the EU Renewable Energy Directive. The composite influence on EU-27 agricultural land use is perceptibly negative, in spite of the strong demand for land coming from the Renewable Energy Directive; agricultural land use is not supported by macro effects in the economy due to high yield growth, and only to a certain extent by rural development measures. In addition, the negative impact of the decrease in direct payments is an important factor of a steep decline in agricultural land use under the Liberalisation scenario.

Commodity market variation according to the scenarios

The evolution of real prices for arable crops is generally negative up to the horizon of 2020 in the Reference scenario, with the exception of soybean, rapeseed and sunflower seed, as the planting of these crops is directly related to the Renewable Energy Directive; with regard to livestock, the liberalising trend affects milk, beef and sheep prices substantially.

There is limited growth in crop production and stable production in livestock, except under full liberalisation, under which poultry and pork production decline a bit; but there is a big drop for beef even with a shift in consumption towards beef because of a change in relative prices for the consumer. Land area sown to non-biofuel and biofuel crops witnesses no strong inflections in either a positive or a negative sense, except that a full liberalisation of biofuels would severely limit the production of ethanol, and this would be mirrored in land requirements.

Farm income evolution and follow-on effect on farm structure

The evolution of farm income, and the follow-on effect on farm structure, is complex. The general situation is the prospect of a slight increase in income from cereals, a substantial increase from oilseeds, a significant loss with regard to other arable crops, a

significant increase for the production of vegetables and permanent crops, and a decrease with respect to all livestock activities. Under full liberalisation, income would be quite negatively impacted across the sector, in comparison with the Reference scenario.

The change of farm numbers that could be expected between 2003 and 2020 is a drop of a third from 11.1 million units to 7.3 million units; this decline is by 25% in the EU-15 and by 40% in the EU-12. The impact on subsectors is unequal, with particular pressure on mixed crop and mixed livestock farms types.

Uneven demographic development across the EU

Uneven development of EU rural areas is confirmed within Scenar 2020-II, following the conclusion of the first Scenar study, as a continuing reality in the time horizon of 2020, especially as this is manifested by a population decrease in Eastern European countries as well as in some northern and southern areas of the EU-27. Nevertheless, of the 358 most rural areas, 145 reveal a positive trend. Altogether, there are only few extremes of growth rates below -1% or above +1% within the EU-27 and almost every Member State has both areas of population growth and immigration as well as those with negative growth rate and likely out-migration.

Stable economic activity in all sectors (independent of the current crisis)

The assessment of the economic dynamics in rural regions is based on the projected employment situation. Here, a cautious interpretation of data series has been undertaken; nevertheless, the appraisal is somehow distorted by the recent economic crisis, which adds uncertainty. The general picture is that small but positive growth rates dominate in the EU-27. This picture remains principally the same when differentiating between the EU-15 and EU-12, although the positive tendencies are somewhat weaker in the new Member States. Similarly, most rural areas are not especially affected by negative employment growth and roughly 80% reveal a stable or positive trend.

There is also no evidence that the EU-27 regions with an above-average agricultural employment are generally revealing negative reactions. Hence, it can be emphasised that rurality and agricultural vocation are not a sign of weak development perspectives.

Unequal quality of life among European regions

Quality of life assessment has been done by aggregating and assessing three indicators for built capital, social capital and natural capital. Altogether, only a small number of regions score really positively with at least two indicators in the upper class. These 20 regions are all located in the EU-15, and 11 belong to the most urban areas, while 9 are either intermediate rural or most rural ones. On the other hand, the lowest scoring, with two or three low ranking indicators, is obtained by 197 regions, 106 of which are located in the EU-12 and 91 in the EU-15. Most rural regions in this class make up roughly 25% of the total, while the most urban group is represented with less than 1/7 in this class.

Unclear environmental net-effects under the Liberalisation scenario

The EU Nitrates Directive (European Commission, 1991) has an effect on farm management, and the decrease in nitrogen surpluses is expected to continue, as modelled at the regional level, reflecting general changes in farm structure; but this legislation can

only mitigate the impact on water quality from intensive livestock production, and impacts locally can be quite severe. Potential conflicts between changing agricultural practices (intensification, land abandonment) and biodiversity preservation are a reason for concern. As regards Natura 2000, the management plans that EU Member States have to put in place for each site should ensure compatible use of the land through farming. However, the abolition of direct support under the Liberalisation scenario is releasing the obligation of keeping land in good agricultural and environmental condition with the effect that quite some agricultural land would be taken out of production, and the combination with reduced market support leads to abandonment of marginal land in particular, accompanied by environmental decline.

With the structural change that can be anticipated, there might be a risk of increase in nitrogen surplus per hectare, because of more intensive livestock management; but the environmental impact from arable production would continue to decrease. Particularly under the Liberalisation scenario, the narrower concentration of production on larger farms could mean greater localised water pollution risks.

Conclusions of the update study: Preparing for Change

The first Scenar 2020 study had as a subtitle: *Understanding Change*. In the two years separating the first study and the current work, many of the underlying conditions are similar, but certainly the economic crisis gives an additional perspective as to the acuteness of the dynamic of change currently at work. Today, understanding change is an insufficient attitude; rather, it is necessary to be actively *Preparing for Change*. This attitude is already witnessed in the CAP reforms carried out at the European level.

This current Scenar 2020 ‘update’ study tests three scenarios of the possible evolution of EU agricultural policy linked to the international market framework. Like the initial study, the current update demonstrates that the differences in CAP and trade policies have more effect on agricultural income and the number of farms than on agricultural production and land use. Land prices and, to a lesser extent, agricultural wages play a key role in absorbing the negative impact of changes in the CAP and trade policy on the agricultural sector and rural areas and contribute to mitigating the fall in production levels. The future pattern of agricultural production in the EU will generally be subject to the international trade policy situation, as well as to purely domestic policies such as the mandated biofuels incorporation into transportation fuel resources. Direct income support is very important for the overall farm income and for the number of farms in the EU-27.

While the analysis of socio-economic perspectives reveals a certain difference between the EU-15 and the EU-12, the clustering of regions by their agricultural structures shows that a north-western and a south-eastern distinction within the EU-27 is coherent. The cross-sectional analysis of the present agri-structural conditions and the future socio-economic perspectives does not support the idea of an alignment between today’s strengths and weaknesses and the future, and also, no theoretical basis exists to back up such linkages. With regard to the environmental risks that are related to the agricultural activities of the Reference scenario, it can be stated that, although they are manifold, none is dominating in spatial terms or with regard to a specific orientation of agricultural production. Further changes in environmental conditions, which the agricultural sector has to deal with in the future, are the opportunities and risks related to climate change. In this study, only a few aspects have been taken into account.

A scenario study demonstrates that it is possible to anticipate the type of restructuring of the agricultural sector that is ineluctable. Considering the agricultural economy at the European scale, there is increasingly a true dichotomy in agricultural systems. On the one hand, there is a trend for specialisation (in open-field arable, horticultural and livestock-rearing/dairy systems); on the other hand, there is the livestock-based system with mixed cropping for fodder system, interlaced with fallow lands tending towards retirement from agricultural use. Both systems are valid and valuable, from a social and an environmental perspective. These trends are long term and geographically identifiable. There are aspects of agricultural land use that can be encouraged by policy instruments at the EU level in order to enhance the environmental contribution of the two types of farming systems.

3. QUALITY JUDGEMENT OF THE STEERING GROUP ON THE STUDY REPORT

The steering group concluded that the analysis in the report is good given the difficulties with availability of data. The study addresses fully the information needs of the commissioning body as expressed in the terms of reference. The study provided a relevant literature review, which set up the context, used up-to-date economic model and went as far as possible in modelling analysis of rural development measures, taking into account the result of the modulation study.

The study provides prospective results on the future of rural areas and agricultural production. The authors highlighted that no scenario study can claim to present what *will* happen, but merely can portray what may happen. What is important afterwards is that these eventualities are debated, and that the necessary choices concerning the future of agriculture and the rural world are as fully informed as possible.

Overall, the quality of the study was judged by the steering group as **good**.

(signed)
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