



Policy Department  
Structural and Cohesion Policies

REFLECTION ON THE POSSIBILITIES  
FOR THE FUTURE DEVELOPMENT OF THE CAP

AGRICULTURE





ЕВРОПЕЙСКИ ПАРЛАМЕНТ    PARLAMENTO EUROPEO    EVROPSKÝ PARLAMENT    EUROPA-PARLAMENTET  
EUROPÄISCHES PARLAMENT    EUROOPA PARLAMENT    ΕΥΡΩΠΑΪΚΟ ΚΟΙΝΟΒΟΥΛΙΟ    EUROPEAN PARLIAMENT  
PARLEMENT EUROPÉEN    PARLAIMINT NA HEORPA    PARLAMENTO EUROPEO    EIROPAS PARLAMENTS  
EUROPOS PARLAMENTAS    EURÓPAI PARLAMENT    IL-PARLAMENT EWROPEW    EUROPEES PARLEMENT  
PARLAMENT EUROPEJSKI    PARLAMENTO EUROPEU    PARLAMENTUL EUROPEAN  
EURÓPSKY PARLAMENT    EVROPSKI PARLAMENT    EUROOPAN PARLAMENTTI    EUROPAPARLAMENTET

**Directorate General for Internal Policies of the Union**

**Policy Department B: Structural and Cohesion Policies**

**AGRICULTURE AND RURAL DEVELOPMENT**

**REFLECTION ON THE POSSIBILITIES FOR THE FUTURE  
DEVELOPMENT OF THE CAP**

**STUDY  
FINAL REPORT**

**IP/B/AGRI/FWC/2006-Lot 01-C01-SC1**

**23/12/2007**

**PE 397.241**

**EN**

This study was requested by the European Parliament's committee on Agriculture and Rural Development.

This paper is published in the following language:

- Original: EN.

The executive summary is published in the following languages:

Project Leader: EuroCARE GmbH

Project Coordinators: Prof Jean Christophe Bureau  
Dr Heinz Peter Witzke

Author(s)<sup>1</sup>: Prof Jean Christophe Bureau (Inst. National Agronomique Paris-Grignon)  
Dr Heinz Peter Witzke (EuroCARE, Bonn)  
Petra Berkhout (Agricultural Economic Institute - LEI, the Hague)  
Dr Alexandre Gohin (INRA, Rennes)  
Prof Thomas Heckeley (Inst. of Food and Resource Economics, U. Bonn)  
Prof Michiel A. Keyzer (Centre for World Food Studies, Amsterdam)  
Prof Werner Kleinhanß (FAL – Inst. of Farm Economics, Braunschweig)  
Prof Alan Matthews (Trinity College, Dublin)  
Dr Max D. Merbis (Centre for World Food Studies, Amsterdam)  
Dr Bettina. Rudloff (Inst. of Food and Resource Economics, U. Bonn)  
Prof Luca Salvatici (Università degli Studi del Molise)

Responsible Official: Mr Albert MASSOT MARTI  
Policy Department B: Structural and Cohesion Policies  
European Parliament  
B-1047 Brussels  
E-mail: ipoldepb@europarl.europa.eu

Manuscript completed in December 2007.

This study is available on the Internet at:

[www.europarl.europa.eu/activities/expert/eStudies.do?language=EN](http://www.europarl.europa.eu/activities/expert/eStudies.do?language=EN)

Brussels, European Parliament, 2007

The opinions expressed in this document are the sole responsibility of the authors and do not necessarily represent the official position of the European Parliament.

Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the publisher is given prior notice and sent a copy.

---

<sup>1</sup> We acknowledge critical comments and helpful suggestions by Floor Brouwer (LEI), Bernard Osterburg (FAL - Inst of rural studies), Heike Nitsch (FAL - Inst of rural studies), and Simon Schlüter (U Bonn).



ЕВРОПЕЙСКИ ПАРЛАМЕНТ    PARLAMENTO EUROPEO    EVROPSKÝ PARLAMENT    EUROPA-PARLAMENTET  
EUROPÄISCHES PARLAMENT    EUROOPA PARLAMENT    ΕΥΡΩΠΑΪΚΟ ΚΟΙΝΟΒΟΥΛΙΟ    EUROPEAN PARLIAMENT  
PARLEMENT EUROPÉEN    PARLAIMINT NA HEORPA    PARLAMENTO EUROPEO    EIROPAS PARLAMENTS  
EUROPOS PARLAMENTAS    EURÓPAI PARLAMENT    IL-PARLAMENT EWROPEW    EUROPEES PARLEMENT  
PARLAMENT EUROPEJSKI    PARLAMENTO EUROPEU    PARLAMENTUL EUROPEAN  
EURÓPSKY PARLAMENT    EVROPSKI PARLAMENT    EUROOPAN PARLAMENTTI    EUROPAPARLAMENTET

**Directorate General for Internal Policies of the Union**

## **Policy Department B: Structural and Cohesion Policies**

### **AGRICULTURE AND RURAL DEVELOPMENT**

# **REFLECTION ON THE POSSIBILITIES FOR THE FUTURE DEVELOPMENT OF THE CAP**

## **STUDY FINAL REPORT**

### **Content:**

The report provides elements of analyses of the Common Agricultural Policy as well as a general assessment and comments on the November 20 2007 Communication of the Commission preparing for the "Health Check" of the Common Agricultural Policy reform. General principles for the future CAP are defined so as to assess the Commission's proposal against a longer term benchmark.

**IP/B/AGRI/FWC/2006-Lot 01-C01-SC1**

**PE 397.241**

**EN**



## Executive summary

On November 20 2007, the Commission circulated its "Communication" to the Council and the European Parliament preparing for the "Health Check" of the CAP reform. The Communication set itself several objectives directed towards particular aspects of the CAP, namely making direct payments more effective, making market price support instruments more relevant and mastering new challenges such as climate change, price fluctuations and water management. The Commission made specific suggestions such as adjusting the Single Farm Payments, reforming the conditionality for Single Farm Payments, limiting the largest payments, increasing modulation, reforming intervention, abolishing land set-aside and phasing out milk quotas. The Commission also proposed to examine measures for managing risks, to provide incentives to assist the development of bio-energy, and to use modulation of the budget devoted to the first pillar to increase rural development funding as well as funding new challenges.

***A rather limited ambition.*** The Health Check is clearly seen by the Commission as a way to adapt the CAP to an evolving set of circumstances over the 2009-2013 period, and not as a broad scoped reform. As a result, the Communication includes suggestions that are often quite technical adjustments. With this limited horizon in mind, our overall conclusion is that the Commission's proposals and suggestions for the Health Check are sound. However, the Communication missed the opportunity to address the longer term challenges that new market environments, institutional changes and domestic pressures raise for the future CAP. It is explicitly considered to be only a "preparatory action" in view of the December 2005 European Council mandate for "a full, wide ranging review covering all aspects of EU spending, including the CAP, and of resources, including the UK rebate, to report in 2008/9". For instance, the issue of the right mix of competences between the EU level and the Member states level is a crucial one and is hardly touched at all. Equally, proposals regarding second pillar measures are unlikely to be adequate either in scope or quality. Nonetheless, the Commission's proposals involve significant as well as desirable changes for the 2009-2013 context. These changes are consistent with a longer term ambition for the CAP since they leave many options open, and even prepare some future reforms.

***Sound proposals.*** Allowing Member States to move towards a flatter rate for Single Farm Payments changes neither the budget nor the main modalities of farm support. However, by making these payments simpler, and by de facto confirming that payments are no longer considered to compensate an individual farmer for past reforms, it paves the way for a different justification for support, directed towards the remuneration of public goods, or as compensation for costs incurred in the generation of positive externalities demanded by consumers and citizens.

The suggestions for simplification of the Single Farm Payment are also welcome from an efficiency point of view as well as in terms of consistency with WTO commitments. Assessments of possible consequences for France and Germany suggest that the shift from a historical reference to a per hectare payment could result in significant transfers between regions and producers for those Member states that had opted for historical references. However, Member states apparently would have full freedom whether to pick up the new opportunity and how to adjust the definition of the regional grid. The Commission also suggests moving to full decoupling in the arable crop sectors for those Member states that have not opted for this possibility. Given the present and expected market conditions in the medium run, this proposal should be supported. There may be a more compelling case for maintaining some coupled support in the livestock sector, where production is joint to non market goods, such as positive

externalities. The flexible approach proposed by the Commission in this area is particularly appropriate, and the case by case basis proposed in the Communication is welcome.

The Commission proposes upper and lower limits on direct payments. Lower limits such as those that are suggested make considerable sense, even though they could have a non-negligible impact in some Member states. There is little point in making "gardeners" eligible for very small payments that cost much more to administer. The upper limit 'illustratively' put forward by the Commission might provide up to €500 million from the first to the second pillar. However this contentious proposal would need to be carefully enforced such that the measure could not be easily circumvented by "paper" adjustments.

The Commission proposals to simplify cross compliance remain vague. Tackling the challenges raised by new market developments for the environment requires a more ambitious policy than the sole simplification suggested in the Communication. Given the risk that new incentives to produce will significantly undermine some of the objectives of the 1999 reform, promoting a more environmentally friendly and multifunctional agriculture is hardly addressed in the proposal. It is true that the various proposals included in the Communication would transfer more than €3.3 billion to second pillar measures. But this is a small amount of money compared to the incentives provided by current market forces (€3 billion is roughly equivalent to the extra revenue generated by a 1 percent increase in agricultural prices).

On market management, the Commission's proposals regarding market intervention are consistent with the shape of any new trade rules likely to emerge from the Doha Round negotiations. The proposal to restrict intervention of cereals to bread wheat is well timed, given that the market situation should make such an adjustment painless, at least in the short run. Neither the dairy quotas nor compulsory set-aside should be maintained. Both instruments were designed to address issues that are no longer relevant, namely controlling surplus production of dairy products and limiting budget expenditures on export refunds. The Commission questions the relevance of the energy crop payment. We could not find compelling motivations for maintaining this payment.

***Some questions nevertheless remain.*** First, there is the question whether there is a need to maintain some limited role for intervention. The analysis of what is known about the future world market situation and the evolution of (multilateral and bilateral) trade agreements both suggest that the EU should be cautious before dismantling all market management instruments. Safety nets, in particular those that provide a floor price, should be maintained, even though they should clearly be designed to cope with extreme circumstances and should in no way lead to the structural intervention that the EU experienced in the 1980s. From that point of view, the Commission's position, i.e. not to dismantle existing provisions in the livestock sector and to maintain intervention for wheat, is welcome.

Second, the soft landing strategy for phasing out dairy quotas needs to be clarified. An efficient quota expansion strategy should favour an increase in production in the most competitive regions, either through the allocation rules or some additional tradability. The envisaged relaxation of superlevy rules is another option to facilitate controlled expansion in the most competitive regions.

Third, the possible negative consequences for biodiversity and the environment in general arising from the proposed ending of compulsory set-aside needs to be taken more seriously. The Commission suggests that locally targeted rural development measures would be a solution. However, on this issue as in several other cases, second pillar measures are presented as solving problems in a way that is rather vague and not always compelling. This may overlook the urgency of compensating action for those areas which have accumulated considerable ecological value while being set-aside for many years.



*New challenges.* The Commission proposes to address new challenges, in particular managing risk, tackling climate change, water management and biodiversity. "Rural Development" measures are presented as the best way to meet these goals. In some cases, targeted second pillar measures indeed seem the appropriate response, in particular in the area of water; in other cases one has the impression that the competences of the second pillar are enlarged without a clear long-term vision.

As far as risk management is concerned, the Commission rightly states that as long as some market intervention is maintained (see above), the need for a broad scoped system of risk management at the EU level has not been demonstrated. The example of the United States insurance program suggests that it is better to think twice before implementing a system that could become costly, inefficient and very difficult to dismantle because of the vested interests created. Producers can now access a broad range of instruments to cope with risk. Futures markets and derivatives, index based insurance schemes and a global market for reinsurance can now alleviate some of the main historical limitations of private mechanisms (i.e. their failure in case of hidden information, moral hazard and covariate risk). Government intervention clearly has a role to play. But beyond catastrophies, epizooties and other particular hazards, the need for more ambitious publically-funded crop or revenue risk management schemes would need to be more clearly documented.

In the protection of biodiversity as well as the prevention of nitrate pollution, EU directives have proved to be useful instruments. The EU has obtained considerable power in these cases relative to Member States. It is unclear whether local rural development measures would have achieved more effective results. The appropriate allocation of competences has to consider several aspects including economies and diseconomies of scale in administration, regional preferences, and relative strength of lobby groups at various political levels.

This last issue of the relative roles for the Member states and the EU level in the future CAP has been considered to clearly fall outside the mandate of the Health Check Communication. However, this results in the lack of a clear guideline for future reforms with significant consequences for financial issues. On this aspect, the Commission's Communication carefully remains within the existing financial framework, only suggesting that the financial discipline mechanism (i.e. a reduction of direct payments when meeting a certain budget constraint) could apply during the 2008-2013 period. There is no attempt to gain some leverage in the coming budget debate by outlining some longer term reforms, such as the extension of the co-financing principle to the first pillar expenditure.



## Acronyms

<b>GDP</b>	Gross Domestic Product
<b>SFP</b>	Single Farm Payment
<b>EAGGF</b>	European Agricultural Guarantee and Guidance Fund
<b>CAP</b>	Common Agricultural Policy
<b>ERDF</b>	European Regional Development Fund
<b>EU</b>	European Union
<b>WTO</b>	World Trade Organization
<b>UK</b>	United Kingdom
<b>EEA</b>	European Environmental Agency
<b>NGO</b>	Non Governmental Organisations
<b>SMR</b>	Statutory Management Requirement
<b>GAEC</b>	Good Agricultural and Environmental Conditions
<b>AEM</b>	Agri-Environmental Measure
<b>LFA</b>	Less Favoured Area
<b>R&amp;D</b>	Research and Development
<b>AMS</b>	Aggregate Measure of Support
<b>IEEP</b>	Institute for European Environmental Policy
<b>EAFRD</b>	European Agricultural Fund for Rural Development



## List of tables

<b>Table 3.1. Distribution of direct payments beneficiaries by payment class, EU-25, 2005</b>	<b>28</b>
<b>Table 3.2. Distribution of direct payments by payment class, EU-25, 2005, €000</b>	<b>28</b>
<b>Table 3.3. Impacts of the capping proposal in EU25 Member States</b>	<b>29</b>
<b>Table 3.4. Impacts on EU raw milk production and prices in quota removal scenarios</b>	<b>33</b>

## List of figures

<b>Figure 1. Total of unpaid fallow land and set-aside in EU15 countries</b>	<b>32</b>
<b>Figure A1. The oil price at which energy use of agricultural products becomes competitive</b>	<b>65</b>
<b>Figure A2. A closer link between crude oil and prices (source Schmidhuber 2007a)</b>	<b>67</b>
<b>Figure A3. A looser correlation during the recent months</b>	<b>67</b>
<b>Figure A4. Distribution of entitlement (levels) in Germany – full implementation of milk market reform</b>	<b>69</b>
<b>Figure A5. Change of entitlement levels under the German dynamic hybrid model</b>	<b>70</b>
<b>Figure A6. Impacts of premium cuts from Modulation/Digression in EU-15</b>	<b>71</b>
<b>Figure A7. Partial effects of increasing Modulation/Digression compared to 5% Modulation</b>	<b>72</b>



# Contents

<b>Executive summary</b>	iii
<b>Acronyms</b>	vii
<b>List of tables</b>	ix
<b>List of figures</b>	ix
<b>Introduction</b>	1
<b>1. Background</b>	1
1.1. Issues with the current CAP	1
1.2. The context for a change in agricultural policies	9
<b>2. Post 2013 objectives for the CAP</b>	15
2.1. Competences in a reformed CAP	15
2.2. A pro-competitive policy	18
2.3. Future orientation for market management	21
2.4. Long-run roles for direct payments and second pillar measures	22
2.5. EU trade policy	23
<b>3. The Commission's Communication</b>	25
3.1. Reforming the Single Farm Payments	25
3.2. Market management	30
3.3. Risk and price fluctuations management	37
3.4. Environmental and rural development policy	43
3.5. Climate change mitigation and agro-fuels	47
3.6. Financial issues	48
<b>4. Conclusion</b>	53
<b>Bibliography</b>	55
<b>Annexes</b>	63
<b>Annex 1:</b> A synthesis of the information available on future world markets	63
<b>Annex 2:</b> Will there be a "natural floor price in the future?"	65
<b>Annex 3:</b> The impact of a regional flat rate in Germany and France	69
<b>Annex 4:</b> Financial impact analysis of modulation and digressive capping	71
<b>Annex 5:</b> Financial instruments to cope with price variability	73





## Introduction

In 2005 the Commission announced a review of the CAP (Health Check) to be undertaken at the end of 2007. It was the compromise needed to end a sharp disagreement between France and UK on the future of the CAP, with France wanting to keep the prevailing budget allocation in place until 2013, the end of the financing period, while the UK favored reallocation away from agriculture, in favor of research, technology, science and development. In the end, it was agreed that the CAP would continue receiving most of its funding as before but that in 2007 a review procedure would be started from which interim adjustments of the CAP could result, to reinforce the earlier reforms on decoupling and to leave sufficient time for formulating a new policy package to be implemented from 2013 onwards. The issuing of this Health Check report in November 2007<sup>2</sup> offers a good opportunity to assess the status of EU agriculture, a patient with a long history as a user of CAP-treatment. Typical questions are then: How strong is the patient? How well did past CAP cures work and what were their side effects, such as possible addiction to subsidies? What are the health risks for the future? How good was the doctor? What are the chances of reducing the patient's reliance on medicine?

Regarding strengths, European agriculture has until now been able to maintain an impressive record as an agricultural producer and exporter, particularly of high value commodities that builds on an exceptionally strong resource base: favorable climate, good soils combined with an advanced knowledge base, dense infrastructure networks leading to cities and ports. At the same time, some of the Member states face limits on intensification but others, particularly the newer ones, have significant room to increase productivity, enabling the EU to respond with great vitality to the expected rise in demand worldwide for agricultural produce. Most importantly, the EU is endowed with a diverse, accessible and attractive countryside, rich in landscapes and history, which greatly contributes to the quality of life also of the urban population. These valuable commons deserve and require active preservation, partly through conservation measures, partly through financial contribution from visitors and taxpayers.

Regarding weaknesses and risks for the future, a first point to note is that major parts of the agricultural sector are benefiting from subsidies of an increasingly decoupled nature, and import protection also remains important. This support has discouraged efficiency-improving adjustments. It has misdirected investments and put a strain on the EU's external relationships. In addition, the policies have proved ineffective in containing environmental pollution, and, while agriculture can in principle contribute in a major way to the preservation and further development of rural amenities, the systems to reward contributions in this domain are still highly deficient. Furthermore, the rural development measures transferring income to poorer regions particularly have proven to be relatively ineffective, particularly in new member states, whose rural sectors need dedicated development assistance rather than the flat area payments that make rural communities dependent on external support. This list is definitely not exhaustive but it is long enough to illustrate that the CAP-treatment has many undesirable side-effects, many of which are being acknowledged in the Health Check document.

The present paper reviews the Health Check document against this background. It notes that the Commission is proposing technical adjustment<sup>3</sup> of the CAP (simplification of area payments

---

<sup>2</sup> Communication from the Commission to the Council and the European Parliament. Preparing for the "Health Check" of the CAP Reform. Document COM(2007)722 dated 20 November 2007.

<sup>3</sup> In several speeches, Commissioner Fischer-Boel made it clear that in her view the "Health Check" was limited in scope, the aim of which is to adapt the CAP to an evolving set of circumstances over the period 2008 - 2013.

and further decoupling) while reconfirming the need to tackle future problems such as climate change and intensified use of biofuels. However, the Communication refrains from making substantive suggestions for the CAP after 2013. Hence, it focuses on the details of current CAP-prescriptions, mainly suggesting some changes in dosage, while continuing to monitor the patient. In Part 1 of this report, we summarize what are the main problems with the current CAP that have persisted in spite of fifteen years of ambitious reforms. We then discuss the new context for the CAP, including the deep changes in the world market environment and the new demands from EU citizens and consumers. This allows us to formulate some general guidelines for desirable policy reforms in Part 2. In Part 3, we comment more specifically on the November 2007 "Communication" of the Commission regarding the Health Check. Part 4 concludes.

# 1. Background

## 1.1. *Issues with the current CAP*

Since 1992, successive reforms of the CAP have followed a consistent path. Major disequilibria have been solved, including the market imbalance for cereals. The "compensatory" direct payments as well as the gradual pace of reforms have made the transition relatively smooth from a social standpoint. The CAP has become more oriented towards the second pillar, i.e. rural development and environmental issues, and the progressive reallocation of the budget now begins to better reflect the willingness of EU citizens to support a "multifunctional" agriculture. While the budget devoted to agricultural policy has remained large, reforms have reduced some of the expenditures that brought relatively fewer benefits to producers for each euro spent by taxpayers, such as storage costs and export refunds. Production is no longer driven by prices that were the results of political compromises, but is more oriented towards demand. The shift away from price support towards direct payments transferred the burden from the consumer to the taxpayer, which overall had a positive distributive impact.

There is little doubt that the orientation of the recent reforms was the "right" direction. The only serious alternative proposal to the orientation taken in 1992 would have been a generalization of supply control, which was the option taken for the dairy sector in 1984. There were compelling reasons not to follow this path, hardly compatible with the move towards a more open EU that was demanded by third countries and with a competitive agricultural sector.

If there is little reason to question the overall orientation of past reforms, there are still reasons for EU citizens to be dissatisfied with the reformed CAP. From an economic standpoint, the main criticisms that can be made to the current policy are the following:

- ***The costs of the CAP.*** While the CAP barely exceeds 0.4 percent of the EU GDP, it still represents more than one third of the EU budget. Administrative costs fall on national institutions and those on farmers must also be accounted for.
- ***Inefficiencies have persisted.*** The "old" CAP had a poor record as far as transfer efficiency is concerned. With the reformed CAP, a larger share of the money spent reaches farmers. However, there are still some significant leakages of support through administrative costs as well as pass-through to asset owners.
- ***The degradation of environment.*** Over-utilization of water, reduction of biodiversity, and contamination by chemical substances of soils and water affect many regions. There is little doubt that the past CAP played a role in this poor environmental record. Measures have now been taken to encourage the role of agriculture as a provider of positive externalities and to counteract negative externalities in a more effective way. However, they have a mixed record while new market developments could roll back most of these efforts by providing incentives to produce more and more intensively.
- ***Worrying trends in the "productivity" area.*** In the reformed CAP, there is a remarkable lack of ambition regarding policies that might boost productivity, a key issue in the new market environment for agriculture in a globalised world. This is particularly troubling since studies on Total Factor Productivity in selected EU countries show a worrying slowdown. When compared to the changes observed in Brazil or even in the US, this is a matter of concern.
- ***A fading justification.*** The rationale of payments as "compensation" for changes in past policies might be seen as an implicit contract with farmers in return for reforms. However,

the decrease in support price mostly took place in 1992 and 1999. With each passing year it is becoming more difficult to explain to European taxpayers why agriculture is still entitled to such payments, particularly in an environment of rising market prices.

- ***Distributive effects.*** Consistent with this "compensation" logic, the largest share of the CAP payments go to larger farmers, often in the most fertile areas, given the regional or historical references used for granting Single Farm Payments (SFP). The distribution of these payments is therefore highly uneven. This makes the issue of the fairness of public support more acute, and raises the question of the re-definition of the objectives of the CAP.
- ***International relations.*** With recent reforms the EU has prepared itself well for a future World Trade Organisation (WTO) agreement. However, high agricultural tariffs as well as particular forms of support continue to be a stumbling block on the way to a new agreement.
- ***Political economy issues.*** The modalities for calculating national contributions to the EU budget must be redefined. The uneven benefits of the CAP across member states make the debate on agricultural policy reform more complex, because of the tight link established between the "rebates", the allocation of structural funds and the reform of the CAP by some Member states.

In the next section, we focus on these aspects that remain matters of concerns for the CAP. These motives of dissatisfaction with the CAP provide the background for the assessment of proposed reforms.

### 1.1.1. The cost effectiveness of the reformed CAP

***The costs of the CAP.*** Within the financial perspective for 2007-2013, the sum of the budgets for agriculture, rural development and environment (i.e. the item Preservation and Management of Natural Resources) represents 43 percent of the total commitments (i.e. 371 billion euros out of 864 billions). The regulation of agricultural markets and direct payments still represent 81 percent of this subtotal (i.e. 293 billions). That is, the CAP, in its narrow definition, still absorbs one third of the EU budget. One can argue that it is somewhat unfair to compare the cost of what remains one of the few policies funded at the EU level to the total EU budget. In addition, the CAP budget was kept largely constant while the EU moved from 15 members to 27. However, the cost of the CAP remains an important issue between Member states. The latter directly contribute to the EU budget but they also bear the cost of co-funding and most of the administrative and management costs. It is often pointed out that, because of the ceiling on the overall EU budget, money spent for the CAP could be allocated with greater social benefits to other policies, including research, technology and infrastructures that are, arguably, more central to the objectives of the Lisbon agenda.

Large direct transfers from taxpayers have replaced transfers from consumers that were provided by market price support. The CAP now imposes a much smaller burden on the downstream sector and to the final consumer than it used to do. However, price support is still significant in some areas where intervention and administrative prices are still active under "normal" market conditions (dairy, sugar), or where high tariffs maintain domestic prices structurally higher than world prices (fruits and vegetables, beef, ethanol, etc.). In 2006, market price support still represented roughly half of transfers to producers, according to OECD calculations, and the "Consumer Support Equivalent", that measures the increase that farm policies cause to prices paid by the downstream sector, was around 20 percent. This suggests that there are areas where taxpayers and consumers still experienced a high cost in spite of the reforms.

**Leakages of the CAP transfers.** A large share of the EU agricultural budget is now devoted to direct payments. Compared to the structure of the spending that was in place in the 1980s, where storage costs and export refunds represented the bulk of the EAAGF expenditures, more of the taxpayers' money now increase reaches producers.

However, the income transfer efficiency of direct payments is less convincing if we take active farmers as the population group that should be supported. When an input is inelastic, payments to producers are often passed to the input supplier through an increase in price. In the particular case of land, quota rights or premium rights, the capitalization of the payments in the asset "land" or "entitlement" is such that a large share of the support is passed to the asset owner.<sup>4</sup>

This kind of pass-through of farm support to asset owners is a significant loss to the farming sector in countries like Slovakia and Hungary, where farmland is rented to a large degree. It is also the case in EU-15 countries such as France and Germany where about half of farmland is rented. Even in countries where farmers own most of the land they cultivate (Poland, Italy, Greece), the leakage has a negative impact on structural change since the most dynamic farmers are typically younger while land ownership is typically concentrated in older rural households. Leakage outside the farm sector also occurs with inter-generational transfers of assets.

The transfer efficiency of the CAP may have improved over the years, but some transaction costs have persisted. The administrative costs of CAP payments are high, in particular in the case of some second pillar measures that require inspection and control.

### 1.1.2. Puzzling productivity trends

Recent studies suggest that gains in total factor productivity of EU agriculture have slowed down over the recent period (see Butault, 2006; Newman and Matthews, 2007). Productivity remains the long term determinant of prices and incomes and any sustained gap in productivity growth between the EU and other countries results in a degradation of competitiveness and the trade balance. It is unclear to what extent the EU productivity slowdown is caused by the recent CAP reforms. Productivity figures might reflect the sluggish adjustment in inputs to policies that have provided disincentives to increase output, such as the recent decoupling of direct payments. This might therefore be only a short term effect. But the observed trends may also reflect a decreasing rate of technical change.

Since 1992, successive reforms of the CAP have taken place in a context of surplus. Even though more market exposure led to some pressure for innovation and efficiency gains, the CAP reforms have had a production limiting bias. Typically, direct payments were conditional on production limitation conditions. The shift of support towards decoupled payments may have reduced the pressure for producing more without providing the right pressure to reduce inputs such as equipment, at least in the short run. The payments themselves have an ambiguous effect on productivity. By providing financial security, they alleviate some of the credit constraints that reduce the adoption of innovation. On the other hand, they also seem to delay exit of ageing farmers (Gohin et al, 2001; Baum et al, 2006). It has even been suggested that they might have a negative impact on the restructuring of production structures in the new Member states (Ciaian and Swinnen, 2007). Pressure from consumers has led to restrictions on inputs and production methods, while the increasing complexity of CAP requirements led to an administrative burden.

---

<sup>4</sup> Payments to farmers do not all capitalize in land prices. In particular, there are countries where a market for entitlements is quite separate to the market for land. Whether the value of the Single Payment is capitalised into the value of land depends crucially on the ratio of the number of entitlements to the number of hectares of agricultural land, as well as on the payment model (historic, regional or hybrid) in place (Isermeyer 2003; Kilian and Salhofer 2007).

All these phenomena are possible explanations for what seems to be a gap in productivity gains between the EU and other countries.

The "old CAP" had a mixed record in boosting productivity. It has been argued that the high rate of technical change that took place in EU agriculture in the 1970s and 1980s was due more to macroeconomic conditions than it was due to agricultural policy instruments (Mahé and Ortalo-Magné 2001). The budget devoted to structural policy (i.e. the "guidance" section of the European Agricultural Guidance and Guarantee Fund (EAGGF)) has always remained limited. High guaranteed prices, together with national input subsidies, have been shown to lead to some over investment in equipment (Butault et al., 1991). However, the past fifteen years of CAP reform have focused on balancing supply and demand, on income support and on promoting non conventional outputs (multifunctionality). It is hard to find instruments in the "new CAP" that specifically contribute to an increase in productivity.

### 1.1.3. A poor environmental record

While pollution due to agriculture remains limited compared to other sectors, agriculture is the main source of particular types of pollution, such as water pollution. In many EU countries, it is also one of the main sources of the destruction of biodiversity, as demonstrated by the dramatic fall in the bird population (BirdLife 2004, 2005). The use of increasingly scarce water for irrigation is becoming a problem in some regions. The issue of pesticides is a source of particular concern given that they are now present in most rivers and groundwater, in many cases at levels beyond the recommended maximum levels (EEA, 2005).

The responsibility of the CAP for the poor environmental record of the agricultural sector is subject to controversy. However, there is little doubt that public policies have encouraged negative externalities. In the past, high prices have provided incentives to use larger amounts of fertilizers and pesticides.<sup>5</sup> Ill-defined direct payments have encouraged the reduction of permanent grassland and the irrigation of some arable crops. Subsidies to land consolidation, drainage or irrigation have made things worse, contributing to the destruction of habitats such as wetlands (ECA 2000).

The reformed CAP has not fully managed to reverse these incentives in spite of repeatedly stated objectives. The 1992/1999 reforms have not led to visible diminution of the negative externalities over the 1990s. In the 2000s, the consumption of fertilizers has gone down, but oil prices might have more to do with this trend than recent CAP reforms, and in 2007 the trends seem to have reversed. The 2003 reform has introduced eco-conditionality as part of cross-compliance, but it is too early to observe significant changes.

The agri-environmental schemes have been presented as a powerful way to curb the negative environmental impacts of the CAP since 1992. After more than 10 years of implementation, the various assessments suggest a mixed record. For the "broad" schemes, it has proven difficult to establish a positive environmental effect. This can partly be accounted for by a lack of suitable baseline and impact data, partly by the fact that the objectives have been set too broad, making it difficult to assess their effectiveness. For the "deep and narrow" schemes, the evaluations of the effects are more compelling. Often, the schemes that attracted contractors were those with relatively lenient terms of reference. As Dupraz and Pech (2007) put it: "Measures that appeal

<sup>5</sup> There is a widespread belief, fueled by non governmental organizations, that the increased use of chemical inputs is a response to lower prices. This makes no economic sense. Indeed, basic production economics as well as empirical observation suggests that when the output price is higher, producers increase the use of an input such as fertilizer, even though its marginal productivity decreases, so as to meet a basic condition that the marginal revenue generated by this input (which increases with the output prices) matches the marginal cost.

most to farmers are measures that are least ambitious". It is very difficult to tailor the measures to individual situations and schemes are based on assumptions about average costs and income foregone to calculate the appropriate compensation. The farmers who have subscribed are mainly those who had a low opportunity cost of implementing the environmental efforts. These are also the farms where the environmental benefits were limited. This may compromise the environmental value for money of the payments (Potter, 2002). A point of criticism is that those schemes that aim to reduce the negative externalities, like pollution with pesticides or nitrates, conflict with the polluter pays principle (Bonnieux, 2007). Finally, one should realize that the costs of implementation and monitoring of these schemes are often high (Falconer and Whitby, 2000). Overall, the record of the first generation of agri-environmental schemes is mixed (Box 1.).

The limited ability of second pillar measures to curb the negative effects of the CAP is worrying given the major threats from the new market environment. Because of the prospect of higher agricultural prices, more land is likely to be put in cultivation. The incentives to produce agro-fuels and the higher prices for agricultural products will undermine conservation efforts and increase intensification.

### **Box 1. Evaluations of agri-environmental measures.**

Assessing the environmental results of these schemes is difficult. This is due to a range of factors: lack of appropriate data, lack of time (for some schemes it will take several years to materialize the goals) or lack of effort, and by the large variety of objectives and measures financed.

The majority of agri-environmental programmes concentrated on improved landscape and wildlife management (Buller, 2000). Relatively few agri-environmental schemes were directly concerned with reducing farming pollution. There is a strong spatial concentration within a small number of states. Agri-environmental programs cover more than 70 percent of the agricultural land in Austria, Finland or Luxembourg. Agri-environmental payments represent 40 percent of direct payments to farmers in Austria. But the areas covered are very limited in Greece, Italy and Spain, and small farmers in some of the new Member states face difficulties to enter these programs.

Evaluations suggest that agricultural land entered into an agreement – at least for five years – has been protected from unwanted extensification, afforestation or abandonment (Buller, 2000). Evaluations available at national level of a number of targeted schemes show that these schemes have a demonstrably positive effect (Baldock et al, 2002), including on the local economy (CJC, 2002). However, these local evaluations also show questionable impact as far as particular targets such as biodiversity are concerned (van Huylbroeck and Whitby 1999; EEA, 2006; Kleijn and Sutherland, 2003; Primdahl et al, 2003, Carey et al, 2002). Large scale programs such as the French support to extensive livestock production have mainly been a way to compensate farmers for painful decisions regarding the level of income support in other areas. Many programs have led to windfall payments without changing farm practices (Barbut and Baschet, 2005). The European Court of Auditors has been particularly critical of measures that lacked a well defined objective. The overview by the European Commission of the impacts of agri-environmental measures, based on a selection of mid-term Rural Development reports (covering the period 2000 – 2003) is overall rather inconclusive as far as the impacts of agri-environmental measures are concerned (European Commission 2005). It is too early to assess the impact of cross compliance measures that have been implemented since 2006.

#### **1.1.4. Questions on the distributive aspects of the new CAP**

The uneven distribution of the CAP benefits, which was made more apparent with the shift towards direct payments, has undermined support from EU citizens for an ambitious CAP. Well-publicized cases of wealthy aristocrats or large corporations receiving direct payments help to turn the public opinion against the CAP, in particular in the United Kingdom (UK). Figures on the direct payments (which have become more important than market price support) show that the 880 largest beneficiaries, i.e. 0.02% of EU farms, received more than 500K euros, i.e. 2.5% of the payments. At the other end of the distribution, more than 50% of the beneficiaries, i.e. 2.5 millions farms, received less than 1250 euros. Between farmers themselves, some new fractures have appeared. The decoupling of the payments has made the "have and have not" distinction more apparent.

#### **1.1.5. Other criticisms**

The CAP faces other criticisms. In some cases, they seem misplaced. Indeed, there is little evidence supporting the idea that the CAP is responsible for less safe food, or for the large economic effects of epizooties, as it is sometimes claimed in the media. The evidence is also thin that the CAP is an obstacle to the economic development of third world countries. Clearly, the EU export refunds have resulted in significant distortions of competition on some markets in some particular countries, as pointed out by non governmental organisations. They have caused important problems to local producers (beef in western Africa, dairy in Jamaica, India or Kenya, etc.). However, it has been shown that the complete elimination of EU export refunds would have little impact on world prices and that EU refunds benefited urban populations (Bouët et al 2005; Panagaryia, 2006). Criticism that high agricultural protection has prevented poor countries from benefiting from their comparative advantages in agriculture seems exaggerated (Bureau et al 2006). Indeed, exports from the poorest countries face few tariff barriers, even though EU agricultural protection hurts emerging economies. The combination of the Generalised System of Preferences and the Cotonou Agreement provide generous access to the EU market for African, Caribbean, Central American, Andean and Pacific countries, while the Everything But Arms initiative provides duty free treatment to the 50 poorest countries regardless of their location.

In some other cases, the criticisms of the CAP are more relevant. This is particularly the case of the high complexity of some of the CAP provisions. Because of their lack of transparency, the protection system for fruits and vegetables, the additional duties for agricultural components of imports of processed products, the management of tariff rate quotas, or the calculation of export refunds for non Annex 1 (i.e. processed) products are complex. The administrative requirements of direct payments as well as second pillar payments are costly. There is a strong demand for the simplification of the CAP from EU farmers and EU taxpayers but also from third countries especially as far as trade instruments are concerned.

The motives for dissatisfaction that have been pointed out in the above sections suggest directions for reforming the CAP. One should nevertheless take into account a series of factors that have changed the general environment in which such a reform takes place.



## 1.2. *The context for a change in agricultural policies*

The general context for the CAP reforms since 1992 was the one of excess EU production, in an international environment characterised by low or sluggish world prices. Both the cost of disposing of surpluses and pressures from foreign countries for the EU to end its policies that depressed world prices were crucial in helping reform efforts to bear fruit. The Health Check takes place in a set of very different circumstances. World markets now seem characterized by steadier prices. There are pressures to meet a growing demand rather than for the EU to limit its production. Internal pressures are now likely to be the main driving force for future reforms. The EU is now much larger and has gained some areas with major production potential. Non agricultural producers want to access freer external markets and sometimes see agriculture as an obstacle to trade agreements. Some concerns from citizens and consumers are putting pressure for more regulation in the areas of food safety, environment and ethical issues.

### 1.2.1. **Prospects for world markets**

According to most institutions that specialize in market analysis, the recent trend of high world price for agricultural commodities is likely to last at least for several years, even though the very high prices observed in 2007 are unlikely to be the rule. There is, however, no certainty and in the longer run the situation is largely unknown.

*Future prices?* World prices in 2006-2007 have been influenced by the rapid growth in income in some emerging economies. Changes in consumption patterns in Asia have changed the prospects for agricultural markets. With US corn exports falling towards zero because of the growth in demand for ethanol, there are effects on a variety of markets through substitution effects.

However, the growth rates of world demand are projected to fall due to the progressive saturation of per capita intake in income augmenting countries, and to the slowdown in population growth worldwide. While growth in Africa could lead to a larger demand on world markets, Schmidhuber (2007a) points out that in China consumers already have about 3000 kcals/day and 50 kg of meat per year at their disposal at less than US\$1000 nominal income per year. Long term FAO projections suggest that the growth rates of world demand will fall from 2.2. percent per annum in the 1990s to 1.4 percent over the 2015-2030 period, and then probably to 0.9 percent after 2030.

In addition, markets are such that opposite forces quickly react to a situation of high prices. The shift towards a more animal protein oriented diet in China or India will slow down if the price of meat increases. More people in developed countries will chose to reduce their meat intake. The production of agro-fuels that drives prices up will be limited by the very high prices of starch and vegetable oil products leading to a reduction in the comparative advantage of producing agro-fuels. At some point, those agro-fuels whose production costs increase with the price of foodstuffs will price themselves out of the market (Schmidhuber 2007a,b). In the immediate future, there are reserves of land that are not used or used extensively, that could be turned into more intensive animal production. The EU-27 could cultivate some 8 percent more land in 2008 compared to 2007 as a response to high prices (in particular because of the elimination of compulsory set-aside) and 3 to 5 million hectares in land presently under the US conservation reserve program could quickly come back into production. Technical change has long been induced by prices and more efficient ways to produce proteins and calories will appear.

However, there are reasons to believe that we are experiencing a reversal of the secular trend of decreasing agricultural prices rather than a short term bubble. In spite of many uncertainties

there is a high probability that prices will remain steady in the medium run. This aspect is developed in Appendix 1, where we attempt to synthesise the information available so as to assess the prospects for future prices. There are areas such as Australia where the fertility of overexploited soils is decreasing. So is water availability in many countries, including the Middle East and parts of the United States. All the institutions involved in market outlook forecasting seem to predict significantly higher prices for the next 10 years compared to the past decade. While production will increase, it is unlikely to grow at a rate that exceeds that of demand resulting from higher income in Asia and South America. Indicators suggest that the next few years could see a significant income expansion in some African countries too. In addition, the potential use of land for energy production could provide an implicit floor price for some starch and oilseeds products. While the US dollar might fall further compared to the Euro in the next few years, one can expect a reversal of this trend in the longer run that would add to pressures for higher farm prices in Europe.

Such prospects would introduce a new environment for the CAP itself and deeply alter the economic and political logic of future reforms. Indeed, most market support and border instruments would become non operant or meaningless except in structurally importing sectors with tariffs. Direct payments to commercial agriculture would lose any remaining part of legitimacy. However, these new conditions would provide new justifications for government interventions. For example, high prices could boost demand for land and threaten conservation and environmental programs, requiring more ambitious conservation policies than the present ones. The burden of high food prices could become serious even within the EU, and require new poverty alleviation mechanisms.

### 1.2.2. International commitments

*WTO constraints.* The reform of the CAP cannot ignore the set of international agreements signed by the EU and should anticipate the conclusion of ongoing negotiations. The General Agreement on Tariffs and Trade, and in particular the 1994 Agreement on Agriculture, binds the definition of agricultural policies. Clearly, a shift towards higher intervention prices, as requested by some farmers' organizations, is out of the question. So is the "recoupling" of direct payments. Furthermore, any reform must be consistent with what is expected to be a future agreement under the WTO, regardless of how close an agreement might be.

If there is eventually an agreement at the WTO, the outcome is rather well defined. The 1995 G20 proposal in Hong Kong can be used as a benchmark for future tariff cuts. A compromise between the G20 proposal and the EU proposal is a benchmark for domestic support.

Because the conclusion of a WTO agreement was largely anticipated during the 2003 reform, the clauses on domestic support are unlikely to prove very binding. Indeed, the decoupling of the direct payments has lowered the actual Aggregate Measure of Support (AMS), which is now much below the ceiling bound at the WTO. A large cut (roughly 70 percent) in this ceiling could be achieved without significant further reforms of the CAP. Further reforms such as a change in the fruit and vegetable entry price regime would give some degrees of freedom for further cuts (Butault and Bureau, 2006).

However, should the EU maintain market management policies, they have to fall within the likely limits of the amber box, the Overall Trade Distorting Support and the product specific Aggregate Measure of Support. Large cuts in the maximum AMS would make it impossible to go back to policies designed to maintain production in certain areas (e.g. partial decoupling of direct payments). This could be an issue since there would be only limited possibilities to counteract the possible concentration of, say, dairy and beef production in some particular

regions if these sectors were liberalized. The end of the "blue box" and very low "amber box" ceilings would remove any possibility for a "target price" policy implemented through direct payments linked to production. It would also make it difficult for the EU to index direct payments on world prices, should the EU consider such an option. (The fixity of direct payments results in the current situation where both consumers and taxpayers pay respectively for high food prices and direct subsidies to farmers).

Export competition constraints depend a lot on the level of world market prices. Clearly, the future CAP will have to be designed without the possibility of disposing of surpluses on world markets through export refunds. In practice, this rules out the possibility for public intervention to guarantee prices structurally higher than world prices. The legal impossibility of funding the disposal of the intervention stocks in foreign markets means that the only intervention prices that could be maintained are "safety nets", i.e. mechanisms that only smooth market fluctuations. In the medium run, intervention stocks would have to be sold without subsidy. In practice, it requires that the gap between the minimum price and the average world price be very small.

The market access provisions of a potential Doha agreement constrain more the design of the future CAP than the other two "pillars" of the negotiation. The different proposals on the table, in particular the US one, involve considerable cuts in tariffs, between 60 percent and 90 percent for the most protected commodities. As a result, it is likely that except for a limited number of tariff lines considered as "sensitive", most EU products will no longer be significantly protected. With the size of cuts that are being discussed, a market management scheme such as intervention will no longer be sustainable since public purchases would be flooded by imports.

Again, the practical consequences of EU agriculture being much more exposed to imports will depend a lot on the world market situation. In most sectors, an agreement might be rather painless if world prices remain steady. However, unless world prices reach previously unheard of peaks, there will be some significant problems in other sectors if tariffs experience large cuts. These sectors include beef, which may affect a large number of farmers. Other sectors with more a concentrated regional impact include poultry, fruits, vegetables and sugar. If prices or exchange rates turn out to be less favourable than expected sectors such as grains or dairy will also be affected.

***Without a WTO agreement.*** Even without an agreement, the recent WTO jurisprudence (Canada Dairy and EU Sugar panels) suggests that many aspects of the CAP could be challenged, not only under the Uruguay Round Agreement on Agriculture, but also under the (potentially broader scoped) Subsidies and Countervailing Measures Agreement. In practice, some sectors would have to experience a significant further reform. Even though the actual jurisprudence remains uncertain, it is likely that the Common Market Organizations that include non tariff restrictions such as an entry price (fruits and vegetables) or those that include some local content clauses (processed fruits and tomatoes), would have to be modified. Restrictions on the allocation of direct payments (such as perennial crops) would certainly also have to go. Potentially, a ruling of the Dispute Settlement Body against the EU could have larger impacts, and require reforms to an extent that is still largely unknown.

The landing zone for the various bilateral agreements is less well known than the WTO one. It is easier to set safeguards and manage trade under such agreements than under a multilateral one. However, one should consider that regional and bilateral agreements increasingly tackle agriculture. Given the need for the EU to take a larger part in trade with high growth areas (Asia, Latin America, Russia), it is likely that more concessions in the agricultural sector will be demanded by third countries. A failure of the WTO negotiation would give more negotiating power to countries such as Brazil or Russia, given that it would leave the EU without many

alternatives for large scale agreements (Brazil has already toughened its position in the bilateral agricultural negotiation over the recent period).

### 1.2.3. New demands from society

The future CAP will have to be in line with aspirations of citizens. Today's demands from society are significantly different from the original objectives of the Rome Treaty. A new set of concerns and aspirations includes food safety, healthier food, environment, rural public goods and ethics.

**Food safety.** Demands for safer products and also for more traceability must be taken into account in the future CAP. Contrary to a widespread belief that modern agriculture has led to the production of more hazardous food, tighter food safety constraints are unlikely to help a revival of traditional production techniques and extensive production. Tighter regulations are more likely to favour the development of large-scale, more industrialized and integrated farms that can bear the extra fixed costs and control the production process more efficiently than family farms. This framework of increased consumer pressure may constrain the definition of second pillar instruments of the CAP. Already, traditional productions and traditional commercialisation face difficulties coping with increasingly rigid food legislation. Agri-tourism is one of the components of rural development policy for less favoured areas, but it faces increasing constraints that require animals to be slaughtered in accredited and sometimes distant facilities, the food served to be processed in certified institutions, etc. Organic farm products also face difficulties to comply with increasingly stringent mycotoxin standards, which could be unachievable without fungicides.

**Degradation of the environment** also ranks high among consumer concerns (Bonny 2000). Excessive nitrate concentration in drinking water and vegetables are hardly a health risk for adults, but they can be a serious one for young children. Nitrates and phosphates also affect surface water and conflict with recreational activities and the tourism industry, including on the sea shore in some areas. Pesticide residues affect flora and fauna. Formal proofs are still missing, but there is suspicion that they play a role in the dramatic decrease in the number of human spermatozoids over 30 years, sexual anomalies of fish and a higher rate of cancer in those countries that are large agricultural producers. Because more scientific evidence of the linkage between these phenomena and pesticide use is likely to appear in the next few years, consumers and citizens' concerns are likely to lead to stricter regulations on pesticide use. (INRA-CEMAGREF, 2006). One cannot rule out that pesticides become the future "asbestos" scandal, with rather similar political, economic, but also legal, consequences.

**Ethical demands**, in particular animal welfare, are becoming mainstream concerns and are partly linked to food quality attributes. Although still limited in terms of the volume of production, a concern for more local sources of supply has emerged. The willingness to buy products from "family farms" or even from some "mountain areas" as part of fair trade is significant in some segments of the population. Organic agriculture has proved to respond to a lasting demand from a non-negligible section of the population, for reasons that are both environmental and ethical. Particular production methods such as genetically modified organisms raise concerns among a share of the EU population.

#### 1.2.4. New challenges induced by climate change

Tackling climate change is now a priority for EU governments. The growing threats of large costs for those countries that have a large population and economic activity close to the sea level, or those that already suffer from drought and the invasion of new species, will bring more pressure for action. The agricultural sector will be asked to contribute to the reduction in greenhouse gas emissions.

The agricultural sector will be asked to reduce its own emissions (the sector contributes roughly close to 10% of EU total greenhouse gas emissions) and to store more carbon through changes in production techniques. Particular techniques can increase the organic proportion of soil, like permanent pasture, as well as sequester carbon and decrease emissions. These techniques range from optimised feeding regimes to low emission manure management. Agriculture will also be asked to supply renewable energy so as to match targets set at the EU level, namely a rate of 10 percent of renewable fuels by 2020 (subject to the caveat that new technologies are available by that date).

Another issue is that agriculture itself will be affected by climate change. The consensus that the effect of the rise in temperature on agricultural production would only be visible in a few decades is changing rapidly, as scientists find that the process is taking place more rapidly than they thought. The rise in temperature will be accompanied by less precipitation especially in the Mediterranean regions leading to droughts and water scarcity, whereas precipitation will increase in the Northern and North-Eastern regions of Europe. The projected climate changes will affect crop yields, livestock management and location of production. Animal production is expected to face new parasites usually found in warmer countries that could require changes in traditional production techniques.

#### 1.2.5. The obligation of policy coherence

**Global strategies.** The Lisbon strategy for growth and jobs is one of the priorities of the EU. It provides a general framework into which sectoral policies like the CAP should fit. Ensuring that European agriculture remains competitive in a globalised economy is an implicit but important objective of the future CAP *per se*, but also within this general framework. The future CAP should also be consistent with the EU Sustainable Development Strategy, which was expanded and renewed in 2006.<sup>6</sup> It is now linked to the Lisbon agenda. There is a commitment to integrate sustainable development in all EU policymaking and external policies. Agriculture is affected by several of the targets and action plans (clean energy, sustainable production, management of natural resources in particular). In particular, each new policy proposal will be subject to an Impact Assessment procedure to make sure that environmental objectives are taken into account.

**Rural development and cohesion.** Many theoretical arguments suggest that trade liberalization will result in agglomeration or geographical concentration of activities (Bureau, 2006). There might be a contradiction between a more market oriented CAP and cohesion policies as illustrated by the role of the regional allocation of milk quotas in keeping production in mountain areas. The reallocation of production can also be a problem in terms of distribution of activities over the territory. More generally, the CAP needs to be considered in connection with structural and cohesion policies, especially given the specific conditions in New Member States, which call for accelerated structural change, if not some stabilizing support.

---

<sup>6</sup> European Council of June 2006, Council DOC 10117/06.

**Competition policy.** The articulation between EU agricultural policy and EU competition policy has always been unsatisfactory. For a long time, the CAP introduced a questionable distinction between sectors where competition authorities intervene to prevent cartels (such as self organization of potato producers) and other sectors highly cartelized but sheltered by a Common market organization (e.g. sugar). It has made competition policies highly ineffective. On the other hand, competition policies have conflicted with measures that could be useful to help the agricultural sector maintain a share of the value added (e.g. denominations of origin, a particular form of cartelization or market transparency measures, depending on point of view). The reform of the CAP should work at resolving these contradictions.

If the present imbalance between the strict regulation of anti competitive behaviour in the agricultural sector and the laxer policy towards high concentration of the retailing sector is maintained, the gains for consumers of a more open agricultural sector remain uncertain. In this respect, it is perhaps not the CAP that should be made consistent with other policies, but competition policy that should be made consistent across sectors and steps in the food chain.

**Health policy.** There have been some claims that recent CAP reforms were in contradiction with overall health policy (Dubois, 2007; Bonnet et al., 2007). Such reforms, which reduced the intervention price of sugar and butter, have been accused of contradicting the objective of curbing the growing problems of obesity and related diseases. The proposed reforms of the fruits and vegetables common market organisation might also reinforce the market power of fruit producers, which might result in higher prices and ultimately lead to lower consumption by that segment of the population that needs it. Closer examination of the drivers of consumption habits suggest that such claims are exaggerated (Etilé, 2005). However, given the large social costs of bad diets, health policy should be a background element of the future CAP reform.

**Development policy.** Policy coherence is also an issue in the case of EU assistance policy to developing countries. The CAP has been criticized for its effect on poor countries because protection has prevented developing countries exploiting their comparative advantage in agriculture, while EU export refunds dumping beef, cereals or milk powder in developed countries caused the ruin of local producers (Oxfam, 2004). There is a lack of objective studies on these issues and there is new evidence that these criticisms have been exaggerated, at least over the recent period (Bureau et al, 2006). However, these issues should be taken into account when designing future agricultural policy, which should be more integrated with a long run oriented assistance policy.

## 2. Post 2013 objectives for the CAP

The Commission's Communication of November 20 2007 focuses on the 2009-2013 period. Many of the decisions will, however, have longer term consequences. In addition, a central question is whether the rather short run measures proposed by the Commission prepare, or on the contrary hamper, future reforms that are likely to be needed after 2013. It is useful to have a longer term vision of what the CAP should be, so as to be able to gauge the proposed measures against a desirable benchmark.

The current CAP is the result of an accumulation of measures that have been driven largely by political economy considerations. Many provisions of the Common market organizations reflect a series of past compromises that provided a particular degree of support so as to make a particular decision politically acceptable. Reforms should be designed based on objective criteria rather than vested interests and perpetuation of past policies.

### 2.1. Competences in a reformed CAP

From the view point of considering what the CAP could be after 2013, irrespective of current regulations, the fundamental consideration is that it will be necessary to provide adequate justification of every expenditure item to European taxpayers and of every intervention measure to European citizens. Hence, the key issue to be agreed upon among the Member states is what they intend to do together and what they want to keep under national authority.

The subsidiarity principle provides a widely accepted general guideline which is succinctly expressed as follows: "Subsidiarity and proportionality are therefore core criteria to determine the added value of EU spending. Under the principle of subsidiarity, the Union shall act only if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level." (European Commission 2007c, p. 9). In economic terms the principle of subsidiarity can be understood as part of the *principle of fiscal equivalence* (Olson 1969; Oates, 1999) which is an even broader guideline for the allocation of competences among different political levels: the spatial distribution of benefits from a public service (European or local) should define the responsibility of providing and financing this service. In its widest interpretation, the subsidiarity principle is not restricted to the allocation of governmental responsibilities, but may also refer to a host of other issues, from privatization to transfer of responsibilities to parastatals or NGOs as well as public-private partnerships. Such a broader set of decisions, which should be based on careful evaluation of public and private sector alternatives using efficiency and equity criteria, is not addressed here.

Generally speaking, transferring policy to the EU level may be justified by goals such as fulfilling a redistributive function, ensuring minimum standards, providing spillover compensation, or preserving common internal markets. In the following we focus on the question whether and to what extent the EU should be responsible for various domains within agricultural policy.

**Market and competition policy.** In terms of external relationships responsibility was transferred to the EU level at the establishment of the custom union. Leaving such responsibility at the sub-European or even sub-federal level may give rise to inefficiencies by not taking into account cross-regional spillovers, e.g. from the imposition of own tariffs. This transfer of responsibility seems obvious, since benefits and costs are supranational in scope. On the other hand,

distortions may arise simply because countries adopt differing policies in an uncoordinated fashion. In this respect, it is worth recalling that there is a body of literature associated with public choice economists which takes the view that competition between governments is a good thing since it induces more efficient local government decision making. However, this line of reasoning cannot apply to a sector such as agriculture where the existence of a fixed factor precludes the possibility of “voting with one’s feet”.

Regarding internal competition in the Common Market there is also no alternative to an EU supervisory role. In general, competition policies should be aligned with those applicable in other sectors. EU standards for food products, including those relating to health, also raise competition policy issues. In general, a central EU responsibility for standards may be justified in the case of EU-wide traded goods for reasons of reputation, recognisability and technical knowledge. On the other hand, differences in local preferences and the costs of achieving certain standards would suggest leaving some responsibility for determining quality to member states and in fact consumers themselves, leading to the idea that the EU role should be confined to harmonized minimum standards which might be strengthened.

Another area with potentially diverging interests in the Community relates to ethical issues like perceptions and judgments about animal welfare. This is certainly a contentious issue where common decision making may be required in order to maintain the common market.

***Health and food safety policy.*** Partly related to competition are health and food safety concerns as far as trade-related effects are concerned. If the focus lies on targeting certain qualities some specific issues may arise. Member states should be allowed to set their own standards, since these reflect their own preferences at their given standard of living, although countering joint threats to animal and human health that would tend to spread over borders or exceed maximum allowable concentrations of additives typically define a community task. Consequences for product reputation and hence spillover effects could justify community or even more centralized intervention, such as the case with the Codex Alimentarius Commission. One might even envisage a common policy towards advertisers, (multinational) food processors and retailers regarding specific health claims that are more effectively monitored and verified at EU-level. However, this does not mean that all consumers should be forced to eat products of equal quality. There should still be scope for product differentiation as far as quality attributes or increased safety attributes are concerned. Management of food quality should remain a national responsibility and focus on protection of consumers in their dealings with retailers. This leaves room for controversy in some domains, e.g. for food products with a potential health hazard that is valued differently, relative to consumer satisfaction, in various Member states. This only means that sufficient powers should be preserved to act on a discretionary basis, as such problems have to be dealt with on an ad hoc basis at high political level say, by the Council. Finally, since SPS barriers are becoming a major issue in international trade between EU and other countries, particularly in Asia, it might be efficient to enhance the EU’s powers of representation in the domain of SPS and trade, so as to avoid the situation where all 27 member states have to negotiate separately a large number of protocols. Furthermore, this joint negotiation on SPS matters may reduce the external spillover of transactions costs for trading partners facing different stricter standards than those mandated by the international standard-setting bodies. Such stricter standards are permitted under WTO rules if justified by a risk assessment, thus already allowing flexibility for national strategies provided they observe the common denominator of “scientifically necessary”. Also important is the issue of private standards which may go beyond the official SPS standards and amend them by additional requirements. Especially in the food policy area private-public partnerships are very relevant and a major issue is monitoring systems in order to address the whole set of different actors.



**Environmental policy.** The key criterion here to determine whether responsibility should be transferred to the EU is whether there are transboundary effects as in the case of emissions of greenhouse gases, waterways shared among several Member States or unique ecosystems valued by citizens in several Member States. This does not always require EU participation as several examples of Coasian solutions for transboundary waterway problems have shown. But frequently the established mechanism for intra EU decision making may reduce negotiation costs. A political economy argument may justify some EU participation even in the case of local public goods, in that EU authorities may be more distant and hence less vulnerable to lobbying than regional policy makers. Cohesion arguments may also justify a role for the EU in supervising some minimal standards EU wide. Finally, environmental problems may be expensive to detect and monitor with a significant fixed cost because of the need to acquire sufficient analytical expertise. Against this background it is difficult to assess in general terms whether an increased role for the EU in environmental policy is justified, since in several cases a concurrent responsibility is required. However, an EU role should be critically scrutinised in particular for biodiversity and landscape impacts which are often quite limited in their spatial scope. A European role can also be efficient in deciding related research priorities, e.g. to assess the environmental effects of GMOs, in order to better coordinate research activities, an argument valid for European responsibility in the other mentioned areas, too. Finally, EU responsibility will be efficient for the negotiation and hence some monitoring of international agreements on environmental issues (e.g. Kyoto, Convention on Biological Diversity).

**Social and income policy.** There are few arguments to justify the need for a special agricultural income or social policy on whatever level, the most convincing being risk considerations and the importance of land as collateral which may constrain the access of farmers to minimum income schemes. Accepting that there are some special circumstances in agriculture, however, does not imply that this area should become an EU responsibility. The principle of subsidiarity appears to point in the opposite direction. Member States design and finance their own social security systems according to national principles and tax systems. The Member State level is frequently the right compromise between heterogeneous preferences, solidarity feelings and capabilities to finance and monitor these systems.

**Cohesion and regional policy.** Also in this case, it is not easy to justify the need for a special agricultural cohesion or regional policy. On the other hand, it is often the case that agriculture plays a significant role in the economies of the least developed regions. Promoting development in new or poorer member states could also in the long term be seen as a common interest to maintain cohesion, to avoid excessive internal migration and to make best use of the available natural resource basis. This might require significant investments from common funds in the agricultural as well as in the other sectors for many years to come. In addition, there may be cross-boundary implications that require co-ordination, for example, regarding infrastructure. Yet, as far as rural development is concerned, experience in development cooperation suggests that establishing reliable and dynamic governance and fostering entrepreneurship at local level are the key issues. Support to regional infrastructure could be given under this heading but it needs proper justification. While phasing out the area payments, the payments for preservation of landscape and cultural heritage will gradually become payments for services, and would as such no longer qualify for support under regional development programs. In all this the Commission would, after having distributed the transfers, primarily play the role of facilitator, to disseminate best practice, and inspector, to avoid misuse of funds.

Accordingly, the Commission is rightly involved in (co-)financing and defining policies to reduce regional disparities. But EU involvement needs to be balanced with local participation, both in design and in financing, which is addressed by the principle of fiscal equivalence.

***Animal health and welfare policy.*** The international spread of animal diseases calls for the international coordination of measures like restrictions on trade from affected regions as is provided for in the SPS Agreement and the International Office of Animal Health Diseases. Animal welfare may be related to health issues, if husbandry systems affect health conditions and again the spread argument is relevant. Other attributes may be of an ethical character and may affect consumers' welfare differently. Assuming the distributional idea of a minimal level of welfare comparable to protection of children, a European or international coordination is justified while flexibility should be offered for stricter actions to be ensured at national level.

***External relations and development cooperation.*** Beyond agricultural trade policies, quite a few of the EU's foreign policies comprise an agricultural component that naturally has to be looked after at union level, relating to various protocols such as the Economic Partnership Agreements, the treaties with Accession countries, and the management of Development Funds. As CAP affects trade partners via transboundary spillovers, among which are developing countries, coordination and support in implementing CAP-related import requirements are necessary. This is already part of some bilateral Agreements like in the Euro-Med Association Agreements. The external relation dimension of CAP in order to address external stability as well may be seen as a European or even multinational task due to the distributive arguments mentioned already as part of Cohesion policy. This idea is already addressed by the extended European Neighbourhood Policy which incorporates traditional trade issues in broader concepts on coordinating and supporting the enforcement of import requirements via Technical Assistance for example.

## **2.2. A pro-competitive policy**

One major objective of the CAP should be to help EU agriculture become more competitive. Research policy providing a public good is perhaps outside the CAP. However, extension, training and education are particularly important, not only as far as competitiveness is concerned but also regarding environmental compliance and ability to manage farms using modern technology as well as sell products in a globalised environment. Infrastructure and communications are important to help build a competitive industry.

***Innovation oriented policy.*** Large public intervention does not ensure that innovation will bloom. However, in the agricultural sector, there is evidence that pro-active policies have played a large role in fostering innovation, provided that the environment encourages their dissemination. Studies suggest that social rates of returns in agricultural R&D are often high (Evenson 2002). Innovation is largely "induced" by economic conditions (e.g. labour shortages induce labour saving innovations) and sometimes by regulatory constraints. It was shown that environmental regulations had helped the adoption of new technology and the development of precision farming, for example. (However, the move of major research centres in molecular biology out of the EU suggests that regulations can also deter innovation in this sector too). Policies that reduce risk, limit credit constraints and bring land tenure security are known to help innovation. Farm support, which alleviates credit constraints but limits competitive pressure, has a more ambiguous impact.<sup>7</sup>

***Structures policy.*** Obstacles to the restructuring of production structures and consolidation should be lifted. There is evidence that economies of scale exist for small farms. There is no evidence that diseconomies of scale exist for large farms that are in a better position to capture the benefits of specialization and productivity improvement. Accordingly, policies that restrict

<sup>7</sup> See Sunding and Zilberman, 2002; Chavas 2002 for a set of references.

the consolidation of farms could have unwanted consequences in terms of competitiveness. Large-scale production entities should not be discriminated against, provided that their environmental pressure is controlled (for example, large scale pig farms with biogas plants and water filtration can pollute less than diffuse emissions by extensive production).

Policies that maintain ageing farmers in activity should be questioned. From this point of view, Member States should consider the consequences of SFPs and of particular modalities such as restrictions in trading them as an obstacle to making land available to young farmers. The issue deserves to be more documented, but there could be a case for more incentives to strengthen the early retirement measure in the Rural Development Regulation.

**Questioning EU regulations?** One way for governments to encourage innovation is sometimes to limit their own intervention. Some public regulations seem to put EU producers at a disadvantage compared to foreign producers. The costs and benefits of such regulations should be addressed. One example is the regulation on the importation of genetically modified feedstuffs (see Box 2.). Other issues mentioned in this Box suggest that foreign producers face more lenient regulations than the EU ones with significant cost advantages. As far as incomes are concerned, some of these regulations are largely compensated by direct payments. (For example, while farmers' organisations complain about the requirements for direct payments, estimates suggest that the latter far outweigh the costs involved by the compulsory respect of EU directives on Good Agricultural and Environmental Conditions, see Jongeneel et al, 2007; Carpy-Goulard et al, 2006). However, because of the increasingly decoupled nature of these payments, they do not correct distortions of competition on the production side.

**Labelling.** In this difficult trade-off, public policy should help the farm sector to efficiently take advantage of market mechanisms. Public authorities have a role to overcome information asymmetries by the signalling of product quality, by setting standards that prevent tainted products from reaching the market, and by helping farmers to differentiate their products. The approach adopted by EU authorities is perhaps not the most efficient for marketing niche products in foreign markets. The geographical system of denominations of origin works well in some countries (France, Italy) and for some products (cheese). But there are other cases where it does not seem particularly efficient in convincing consumers that there is a genuine link between origin and quality, as shown by the success of brand names compared to geographical indications in the export wine market (Bureau and Valceschini, 2003). The current proliferation of conflicting labels has introduced some confusion and needs to be simplified.

### **Box 2. EU regulations and competitiveness**

Farmers' associations often complain that the EU regulatory framework imposes more constraints and therefore results in higher production costs than the regulations faced by third country producers. It is unclear to what extent these claims are well grounded, and how much this explains a lower level of competitiveness. However, different surveys and administrative enquiries in the food chain have identified several issues that might put EU producers in a less favourable position than foreign producers. These issues include:

Environmental regulations more constraining than in other countries, namely on pesticides and nitrates. This seems to be an issue, in particular, in the pork sector. Fruits, vegetable and wine producers also point out the fact that EU Member states have implemented taxes on some active ingredients that third country producers are not required to pay. Even though conditions differ a lot between Member states, some of them (Poland, Spain) allow products that others prohibit. It seems that the length of procedures result in significant distortions of competition in the fruits and vegetable sectors, compared to countries such as China. In these distortions of competition,

differences in the list of authorised molecules are emphasised by cumbersome administrative procedures and delays regarding homologation and approval.

Genetically modified products impose a growing distortion of competition. The EU livestock sector is increasingly forced to import non GM maize (mainly from Brazil) while Brazilian exporters of beef that compete with them are allowed to use their GM maize. This leads to the paradox that Brazilian meat producers import GM maize from the US while Brazilian maize producers export non GM maize to the EU. This "triangular trade" means that EU meat producers are levied some 70 dollars extra per ton of maize. Even for non GM material EU producers are subject to intellectual property rights. They compete with emerging country producers where non compliance of foreign producers with intellectual property rights allows access to cheaper seeds. In the sugar beet and cotton sector, it seems that GM products, not allowed in the EU but allowed in other countries such as Brazil and China, have the potential to reduce production costs by 20 percent according to the French Confédération Générale de la Betterave.

Growth promoting hormones and other activators in the beef sector, as well as somatotropin (rbGH) a hormone that increases milk yields by 8 to 15 percent depending on the type of livestock production, are not allowed in the EU while they are used extensively in most other countries (the EU prohibits imports of hormone treated beef, but not all activators can be detected by the analysis of the meat, and the EU does not impose restrictions on dairy products).

The obligation of traceability and segregation has increased costs along the food chain, while the obligations on imported products seem to be less constraining, in particular in the beef sector.

Animal welfare regulations are seen as involving a cost increase between 3 to 15 percent in the poultry sector (eggs), and to some extent in the pork sector.

Regulations on mycotoxins, heavy metals and pesticide residues are said to be stricter in the EU, even though inspection also deals with imported products. Regulations on animal waste impose costs that might not be faced by South American producers. This involves compulsory procedures for rendering, restrictions on the utilization of by-products (some by products cannot be used in pet food and gelatins, some offals are not allowed to be sold resulting in an extra cost compared to foreign producers). The conditions of cleaning to decontaminate poultry carcasses are more lenient in third countries, and the ex post use of chlorine is widespread while in the EU low levels of salmonella must be achieved by risk management techniques. The definition of "ovoproducts" seems to be more lenient in third countries, making EU processed products less competitive. The list of additives subject to regulation is larger than in other countries, and there is a lack of a harmonized list for authorized additives in feedstuffs. The terms of reference for obtaining the "organic" label seem to be stricter, at least in some Member states, than outside the EU while imports are allowed.

### 2.3. Future orientation for market management

***Dismantling intervention?*** Under the plausible assumption of world prices remaining steady the market management instruments of the "old CAP", i.e. institutional prices, export refunds, and the whole intervention system will become less relevant.

Even if prices are likely to be higher than in the early 2000s, this still leaves room for concerns regarding price volatility. Producers are no longer isolated from the price signals of the world market. With a more globalised market, fluctuations are absorbed on a larger basis. However, it is also likely that production will concentrate in least cost areas (e.g. sugar in Brazil, grains in North America) that are sometimes areas with high yield variations. With stocks now typically below two months of consumption, a series of droughts or new pathogens could have significant consequences for price variability. There is little hope that any serious action will be taken at the world level to stabilise world prices. All the attempts at stabilisation schemes, buffer stocks and regulations implemented in the 1970s, have failed (see Dehn et al, 2005). The financial power of hedge funds would be a tough challenge for an ambitious international coordination to stabilise prices.

It is possible that the dual use of agricultural products both for food and energy will help to stabilize markets by providing an implicit floor price. However, evidence that there is now an "implicit intervention price" is still weak. This issue is analysed in Annex 2. The consequences of dismantling market management instruments should be assessed under pessimistic scenarios regarding exchange rates, world prices and the possibility of highly managed exports by countries such as China or Ukraine and Russia (which exported wheat at a price that could not be explained by any market mechanism in the early 2000s). At least until the stabilising role of the energy outlet is supported by more evidence, there is a justification for public intervention that would limit large price fluctuations.

By providing a floor price that limits the fall in producer prices, public intervention might help stabilize the expectations of producers and avoid large disruption in the EU production. It is also possible that such a public safety net makes private instruments more efficient (by providing a floor and ceiling price to market operators). Clearly, such a floor price should be designed to deal with exceptional circumstances and by no means provide structural price support to producers as was the case in the 1980s.

***Instruments.*** A difficulty is that large tariff cuts under the WTO could make it difficult to maintain such a safety net with public purchases. Without some degree of border protection it is difficult to guarantee a price even temporarily higher than the world market price, given that public intervention could be flooded by imports. If it turns out, that WTO commitments require abandoning all border protection, a minimum price that relies on a deficiency payment mechanism could be considered. This issue deserves more careful investigation. It is unlikely to be unanimous among Member states, and might raise WTO compatibility problems. One of the reasons why the Commission has always been reluctant to consider such a possibility is due to administrative constraints. That is, the annual nature of the EU budget is ill suited for unpredictable expenditures. This could be solved by setting up a fund that would be used to guarantee a minimum price level to producers under exceptional circumstances.

## **2.4. Long-run roles for direct payments and second pillar measures**

**Longer term motivation for payments.** Since 1992, direct payments have served to make socially necessary but unpopular reforms acceptable. In this, there is not only an efficiency argument ("buying" a lower social cost) but also a "moral" argument, if reforms can be seen as the breaking of an informal contract between policy makers and farmers. The latter have sometimes experienced sunk costs trusting in the stability of the old CAP. Direct payments were thus justified as an income transfer device in a period of transition. In a long term perspective, they might serve two different purposes.

The first one would be more "structural", i.e. longer term support for economic activity in certain rural regions for cohesion purposes. Typically this kind of support would fall under the second pillar but in rare cases direct payments supporting selected agricultural activities may qualify as a rural stabilisation measure in certain regions. The second, more relevant, purpose would be to provide payments to the suppliers of positive externalities that markets do not value at its proper contribution for society. The difficulty with the current shape of direct payments is that uniform payments, even if differentiated according to region and share of grassland, are not sufficiently targeted to cover all kinds of circumstances. At most, they can be an administratively efficient solution for some basic requirements, possible to be enforced and easy to monitor for the greatest part of total area.

Motivating and developing future direct payments in this way would clearly move them away from fully decoupled payments again. To the extent that payments are linked to certain requirements and services, they are not decoupled anymore. But the coupling should be first of all to these services which may then have indirect repercussions for production such as beef. There is nothing fundamentally wrong with these side effects. In fact, it could even be that for basic maintenance of open landscape in some regions payments for suckler cows or sheep could be a more efficient instrument for administrative reasons than a complex payment scheme based on output in terms of additional biodiversity. This issue of the most efficient instrument cannot be decided in general terms, but will require more detailed impact analyses and comparisons of various instruments including their administrative cost at EU, Member State and farm levels.

Moving beyond the set of basic requirements agriculture may provide a large set of amenities, in particular environmental services which are specific to local natural conditions. In these cases administrative cost as well as local support requires a stronger national and regional participation in the design of measures as well as in their funding. The same holds, in line with the aims of regional policies, for rural development policies to reduce disparities in economic opportunities and social conditions among rural regions. These objectives provide a long term perspective to second pillar spending. Consistent with this perspective there has been an ongoing trend to shift resources from the first to this second pillar of the CAP (which still barely exceeds 20% of the total CAP expenditure in 2007).

**However, there are three fundamental problems related to the second pillar.** The first is that rural development measures are much more complex and costly to monitor than the intervention mechanisms of the old CAP. There are already programs where the Court of Auditors has found that the costs of audit exceeded the amounts transferred to farmers. Beyond a certain limit, increasing the budget devoted, for instance, to agri-environmental programs or investment aids will either generate corruption or reach excessive costs of inspection and control. On the contrary, although the current provisions regarding monitoring and evaluation of the rural development regulation are in line with the provisions used for the other structural funds, the fact that the number of applicants under the EAFRD is much higher seems to have been overlooked.

The second, somewhat related, question is whether it is appropriate to arrange for these policies at EU level. The argument for the first pillar of the CAP is quite clear as it follows from the benefits of a Common Market. However, for the second pillar this is a less valid argument. Most support under the second pillar concerns non-tradable goods that will not influence free and undistorted competition in the EU (the main reason for rules and regulation at EU level). Although in principle higher subsidies for say investments in member state A compared to member state B, or higher payments for comparable agri-environmental services in different member states, could also contribute to a distortion of competition, this possible distortion should be weighed against the cost currently involved with a proper implementation of these measures, including monitoring and evaluation.

Finally, if a case can be made for some second pillar measures at EU-level – which is questionable for many currently in use – it should be more than the set of patches that has developed to soften the criticisms made of the CAP. A rural policy should set clear objectives and most preferably be integrated with a broader regional policy. There is little reason for rural development policies to target agriculture more than other sectors of the economy, especially if one considers the ongoing structural trend of a declining number of farmers. This leads to the conclusion to integrate all regional policies as encapsulated by the idea of territorial coherence. The rural policy should also not attempt to fight migration towards cities if fundamental market forces drive such an evolution. Concentration of the population in agglomerations can lead to a more efficient use of the territory, reduce transaction costs and make better use of the infrastructure. Rather, policies should promote activities that generate wealth in a sustainable way.

Against this background, the creation of the EAFRD with little articulation with the other structural funds has to be seen as awkward. There is also little reason to restrict the budget of the EAFRD to farmers. Rather it should be oriented to funding infrastructure that allows a competitive industry to develop in rural areas, and to enhance positive externalities that could boost tourism or recreational activities. This might include land occupation and maintenance of the countryside as an open farming space, protected from fallow, land abandonment, bush invasion, or general reforestation. Most of these objectives can be obtained through the use of the general structural funds, with the exception of the provision of positive environmental externalities. To best tackle synergies of different Funds' activities, territorial coherence should lead to general criteria for making all funds available not depending on the actor as farmer or non-farmer. In order to consider the Lisbon strategy this may be supported by a changed regional typology, which not only refers to characteristics of population densities but may differ among regions with different employment requirements and agricultural attributes (Copus et al., 2006). Hereby in principle all measures can be applied to all regions and implemented by all actors with a cooperative funding across all Structural Funds and may lead in the long run to a "Territorial policy" among all sectors.

## **2.5. EU trade policy**

*A case for protection?* Border protection has been a key component of the "old CAP" in the sense that it was necessary to ensure that market price support instruments would work. With the move towards payments targeting more directly producers' incomes or the provision of services, border protection could be revisited. Indeed, there are sectors where tariffs impose a significant cost to consumers, including the poorest ones whose food budget is proportionally higher, as well as the food industry and the livestock sector that imports feedstuffs.

However, in some cases agricultural protection might be useful. First, as it was stated previously, there are sectors that can provide positive externalities that are joint with agricultural production. Border protection could therefore play a role in such cases. While this argument has often been used and abused by vested interests, it may be a valid one in some cases where alternative measures are more expensive. Second, the issue of the dependence on a few foreign sources of supply for proteins, for example, deserves some consideration given the large volumes imported from South America<sup>8</sup>. Third, the "infant industry" argument may be applicable in the case of emerging industries such as agro-fuels. Finally, some temporary protection is justified if one wants to maintain safety nets in case of major shocks to the agricultural sector that would involve very low domestic prices.

***Rationalising trade policy.*** Under a WTO agreement, the EU has limited degrees of freedom to maintain some degree of protection. If a product is classified as sensitive, compensation will be given through expanded tariff rate quotas. Under regional agreements, there is more scope for a strategic allocation of the tariff cuts between products and the EU has made extensive use of import quotas and other forms of ceilings. Future agreements will nevertheless require significant concessions, in particular if a failure of the WTO gives more bargaining power to countries such as Mercosur, Canada or Russia for bilateral deals.

The allocation of the remaining protection across sensitive products should be based on sounder criteria than avoiding the erosion of rents. It is likely that the case for maintaining some degree of protection on some animal products that are important for mountain areas where they are produced in way that is compatible with environmental services is easier to defend than maintaining protection on products that have long enjoyed high tariffs.<sup>9</sup> Another motivation could be to "level the playing field" when there is evidence that foreign producers face less constraints on production processes because they have lower standards in terms of environment or ethics. Obviously, there is a risk of opening a Pandora's box, given that there is no clear frontier between what is part of the competitive advantage of one country and an unfair distortion of competition. But pressures from EU consumers and other stakeholders seem to impose constraints on EU producers that foreign competitors do not face (Box 2.)

---

<sup>8</sup> The threat of a US embargo on soybean exports in the 1970s led to very high prices and to the slaughtering of cattle in the EU. The consequences on the cohort of livestock capital could be seen years later both in the dairy and beef markets.

<sup>9</sup> The EU now imports large amounts of beef from South America in spite of the very high current tariffs. Given the large cuts that are expected under a WTO agreement, imports are likely to increase a lot. A large part of EU beef consumed comes from the rather inelastic supply of meat from dairy cows and suckler cows, and the latter sectors might be hit particularly hard. Given its role in providing positive externalities, some degree of protection could help sustaining second pillar policies.



### 3. The Commission's Communication

This section of the report addresses more explicitly the proposals made by the Commission in its November 20 2007 Communication. With the longer term objectives described in Part 2 as a benchmark, and using the analysis of Part 1 to draw lessons on the success and failures of the reformed CAP, Part 3 provides an assessment and general comments on the main items of the Communication.

#### 3.1. *Reforming the Single Farm Payments*

A key component of the Commission's Communication relates to the Single Farm Payment introduced in 2003. The Commission argues that differences in SFP based on past levels of production will soon become difficult to justify, in particular those in the historic model. The Commission thus invites Member states to adjust their chosen model towards a flatter rate during the period from 2009 to 2013 and to simplify the implementation of the payments. This could mean to move some way towards "regionalised" SFP payments, as currently operated on an optional basis in certain Member states, and on a compulsory basis for the 12 new Member states. It is also conceivable that "flattening" should apply to difference of payments in the regional model, i.e. across regions and for the separate payments for arable land and grass land.

In view of the subsequent extensions of the SFP to other sectors the Commission recognises an increasing thrust of arguments in favour of full decoupling (efficiency and administrative simplification). The Commission proposes, as part of the long run strategy to strengthen the second pillar by increasing the current rate of modulation of 5 percent in 4 steps over 2010-2013 to 13 percent.

The Communication also suggests introducing a degressive reduction of large SFP payments per farm, such that payments over €100 000 could be cut by 10 percent, payments above €200 000 by 25 percent, and payments above €300 000 by 45 percent. At the lower end of payment amounts the Commission proposes to introduce either a minimum level of annual payments or to revise the current 0.3ha lower limit for receiving farm payments. Money saved by the application of this measure would stay within the member state based on the existing 'national envelope' model (Article 69).<sup>10</sup>

##### 3.1.1. **Moving to flatter payment schemes**

The proposal to allow Member States to move towards a flatter rate of Single Farm Payments would have different implications depending on how it will be implemented after the Health Check discussion. Annex 3 summarises findings from France and Germany. The studies mentioned in Annex 3 confirm that a flatter payment would affect the distribution of payments across farmers depending on the model that was chosen for implementing the SFPs.

***Pros and cons of the Commission's proposal.*** The Commission's proposal would reduce the heterogeneity of treatment of agricultural producers in the EU. This heterogeneity is considerable both within and between Member States. Once it is admitted that the "compensatory" nature of the direct payments is losing relevance, at least a part of these differences are difficult to justify. The Commission's suggestion rules out the idea of a single

---

<sup>10</sup> Although Cross Compliance is addressed in the same context as single farm payments, we will treat this issue in a subsequent section.

rate throughout the EU and leaves some room for regionalization of the flat rate (It is indicated that Member States would be "allowed to adjust their chosen model towards a flatter rate"). Even if it does not address the heterogeneity between Member states, this would reduce the "within" heterogeneity, which is particularly large in the nine Member states that apply the SFP on purely historical models. Indeed, between two French "Departements" for example, the average level of SFP per hectare ranged between 11 Euros to 694 Euros per hectare in 2006. The degree of redistribution of the payments between farmers (and production sectors) will depend a lot on how large the "regions" would be defined within the Member state. Figures in Annex 3 suggest that if a country such as France applied a flat national rate, there would be considerable reallocation of payments from the grain sector to the livestock sector, but that there are some complex distributive effects within each region.

It is unclear whether the proposed move towards a flat rate and the resulting reallocation of payments from the arable crops to the livestock sector was also intended as better remuneration for the provision of public goods. However, any orientation of direct payments towards environmental interests argues for a regional approach rather than a historical reference, and in that sense the Commission's approach goes at least in the right direction. Furthermore, the reference to Article 69 in regulation 1782/2003 in this context— allowing to retain 10% of SFP to support environmentally desirable activities - may be read as a confirmation of the Member State option to decide according to national criteria which activities should be supported. This option, so far hardly used, is certainly helpful, but it might have been desirable to extend the permissible scale of this environmentally motivated redistribution beyond the current maximum of 10 percent.

Finally a flat rate system is certainly easier to administer than the historic model. This is precisely the reason why New Member States have opted for the simplified payments system and the savings in administrative burden and cost from a continuation of this simplified system will be welcome.

*Is the Commission's proposal consistent with a longer term vision?* In the Communication, there is no hint of how the payments should evolve in the longer run. The fact that Member States are invited but not forced to adjust their payment models is in accordance with our long term recommendations to leave responsibilities for social policies and income distribution to the Member States. Some of them may decide that it is time to change the status quo, others may be more cautious in view of the intact "social fabric" in rural areas. At least the change proposed by the Commission is not in contradiction with a longer term reform of the direct payments. By questioning the historical references, the Commission proposal can be seen as paving the way for a sounder allocation of direct payments, based on the actual amenities provided by farmers, and more generally by those who contribute to public goods.

### **3.1.2. Full decoupling?**

The Commission's communication suggests abolishing the remaining coupled aid payments for the arable crops, which would mean in practice including the 25% coupled arable crop payments still in use in France and Spain into the SFPs. The Commission, however, leaves the door open for partially coupled support in regions where the level of production is small overall, but environmentally or economically important. Even though the wording is such that this may include arable crops payments, the suckler cow payments are mentioned as an example. The Commission suggests to undertake "a case-by-case analysis to identify the potential risks from a move into full decoupling and the possible alternatives at regional level".

***Pros and cons of the proposal.*** In this area, the Commission's proposal is hardly a major change. Most countries have already chosen full decoupling in the arable crops sector. In those countries that have not, there does not seem to be strong opposition to move towards full decoupling at least in the arable crop sector.

The move towards full decoupling is clearly consistent with longer term objectives of reforming fundamentally the payments, eliminating the historical reference and the link with agricultural production, and granting them as a function of positive externalities and public goods provided by farmers. In addition, the move towards full decoupling would help simplify the CAP. The combination of the two systems with the "new" payments (SFP) and the old (coupled) payments has been an avoidable bureaucratic burden in nearly all Member States of EU 15 (except the UK, Ireland, Greece, Italy and Germany). The costs induced have been experienced by national authorities, and they can only blame themselves for choosing such an awkward system. But there may be some spillover effects on other EU Members, in particular because it provides more production incentives in some countries than in others.

The fear that cereal production would disappear completely in some "intermediate regions" (with a limited comparative advantage for producing grains) was the main motivation for countries such as France to maintain some coupled payments in the arable crop sector. The market conditions are such that this fear has disappeared in the immediate future. However, in the beef sector, those countries that have kept coupled payments feared land abandonment in some areas. This concern remains. It is conceivable therefore that coupled support for particular activities, providing public goods and agricultural production as joint products, is a reasonable solution in certain Member States. The "case by case" attitude of the Commission seems therefore appropriate. The only significant risk with such an option is the possibility of distortions of competition. However, provided that the "case by case" analysis is restrictive enough and does target some regions where agricultural production is a source of positive externalities, the risks are limited.

### **3.1.3. Capping and cut-off limits**

The Commission proposal includes two types of measures that might channel increasing amounts to the second pillar of the CAP. The first is reductions in the largest payments which are discussed in this section. The second more important source of additional money for the second pillar would be increased modulation (yielding about 2.9 billion euros).<sup>11</sup>

***The consequences of the Commission's proposals on capping.*** The magnitude of the distribution effect based on the illustrative thresholds for the degressive reductions proposed in the Communication can be assessed using the Commission's figures on the distribution of direct payments across farms for 2005 (the latest year for which these figures are available) and ignoring policy changes in the pipeline such as the dairy premiums. Less than 25,000 farms in the EU-25 would be affected, or less than 0.4 percent of all holdings. Between them, these holdings receive around €4.7 billion of the €32.5 billion of direct payments, or over 14 percent of the total (Table 3.1 and Table 3.2). But because the degressive cap would be applied on a sliding scale, the savings would amount to only around €500 million, or around 1.7 percent of total payments in that year. It would be a maximum figure, as the introduction of a cap on payments would result in adjustments (splitting up) of farms.

---

<sup>11</sup> To avoid repetitions we will discuss intrasectoral impacts of this modification of the current system of direct payments mainly in this section whereas the implications for the second pillar and public funding, for example through modulation, and expenditure budgets are addressed in Section 3.6.

In terms of the amounts of money involved degressive capping at the rates proposed by the Commission will have largely an optical effect. However, this does not hold for Germany, which has a large number of very large farms in the areas of former East Germany, where agriculture was collectivised under Communist rule<sup>12</sup>, see Table 3.2. Note that this would not change the distribution of payments over Member states if the savings on the largest and smallest farms were (indeed) used for payments under a modified Article 69 in the same Member state where the savings occurred.

**Table 3.1. Distribution of direct payments beneficiaries by payment class, EU-25, 2005**

Payment class (euro)	Number of beneficiaries	% of total beneficiaries	Cumulative number of beneficiaries	Cumulative % of total beneficiaries
<1,250	4,361,930	62.80%	4,361,930	62.80%
>1,250 and <5,000	1,295,700	18.66%	5,657,630	81.46%
>5,000 and < 100,000	1,264,400	18.20%	6,922,030	99.66%
>100,000 and < 200,000	17,640	0.25%	6,939,670	99.92%
>200,000 and < 300,000	3,070	0.04%	6,942,740	99.96%
>300,000	2,790	0.04%	6,945,530	100.0%

**Table 3.2. Distribution of direct payments by payment class, EU-25, 2005, €000**

Payment class (euro)	Direct aids paid	% of total direct aids	Cumulative direct aids paid	Cumulative % of total aids paid
<1,250	1,592,477	4.90%	1,592,477	4.9%
>1250 and <5,000	3,405,494	10.48%	4,997,971	15.4%
>5000 and < 100,000	22,842,503	70.28%	27,840,474	85.7%
>100,000 and < 200,000	2,338,809	7.20%	30,179,283	92.9%
>200,000 and < 300,000	733,157	2.26%	30,912,440	95.1%
>300,000	1,589,653	4.89%	32,502,093	100.0%

Source: European Commission, 2007, Indicative Figures on the distribution of aid, by size-class of aid, received in the context of direct aid paid to the producers according to Council Regulation (EC) 1259/1999 and Council Regulation (EC) 1782/2003, Annex 1, Financial year 2005.

<sup>12</sup> Fighting against losses of premiums during negotiation of Agenda 2000 policy makers of the New Laender proposed a franchise amount per worker (AWU) because these farms (co-operatives) often employ 40 to 60 employees. Under Article 4 entitled 'Modulation' of Regulation 1259/1999 establishing common rules for direct support schemes under the CAP a number of criteria which Member States could use on a voluntary basis to modulate funds from Pillar 1 to Pillar 2 were established.

**Table 3.3. Impacts of the capping proposal in EU25 Member States**

Country	Recipients affected	Percentage	Savings (€millions)	Percentage
Belgium	95	0.2%	<1	0.1%
Czech Rep	540	2.9%	4.4	2.1%
Denmark	680	1.3%	14.4	1.6%
Germany	5310	1.6%	269.9	5.4%
Estonia	10	<0.1%	<1	<0.1%
Greece	50	<0.1%	1.0	<0.1%
Spain	2720	0.3%	55.7	1.2%
France	3560	0.8%	16.4	0.2%
Ireland	310	0.2%	1.6	0.1%
Italy	2290	0.2%	62.5	1.7%
Cyprus	0			
Latvia	0			
Lithuania	10	<0.1%	<1	<0.1%
Luxembourg	0			
Hungary	380	0.2%	5.0	1.6%
Malta	0			
Netherlands	140	0.1%	23.5	4.3%
Austria	60	<0.1%	3.4	0.5%
Poland	100	<0.1%	2.3	0.3%
Portugal	590	0.3%	6.0	1.1%
Slovenia	0			
Slovakia	170	1.4%	1.4	1.7%
Finland	20	<0.1%	<1	<0.1%
Sweden	370	0.6%	6.6	1.1%
UK	6100	3.8%	78.5	2.3%
EU-25	23500	0.32%	554.3	1.71%

Source: Calculations by Jack Thurston based on European Commission, 2007, Indicative Figures on the distribution of aid, by size-class of aid, received in the context of direct aid paid to the producers according to Council Regulation (EC) 1259/1999 and Council Regulation (EC) 1782/2003, Annex 1, Financial year 2005, [www.farmsubsidy.org](http://www.farmsubsidy.org)

***Is the proposal consistent with longer term objectives?*** The Commission proposal is acknowledged to be a response to public criticism of large payments at the top end of the distribution. Apparently, it has been accepted in the Commission that the compensation history has become insufficient foundation and that the current direct payments are at least partly income support granted without justification and alignment with common standards in social policy. For this reason, the Commission's proposal might be considered a first and moderate step in the right direction.

However, it may also be considered as a defence of a system that is fundamentally untenable. If direct payments are social policy their funding and design would usually fall under national competences. In fact, the proposal of the Commission can be seen as a long term strategy to progressively phase out those payments that are not justified by the provision of public goods or externalities.

But the long term vision is not explicitly stated, not even as a possible strategy for the future. It is equally possible therefore to read the current step as purely defensive of old farm support, accepting just enough modification to counter distributive criticism while avoiding more fundamental reform and without answering the question why an EU income policy is needed in addition to national social policies.

***Efficiency impacts.*** The effect of capping would be to discriminate against larger farms which are often considered to be precisely those that can reap economies of scale and which are thus likely to be more efficient on average. It may be argued that if direct payments are not income support (which would be under national responsibility), but represent, taking into account further adjustments of cross compliance obligations, some type of payments for positive externalities there is little reason why the payments given to large and often efficient farmers

should be cut more than those of smaller farmers, who do not necessarily supply more public goods. If it is admitted that one should move away from the logic of compensation altogether, the recipients of large payments that provide large amounts of public goods should not be penalized.

Larger farms might respond to degressive capping payments with genuine fragmentation of large farms, creation of separate legal farm entities or the transfer of ownership into the names of family members. However this would be at least additional administrative burden and unnecessary waste of managerial capacities from an economic point of view. To avoid these farm adjustments "on paper" it is conceivable to introduce a progressive scheme with many small steps (for example as in income tax schedules of some EU Member States such as Germany) instead of the illustrative steps given in the Commission communication. In particular the large step from 25 to 45 percent is likely to induce splitting-up of farms.

At the lower end of the payment distribution the Commission proposes increased lower cut-off limits, but without illustrative numbers permitting quantitative assessment. However Tables 3.1 and 3.2 above indicate that a threshold of €1250 would affect less than 5 percent of total aid but 63 percent of all recipients. Many of those will be in the New Member States. At the moment these have often set the lower threshold higher (1 ha) than the EU prescribed minimum (0.3 ha) to promote structural change in this subsistence segment of agriculture. Higher cut-of limits could certainly save significant administrative cost.

## **3.2. Market management**

### **3.2.1. Set-aside and other forms of supply control**

The Commission's communication suggests to permanently abolishing the current obligation on farmers to set-aside 10 percent of their land each year. The Communication states that "The foreseeable demand and supply situation for cereals, including the demand linked to the fulfilment of the biofuel target set by the EU, argues for mobilising land which is currently kept out of production through the compulsory set-aside scheme".

Compulsory land set-aside was introduced within a mix of measures (lower intervention prices, direct payments) in the 1990s. The main purpose was to limit surpluses that caused large budget expenditures through export refunds. Because of the way the single farm payments entitlements are activated, set-aside remains de facto a condition for receiving SFPs for those producers that received arable crop payments. Since the 1990s, the rate of compulsory set-aside has been used as an adjustment variable to market condition. While it has varied between 5 and 15 percent of land devoted to arable crops since the early 1990s, set-aside will be temporarily set at zero for the next harvest.

*Pros and cons of the proposal.* There is a broad consensus among economists that the obligation of setting land aside is a particularly inefficient way to support prices. Indeed, it is more or less like imposing a negative productivity shock on supply, resulting in higher production costs, given that the costs of maintaining say 10 percent of the land idle is added to each unit of output sold. As set-aside only restricts land, the optimal input mix, in particular the optimal intensity in terms of fertilizers and pesticides, will be biased upwards on the remaining surface. The proposal to get rid of this instrument must be supported from an efficiency point of view. The Commission's proposal also makes a lot of sense if we take a longer term perspective. Because the regime is cumbersome, the elimination of compulsory set-aside should pave the way for a welcome simplification. Such a move can only facilitate the future phasing out of SFPs and transition to a system of payments linked to the provision of public goods.

Fears that ending compulsory set-aside will endanger the development of agro-fuels, which benefit from a lower opportunity cost of land seem misplaced.<sup>13</sup> Currently, agro-fuels grown on set-aside land only account for one third of production.

There is, however, one main drawback to the abolition of compulsory set-aside. A major matter of concern is the threat to biodiversity. There is evidence that the other two thirds of the 4 million hectares of compulsory set-aside land that are left idle act as a major refuge for wildlife. Non governmental organisations have presented evidence that, in Austria and the UK, set-aside was the single most important factor determining the density of particular species (Birdlife, 2007a and 2007b). In the UK it appears that rotational set-aside may have compensated for the loss of winter stubbles over time, but for some species long run (non rotational) set-aside would be needed (Hodge et al., 2006). In addition, compulsory set-aside has a leverage effect on other conservation policies: for example, when land must be kept idle, some additional conservation policies have a low marginal cost. Typically, it is rather inexpensive to provide payments for farmers to spread flower seeds. This might be an effective measure to limit the sharp decline in pollinating insect populations, considered to be a major threat for future fruit and vegetable production in the EU (Vaissière 2007; Steffan-Dewenter 2005). Finally set-aside has evidently reduced the average use of fertilisers and pesticides and thus total emissions from EU agriculture.

Uncertainty persists regarding the way farmers will put some land back into cultivation and in which areas (Box 3.) It is likely that set-aside will be more limited than in the past to land with marginal agronomic interest. Set-aside could concentrate on particular regions. While the environmental issue is certainly not a sufficient reason to maintain compulsory set-aside, it will be necessary to strengthen environmental policies in time in order to compensate for the environmental and recreational benefits of set-aside. Depending on regional environmental conditions this may require promoting voluntary set-aside on a perennial basis, biodiversity corridors and lifelines. These compensatory measures would have to be set up quickly to avoid high biodiversity losses if set-aside land, that may have developed over more than a decade into a valuable ecological refugee area, is suddenly subject to ordinary agriculture because the set-aside obligation is eliminated before attractive voluntary measures have been put into place.

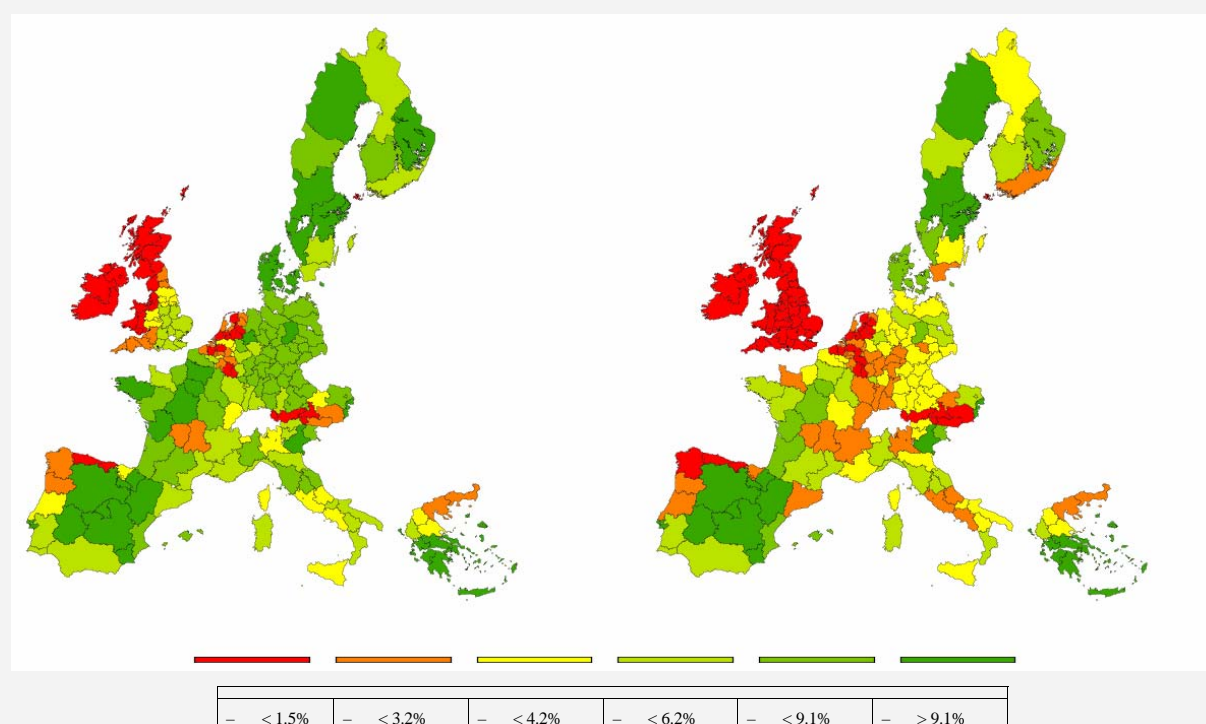
---

<sup>13</sup> It is noteworthy that crops can be grown on land set -aside (up to a certain limit resulting from the Blair House agreement with the United States) as long as production is not sold into either food or feed markets. One fourth of the 3.8 million hectares of land under the set-aside scheme is currently used to produce agro-fuels.

### Box 3. Ending compulsory set-aside

It is not easy to assess the consequences of a removal of the set-aside requirement, given that Europe is very heterogeneous. In an evaluation of set-aside in the 1990s rotational set-aside turned out to dominate in the Netherlands, Germany, UK, Finland and Spain whereas a fixed set-aside turned out more important in Denmark and France, with some tendency for fixed set-aside to increase (Oréade-Brèche 2002). An unknown part of set-aside areas, in particular fixed set-aside, is likely to remain fallow even after elimination of compulsory set-aside, because these areas were unproductive or difficult to access. This may occur to an even higher extent for voluntarily set-aside. The following map with CAPRI results is based on the assumption that obligatory set-aside land would fully return into production.

**Figure 1. Total of unpaid fallow land and set-aside in EU15 countries**



Note: Figures in percent of agricultural utilisable area under an MTR reference run and with a zero compulsory set-aside rate in 2013.

The impact on total ‘non-productive’ agricultural land will be larger with a larger initial compulsory set-aside area (where shares of arable land and professional producers are high) and a low share of unpaid fallow land and voluntary set-aside (assumed to be not directly affected). These conditions are met in particular in Eastern England but also a number of other regions.

### 3.2.2. The proposals for dairy quotas

The Commission has made it clear through various speeches by EU Agriculture Commissioner Fischer Boel that abolition of milk quotas was a longer term objective. The Commission's communication states that the "reasons for which the EU dairy quotas were introduced are no longer valid" and proposes a strategy to ensure a "soft landing" for the quota regime. The document presents a gradual quota increase as the best way to do so. The document also identifies adjustments to intervention and the superlevy fines payable by milk producers who exceed their quotas. Even though this is not formally stated and the wording remains particularly careful, this suggests that intervention would be phased out, or at least reduced, and



that the superlevy would be softened over the transition period. The Commission also stresses that measures might be needed to mitigate the expected negative impact in mountainous regions such as adjusting Article 69 of Regulation 1782/2003 for this purpose.

*The precise quantitative composition* of this policy package is said to follow from ongoing analysis. Several major studies are currently being prepared with results available some time in 2008. At the moment the empirical knowledge of the consequences is still incomplete, best perhaps on likely production and price effects, as a number of studies have been carried out in the recent past (

Table 3.4):

**Table 3.4. Impacts on EU raw milk production and prices in quota removal scenarios**

Study	Years	Scenario	Rent	Prices:	Quantities:
Lips, Rieder 2005	1997	Quota + export subsidy abolition vs. Pre Agenda 2000	~ 20%	-22%	3%
Langley, Somwaru, Normile 2006	2000	Quota abolition (EU+ Can) vs. Pre Agenda 2000	20%	-9%	4%
INRA-Wageningen Consortium 2002	2000-14	Quota abolition vs. Agenda 2000	~40%	-34%	11%
Bouamra-Menemache, Requillart 2005	2003-14	Quota +14% vs. MTR+WTO agreement	~40%	-19%	6%
FAPRI-Ireland Partnership 2007	2004-15	Quota +20% vs. MTR	~ 20%	-7%	4%

Summing up this conflicting evidence we may say that released of the milk quota EU production of raw milk would increase by up to 6 percent whereas milk prices could drop by about 10 percent with a large margin of uncertainty (0%-20%) depending on the assumptions.<sup>14</sup>

The associated income effects have been investigated for selected Member States in Bouamra-Menemache, Requillart (2005). They range from falls of 5 percent to 13 percent on the country level as the price drop of 19 percent is partially compensated by additional production. However, in specific farm types (farms with a large dairy herd) and regions these losses may exceed 30 percent. As Bouamra-Menemache, Requillart (2005) found a rather high price impact of quota abolition, country-level losses of 13 percent may be quite pessimistic and therefore on the safe side from a farm perspective.

*Is the Commission's proposal consistent with long term objectives?* First of all an abolition of the quota regime will stimulate structural change and reallocation of milk production between producers. Currently the transferability of quota rights is far from costless in many EU countries (OECD 2005, FAPRI-Ireland Partnership 2007, Isermeyer et al. 2006) such that efficiency gains may be expected, in particular in countries with a restrictions on quota transfers (ties to land, deductions etc.). Furthermore, the quota system also puts additional demand on managerial capacity of farmers, public staff and dairy managers which could have been devoted to increase productivity. It could be symptomatic that Canadian farms in Ontario, having adjusted to decades of quota management, are found clearly less efficient than their Wisconsin counterparts operating under the same natural conditions on the other side of the border (Isermeyer et al. 2006).

In addition to increased efficiency from structural change standard efficiency gains are also a quite usual result from applied welfare analyses undertaken in the context of dairy studies. In Bouamra-Menemache, Requillart (2005) the overall gain of the 14 percent quota expansion (rendering quotas almost irrelevant) achieves an overall welfare gain of 1,7 billion € with a clear

<sup>14</sup> The analysis by the INRA-Wageningen Consortium (2002) stands out with the highest impacts for two reasons. First of all the quota rents used in the analysis were relatively large and second the reinforced price cuts of the Luxembourg reforms (MTR package) were not yet built into the analysis. These price cuts were incorporated in the successor study Bouamra-Menemache, Requillart (2005) which also includes more refined trade modelling and the EU enlargement. Most recent studies gave still lower price and quantity impacts which is mainly due to the lower quota rents assumed.

reallocation from producers (-2.5 billion €) to consumers (+3.9 billion €). These efficiency gains need not occur in a second best environment but for the removal of major distortions this is the standard result.

Regional efficiency aspects are more difficult to assess. The ranking of regions is empirically contentious and depends on data and methodological choices. It is certainly appropriate therefore that these issues should be investigated in more detail in 2007 and 2008. Additional environmental costs might be caused in expanding regions if these are already suffering from an excess supply of manure. This may hold if production further concentrates in well known centers of production (e.g. Netherlands, Belgium, parts of Germany). The Communication mentions negative impacts on mountainous regions but it is difficult to see why dairy production delivers environmental services that could not be supplied by suckler cows, sheep or even meadows in "good agricultural condition".

However, the Commission also refers to 'cohesion' impacts of regional reallocations of dairy industries. Attempts to slow down the decline of an uncompetitive dairy sector would not help in the long run. If however, some funds in support of innovation (say for information technology infrastructure) were re-channelled towards mountainous regions this would be also in line with the Lisbon strategy. It should be noted that additional support for mountainous regions should also consider that the proposed move towards a flat rate payment would already provide some additional support to (minimal) cultivation of areas. If entrepreneurs are liquidity constrained, this may also stimulate investment in these regions. Coherence of policies would require some assessment of all or most regional impacts of the envisaged Health Check measures.

Moving from efficiency to distribution we may note that a part of the economic losses from declining raw milk prices will be borne by owners of quota rights, a point frequently considered as an increase in distributional fairness. This assessment is understandable when thinking of owners of large former dairy farms who had diversified away from milk to beef and receive quota rents as a comfortable top up income. The devaluation of quota rents may be less welcome when it hits a retired former owner of a small dairy farm who had to stop dairying for physical reasons and counted on the quota rent as a major part of his old age pension. Empirical knowledge on the distribution of quota rent revenues similar to the distributional information on recipients of direct payments does not seem to be available even though it may be expected that personal income and quota rent revenues will be positively correlated. Given this lack of information it may be argued that the distributional merits (or drawbacks) of quota abolition should not weigh heavily in an overall assessment.

How to ensure a soft landing? If the quota abolition as such is difficult to criticize from an economic perspective we may look at various management options for soft landing strategies:

- Quota increase with some politically determined allocation across MS.
- Quota increase with some tradability across borders.
- Reduction of the super-levy.

The first option leaves the decision on which Member States may increase their production in what amount to the policy makers of EU and national institutions. The most probable result, an equal proportional increase in all Member States, would limit expansion of efficient producers. At the same time it might stimulate expansion of inefficient producers who could benefit from "free" quota rights at a time where market prices have not yet adjusted to their lower equilibrium values.

Quota tradability is a common recommendation by economists and has proven useful where market institutions have been established. However cross border trade, at least if uncontrolled,

would completely return the competence to decide on regional reallocations to the market which policy makers are unlikely to accept in the short run. Partial tradability, say limited to the increased quota endowments, could be a compromise involving smaller political risk but also smaller benefits. It might be argued, however, that the administrative costs to set up a partial tradability system are prohibitive if quotas are completely abolished in a few years in any case.

The reduction of the superlevy may appear to be inequitable if the levy is considered the penalty for a criminal or at least socially undesirable act. Alternatively the superlevy may be considered the ordinary price for additional production rights offered by the public sector, similar to auctioned CO2 emission rights or particular import licences. Viewed in this way a reduced superlevy combines the efficiency merits of tradability with some political control (if the levy may be reassessed in case of too strong production growth). It has been argued that this option would complicate farm management and increase administrative cost compared to a simple quota expansion (FAPRI-Ireland Partnership 2007). On the other hand this additional complexity of farm management (deciding on the optimal output level) is exactly what farmers have to cope with after 2015 such that this preparation may be considered an additional advantage rather than a drawback.

#### **Box 4. WTO risks of Article 69 support to dairy farming in mountainous regions**

The proposed application of Article 69 to support dairy farming in mountainous regions (“to keep production in place”) is certainly risky in terms of WTO law. Under the existing Uruguay Agreement on Agriculture it is possible that payments specifically given to dairy farming will be considered a new coupled support which is prohibited. But even if this is considered just as a modification of existing support to dairy a large future cut under a new agreement might imply that the product specific AMS would be exceeded, at least if the regional scope is not very limited. This risk is impossible to assess at this point in time because the future level of permissible AMS, the future level of de minimis payments and even the whole future of the "Blue box" are unknown.

Assuming that a Doha Agreement will not be agreed for the time being, the expiration of the Peace Clause permits agricultural subsidies to be assessed under the general rules of the Agreement on Subsidies and Countervailing Measures (SCM), as seen in the Cotton case. According to the SCM all sector specific subsidies are either prohibited (export subsidies) or actionable allowing countervailing duties for affected products. Exceptions are for subsidies in the area of research (Art. 8.2a), in order to adjust to changes in environmental law (Art. 8c) or to support regional development (Art.8b). The level of support according to the SCM is restricted to a certain percentage related to real costs (e.g. for adapting to changed environmental legislation up to 20% of the adoption costs). Furthermore, Article 69 support would be clearly sector specific and difficult to bring under any of the exceptions mentioned above. Compensating measures under Pillar 2 would be more difficult to attack under WTO law, in particular if this is geared towards regions rather than agriculture or even more precisely dairying. A more open eligibility would also be more in line with the territorial approach to Rural Development promoted in the 2005 reforms (see section 3.4.3).

### **3.2.3. Other forms of market support**

The Commission does not make many precise suggestions regarding further reforms of the instruments for market management, stating that more examination and monitoring of the market situation and the intervention schemes are necessary. However, the Communication recommends phasing out intervention buying for barley and other coarse grains, in line with the model agreed earlier this year for maize (i.e. the introduction of maximum buying-in quantities, reduced over a period of time to zero). The Commission argues that bread wheat intervention

would suffice to provide "an appropriate safety-net support" for the grains sector, while allowing other cereals to "find their natural price level".

The proposal is in line with the general orientation of the CAP, i.e. that producers should be more responsive to market price signals. Given the prospects for higher prices, it is clearly the right timing to reform the intervention system. The questions raised by the Commission's proposal are threefold: Have we reached the appropriate level of public intervention? Is intervention sustainable given a larger set of constraints? Is "bread wheat" a good proxy to drive prices on the whole grain markets?

***The rationale for further reducing intervention.*** The progressive dismantling of intervention that has taken place since 2002 raises the issue of whether or not the right level of involvement of public authorities has been reached. Intervention has already been made inactive for many agricultural products, either formally or de facto. The present proposal by the Commission keeps a basic intervention mechanism for wheat, but clearly sees it as a safety net.

The idea that the EU keeps instruments to set threshold levels —at least during a period long enough to see how markets evolve — makes a lot of sense. Dismantling completely all instruments would be a strong bet on the prospect that prices will remain high and that there will be a "natural floor price", in particular because of the use of agricultural products for energy. While there are signs that this could occur, uncertainties remain (see Annex 2).

***Is intervention sustainable?*** Because of the planned dismantling of export refunds, intervention will have to be limited to a price that cannot exceed significantly the average world price in the future. Indeed, agricultural products purchased under public intervention will eventually have to be sold without subsidies. This pleads for an intervention price that is indexed on a moving average of world prices and that is mainly designed to smooth fluctuations.

However, even this system would not work if tariffs were cut to very low levels. Indeed, even in short periods where the world price would be lower than the "safety net", imports might flood the intervention system if tariffs are close to zero. In such a case, rather than relying on the traditional CAP public purchase for intervention, a safety net would have to be implemented through a floor price and a system of deficiency payments. The Commission has always considered that this was not an issue because the way the Commission's budget was funded did not allow for unpredictable expenditures. There are also fears that the Council or the Parliament would find it difficult to resist using any unspent agricultural budget, even though it is embedded in a "fund" designed to face exceptional circumstances. Resistance from the Commission to such an option is certainly based on experience (the use of unspent CAP budget for the Galileo program in 2007). However, the fact that the EU budget process is at odds with the constitution of a fund for unpredictable expenses is an administrative constraint that can be solved in cooperation with the European Parliament. In any case, the case for deficiency payments as an alternative to the intervention system will only be raised if border protection fell to a very low level. Much will depend on the results of the Doha Round market access provisions and whether an agreement on agriculture is eventually reached.

***Is "bread wheat" the right proxy?*** The Commission does not suggest reforming the price safety net for beef and the existing provisions for livestock sectors. Regulating bread wheat is seen as sufficient to drive the price for most cereals.

Bread wheat can refer to a set of objective qualities, the main one being protein content. In that case, limiting intervention to bread wheat would simply impose stricter quality criteria for wheat to be eligible to intervention. In practice, the standards for wheat to be eligible to current intervention are such that the eligible wheat de facto qualifies as bread wheat. So, the Commission's proposal does not change much on this issue. High quality standards requirements

are a reasonable option. EU producers have made considerable efforts to improve wheat quality over the past fifteen years and the period where poor quality wheat, dairy or wine was produced for intervention is largely over. Strengthening the quality criteria for intervention is welcome in the sense that lenient standards would contradict this effort.

However, limiting intervention to "bread wheat" also means that the substitutions with other grains are limited, at least on the demand side. This could result in leaving the feedstuffs market largely unregulated. Typically, barley and maize are substitutes for the wheat normally produced for feedstuffs. Claiming that intervention of bread wheat "provides the appropriate safety net" for other grains deserves more investigation.<sup>15</sup> The price spillovers between bread wheat and coarse grains would take place mainly through supply side effects, which involves a time lag.

### **3.3. Risk and price fluctuations management**

The Communication states that the Commission will also look at how a future CAP could cope with both price and production risks, arguing that the extent of risk varies from sector to sector as well as geographically, and that a "one size fits all" approach would not be appropriate. Thus, the Commission suggests that part of the savings on modulation and second pillar measures could be used to deal with risks through dedicated measures, with a better targeting of beneficiaries as well as of contingencies.

*Is the proposal consistent with a longer term orientation?* Consider first the various production risks. The range of risks modern agriculture has to face becomes wider as farming becomes more intensive and the chains from farm to table longer, but also as biological farming emerges that abstains from using certain inputs. Many of these can be addressed by a mix of reduced exposure (climate control in greenhouses, use of pesticides), better prevention (vaccination of livestock), preparedness (food stocks) and coping (crop insurance) and, thus, by a combination of technical and economic devices. The question is to what extent the CAP should get involved in managing these. At any rate, the position of the Commission that the national or sub-national level is in a better position to assess risks and define their preferred solutions is defensible. Indeed, the guiding principle should be that risk management is an entrepreneurial activity par excellence and, therefore, primarily a task for the private sector: farmers, banks, insurers, processors and traders. Yet, government involvement may be required to address market failures in this field, some of which may be specific to agriculture. At any rate, most of this would be for the member state government as well as national and sub-national institutions to be concerned about.

Regarding price and income risks, until now the CAP has largely relied on price interventions and income transfers. After trade liberalization and removal of regular price support, a possible extension of the CAP might, therefore, consist of lowering the intervention prices for key commodities to floor levels where they begin to act as risk management tools that are seldom activated but remain available, nonetheless. In exceptional situations of world market surpluses this might lead to export subsidies, import taxes, or stockpiling. Similarly, to deal with shortages ceiling prices could be kept in place, with a dormant status until world market prices reach them to trigger import subsidies or export taxes, albeit that international solidarity might call for restraint regarding these upper bounds, as they could exacerbate famines. At any rate, such a price band would have to be kept wide enough to warrant its status as an emergency measure.

<sup>15</sup> In particular, it should be made clear whether definition of "bread wheat" refers to protein content / humidity standards or whether it is the one often used by the private sector, which involves particular wheat varieties, others being excluded irrespectively of their protein content. In the latter case, spillovers with other cereal markets would be very limited.

Beyond this, as mentioned already in section 2.1, the rationale for EU-wide policies is more limited and mainly consists of monitoring to maintain fair competition, given specified budgetary transfers among member states. In that sense, the EU Commission is certainly right, in the present situation, not to propose ambitious EU-wide instruments such as US-type countercyclical payments or the US-type revenue insurance scheme and to stress the importance of instruments at the Member state level that belong to the second pillar, i.e. either funded at the national level or benefiting from co-funding by the EU rather than being funded at EU level. Since the Communication is not very specific, it seems appropriate to formulate general principles for dealing with risk first and then review briefly how various financial instruments have played a role in agriculture.

***Some general principles for a risk management policy.*** Once the income protection through price interventions by the CAP has disappeared, it becomes important to ensure that farmers enjoy at least the same income protection as other members of society, with due recognition of agricultural specificities. Specific reasons would have to be provided for support in the sphere of risk management. These would presumably be the same as for aid to rural areas as such and essentially amount to help keeping living standards and economic activity at social acceptable and economically efficient levels. With respect to risk management in agriculture proper, two features appear to be crucial, relating to the nature of EU farms and the agricultural operations.

First, farms in the EU tend to be households as well as enterprises. This combined role has greatly contributed to their shock absorbing capacity, since it enabled the factors labour, land and capital to act jointly as residual income earners. However, it has also made household incomes vulnerable to shocks, particularly as farms have become more specialized. This may be problematic because eligibility for social security benefits is often conditioned on depletion of the private capital first. This capital was, however, invested in the farm often jointly with bank loans for which it served as collateral. Hence, for farmers any use of capital for consumption purposes undermines the continuity of the enterprise itself, particularly since banks tend to be reluctant to invest equity capital in smaller farms, or to provide consumption loans to farmers. To address this, the two functions of farm household and enterprise would have to be split more explicitly. For farm households a system with minimum income guarantees with, possibly subsidized, compulsory premiums would be required, whereas farm enterprises, particularly the smaller ones, might be assisted in restructuring their financial asset portfolios so as to acquire adequate credit lines after calamities, crop failures, and price shocks. Both may need dedicated risk management tools.

Second, these risk management tools have to be tailored to the specificity of agricultural operations. This obviously amounts to maintaining portfolios of physical as well as financial assets rather than focusing on a few financial instruments. Within such a portfolio, index-based insurance, as currently being experimented with in several developing countries (see Skees et al., 2004) might be a useful element, because it addresses the two common limitations of crop insurance (see Chambers, 1989 and Goodwin and Mahul, 2004) of asymmetric information and covariate risks. Asymmetric information causes moral hazard with farmers exaggerating crop losses or neglecting insured crops, which can only be countered by very costly on-site inspections. It also creates adverse selection, whereby insurers only admit low risk farmers, while high-risk farmers are most interesting in buying insurance. Index-based insurance seeks to address this aspect by offering indemnification according to a predetermined schedule that depends on objectively measurable variables such as rainfall and market prices. To cope with adverse selection, a scheme may have compulsory admission, while the degree of solidarity among policy holders with different risk profiles can be controlled via the differentiation of premiums by risk class. Government may in turn decide to subsidize the most vulnerable classes in this respect. The other limitation is covariate risk. Agriculture tends to generate covariate risk

to the extent that all farmers in an area face the same weather and price shocks, due to changes on world markets (some of which results from fluctuations in currencies). Consequently, their net revenue may vary significantly, albeit the empirical evidence on this is not so clear as firms outside agriculture also face shocks in, say, energy prices jointly. The financial sector in Europe should in principle be in a position to deal with these, through reinsurance as well as many other ways of portfolio diversification. In the end it will, just like in other fields such as health insurance, be a matter of negotiation between stakeholders and government whether any subsidies are required to compensate for the compulsory admission of high risk participants.

Government involvement may be required in defining such a scheme, because the indemnity scheme of index-based insurance, unlike an asset portfolio, is not tailored to the risk profile of the individual farmer buying it. This means that its specification has to be agreed collectively both in terms of the critical variables entering it and the amounts provided under various circumstances. This is particularly the case when subsidy is provided but also when the arrangement is self-financed because, as is usual in social security, these modalities define the solidarity among participants as well as the scope for layering of risks and the associated reinsurance (World Bank 2005a).

*Subsidized crop insurance*, whether index-based or not, has the special feature that it benefits from Green Box status at WTO. Because of this, public authorities attempting to provide income support with such a status may become too much involved in the insurance market. The example of the US crop insurance scheme shows that this could result in considerable costs for taxpayers and a particularly inefficient way to support farmers (Box 5.). As the ongoing debate on the 2007 US farm bill shows, once these policies are in place they are difficult to eradicate because of the vested interests at stake. In addition, public intervention tends to introduce major bias in the insurance market itself, since it affects the behaviour of private agents.

#### **Box 5. The US Crop Insurance System: An example not to follow**

The US crop insurance program is funded by taxpayers, regulated by the US Department of Agriculture Risk Management Agency, but sold and serviced by private business. The large involvement of government was justified by the nature of the agricultural risk. The private sector is reluctant to offer insurance when claims vary dramatically from year to years (drought, floods, etc.) and risks are highly correlated between individuals. Most economists consider that a purely private crop insurance market would not exist because of the nature of the risk, and that the public sector needs to provide backstop protection in years with large losses for a crop insurance program to work. Typically, government involvement has resulted in using insurance programs that are largely subsidised (Glauber 2004). Farmers pay only roughly 40 percent of the amount needed to cover insured losses. Throughout the 1980s and 1990s, the Congress increased public subsidies in order to expand the coverage of the insurance program, which was seen too limited.

An evaluation of the crop insurance program by Babcock and Hart (2006) shows that for each dollar received by farmers in net crop insurance payment in 2005, the taxpayer had paid out \$US3.3. In four years, since the provision of the Agricultural Risk Protection Act fully came in force, taxpayers have paid US\$15.1 billions to deliver US\$8.82 billion to farmers. This very low ratio of transfer efficiency is similar to the most inefficient programs that the EU got rid of in the 1990s.

Insurance programs are costly to administer. Company salaries and agent commissions must be paid and this creates a gap between the amount of premium paid and the average returns. In the US program, this is funded by subsidies, so that insurance companies are currently paid administrative and operating subsidies equal to about 21.5 percent of the premium (i.e. US\$840 billion dollars per annum). Such a sum results in large rent seeking and lobbying pressure. Administrative and operating subsidies have increased by 60 percent since 1997 even though insured acreage has increased by only 35 percent. In addition, Babcock and Hart show that in years in which underwriting gains are positive, companies get to keep a larger proportion of the gains than they have to pay the government, while in years in which they are underwriting losses the opposite occurs, because of the provisions of the Standard Reinsurance Agreement.

While the scheme was designed to compensate companies from the risk that they retain, and also for the constraints of offering insurance to all eligible farmers and not being able to pick their customers, the asymmetry between keeping the benefits in "good" years and experiencing losses in "bad" years generates a considerable rent, which Babcock and Hart estimate to exceed US\$430 million a year. That is, considerable savings could be obtained by making underwriting gains and losses the sole responsibility of the federal government. The US example suggests that if EU first pillar budgets were to shift from the SFPs to an ambitious EU funded insurance scheme, the benefits would be uncertain for EU farmers, given the slippage of the budget to insurance companies and administration costs.

To sum up regarding reliance on risk management tools, integration of farm households and farm enterprises into the risk coping institutions at member state level with due provisions for agricultural specificities would seem the major challenge in the years to come, as opposed to envisaging insurance-based deficiency payments as a new incarnation for the CAP.

Many of the risks farmers face can be dealt with through their production decisions. Their financial intermediaries will help them deal with their uncovered risks, as well as determine the appropriate mix of financial instruments, given the risk profile of individual farmers, particularly for farmers who are relatively well off. These intermediaries will generally propose to integrate all risk management assets within the overall finance strategy of the farm enterprise, based on expectations and uncertainties in the revenues over the farmer's lifecycle, the expected appreciation of physical assets such as land and real estate, and the payment obligations to siblings and heirs. Clearly, individual preferences and risk aversion play an important role in defining the portfolio, for example to what extent an accumulated pension could be used as collateral. Such choices will have to account for the regulations prevailing in the country regarding retirement age, and various fiscal provisions for instance to cover financial losses. In short, the mainstreaming of risk management into social security and financial intermediation is a highly differentiated operation that has to be tailored to individual needs and largely regulated and supervised at national level. Yet, provision of a minimum of conceptual guidance by the Commission might ease the transition under diminished CAP support, especially because the number of risk management tools currently proposed and criticized in the agricultural economics literature runs the danger of disorienting some agricultural policy makers with limited experience in this domain. We list a few.

**Catastrophic risks ("cat risks")** are risks that the private sector finds hard to deal with and for which government may be asked to serve as agent of last resort. Gollier (2005) points out that at a time of crisis government may be in a better situation than private agents to smooth shocks through buffer stocks and borrowing, because it has the credit worthiness and the long enough time horizon to do it. Of course, the concept of a crisis is not very well defined. What may be a crisis for a small region is only a wrinkle for the larger unit. This is also why management of catastrophic risk generally needs a combination of mutual arrangements with the unaffected population helping the victims as well as precautionary reserves of both goods and financial



assets. In fact, a catastrophic shock affecting agriculture only, which may seem large for a region of the EU might not be very large for a private insurer with sufficient opportunity to reinsure internationally. However, major crises affecting agriculture also impact on overall infrastructure in a region, and cannot and should not be handled by the private sector alone. First, common private insurance excludes catastrophic risks and by doing so is able to offer insurance at lower cost. Second, catastrophes that destroy overall infrastructure need emergency interventions in the physical sphere by the military, the fire brigade and so on, that the private sector will find hard to mobilize under such circumstances, especially since it does not have the authority of requisitioning any assets. At any rate, crisis management is a part of security management, a core task of government, by vocation. Third, prevention of catastrophic risks requires governmental regulation. Fourth, when such emergencies occur disbursement of indemnification payments has to go hand in hand with the management of physical deliveries and in some instances even requires rationing, short of which price rises will cause the purchasing power of these payments to erode, and non-beneficiaries to suffer even more seriously than in the absence of the insurance. This could for instance happen if all the pig population of a large region was wiped out by some disease, and farmers only received money to buy new stock.

***Future markets and options.*** Forward contracts, futures and options on agricultural markets offer some opportunity to smooth risks over time<sup>16</sup> but they are only some of the many ingredients of financial portfolios that financial intermediaries may want to resort to. Agricultural economists noted as limitations that the underlying agricultural markets may be too thin and heterogeneous for viable forward markets to develop, and that these instruments are less effective in smoothing annual income fluctuations over prolonged periods and in addressing price variability between years (Gardner 1989; Lence and Hayenga 2001). Examples of arrangements relying on such instruments include Brazilian and Mexican programs where grain producers purchase a subsidized option premium from the program in return for a guaranteed minimum price at harvest, with the agency constructing pooled hedges for all individual participants using Chicago Board of Trade options contracts (as in the case of the Mexican ASERCA agency for grains). At any rate, rich farmers are no bankers and need financial intermediaries rather than government to help them develop a finance strategy, and poor farmers may need support but are not in a position to assure themselves of sufficient financial coverage, because they usually lack the necessary liquidity and collateral and are too busy in keeping their farm afloat to spend the time developing the necessary skills and knowledge in this domain.

***Storage.*** The impact of shocks on prices can be moderated by stockholding and under some circumstances stock operations can be profitable as well. However, the negative consequence is that the impact of a negative shock in one year in this way extends to the following years (Samuelson 1957), implying that even with shocks that are uncorrelated over time, stockholding induces positive autocorrelation in prices. Public stockholding obviously changes the incentives for the private sector to hold stocks. If an agency is committed to preventing prices from falling too low, the private sector will assume the price will rise while accounting for truncation at the floor price, and the public sector might end up holding the excess supply entirely. Similarly, the public stock will tend to reach exhaustion when the agency in charge firmly commits to maintain a ceiling price. Hence, because of its cost and risk of collapse, the system of public storage has rarely been efficient at stabilizing prices. Interest subsidies for private storage face less problems (Wright and Williams, 1991), but history has shown that one should not expect too much stabilisation from ambitious storage programs, such as buffer stocks, and since the

---

<sup>16</sup> A forward contract is an agreement to buy and sell an asset at a certain future time for a certain price. Commodity futures are commitments to make or take delivery of a good at a particular location and time. See Annex 4.

1990s this instrument has few proponents (Dehn et al., 2005). Furthermore, the need for storage has gradually diminished, due to market integration and globalization, whereby large quantities of food float on the oceans in large tankers that act as warehouse and can readily be redirected to the destinations where shortages or surpluses emerges. Finally, as far as food crops (e.g. maize) are concerned, the demand for basic staples has become far more price elastic over the years, because livestock has become a major user with much more flexible demand patterns than humans.

**Vertical contracts.** Contractualisation between farmers and processors is often proposed as a solution to reduce uncertainty in prices for goods, particularly those that are not commodities in the sense of having an exchange taking place on a market with multiple agents appearing on the demand as well as on the supply side, and that, therefore, also lack trade in derivatives. Under such a contract, processors share the risks with farmers. Naturally, processors can very well decide by themselves whether to conclude such contracts and do not need the CAP for it. Moreover, when processors are not interested, producers can form cooperatives, and have done so quite often in the past, whereby farmers receive fixed prices while the cooperatives operate on future markets to hedge their risks (cf. the ethanol industry contracts for grains). There are advantages of income and supply stabilization but also some drawbacks. One is that members of the cooperatives have strong incentives to default and the same applies to commercial contracts. In the processed fruit sectors of the EU, where contractualisation between farmers and processors is encouraged with public subsidies, it appears that if market prices become much lower than the contract price, the products delivered to processors become much less in quality than specified in the contract terms and are often purchased as cheaper grades on the spot market. Since these contract terms include up to thirty quality criteria, the moral hazard is significant, indeed. When market prices are higher than the contract prices, farmers claim that poor harvests prevent them from delivering. More generally, asymmetric information makes it difficult to apply any generalized contractual arrangement in markets with non-standardized products, and at any rate, vertical contracts cannot offer the appropriate instrument to reduce price fluctuations.

**Tax based policies.** Tax policies that smooth incomes by making it possible to spread losses and benefits over several years can offer a low-cost alternative to income stabilisation schemes. Tax incentives may also be used to encourage building up precautionary reserves of various kinds. Such arrangements are available in many member states, especially for small and medium size enterprises (e.g. the French system of "Déduction Pour Aléa"<sup>17</sup>). The danger in promoting them is obviously that they require adequate supervision to avoid misuse as tax shelters, i.e. for fiscal optimization rather than prevention of bankruptcy, especially if they apply to the full taxable income of farm households. Furthermore, the fiscal instrument has the practical limitation that, according to data from the Farm Accounting Data Network, a large number of farmers have low and even negative income, and hence not subject to income taxes. Since this holds in particular for specified products (beef, sheep, wine outside protected denominations of origin, etc.) this instrument has limited reach.

**Other risks.** Farmers face a variety of risk that go beyond climatic and price risks. Specifically, very few instruments have been implemented so far dealing with sanitary risks and food safety risks. Government intervention seems to be necessary in this sphere but many pitfalls have been addressed, generally related to asymmetric information (neglect of physical prevention measures) and to strategic behaviour (lobbying for risky policies). As mentioned earlier, private insurers are reluctant to deal with risks that involve large losses, tend to exclude risks that were

---

<sup>17</sup> The French scheme does not function well and is hardly an example for other countries, but it is being reformed so as to solve administrative obstacles that prevent an adoption by a large number of farmers, see Ménard, 2004.

not relevant when the contract was concluded (typically those related to unknown diseases or genetic engineering). In addition, insurance companies fear the changing jurisprudence in lawsuits. They also have limited information on the risk profiles in the sanitary and phytosanitary area, and lack ability to assess hidden actions (e.g. poisoning of livestock). Furthermore, the instrument of index-based insurance may not be appropriate for many of the risks that affect livestock production, because there is no clear index variable that could stand for the event triggering an outbreak of some disease, and because the number of farms affected is highly outbreak-dependent. Hence, it would seem that some social security (mutual insurance) type of arrangement, combining solidarity payments among members of the same sector with due tests and penalization of negligence and lawsuits of perpetrators, would, jointly with last resort assistance by government, offer some solution but the time is now more for experimenting with such arrangements than for rolling out any standard recipe.

### **3.4. Environmental and rural development policy**

The Communication proposes to "strengthen the second pillar" and offers as a key mechanism the increase of existing compulsory modulation by 2 percent annually in budget years 2010-13. In this section we will look at problems of agri-environmental payments and other rural development measures. This is preceded by an assessment of the Commission proposals on Cross Compliance which sometimes is another vehicle to reach similar objectives.

#### **3.4.1. Cross compliance of direct payments**

The Communication proposes that measures making payment of the SFP conditional on compliance with environmental and animal welfare rules be better targeted, and that some non-relevant measures should be abolished whereas others could be amended. The Commission proposes a review of the list of Statutory Management Requirements (SMR) set out in the current cross-compliance regulation, and the criteria which define Good Agricultural and Environment Condition (GAEC).

The main objectives of the Commission seem to concentrate on administrative simplification and increased efficacy through excluding irrelevant cross-compliance standards. The administrative burden falls both on the farm as well as the public institutional level. This burden would gain in weight if application were extended to the new Member States. On the other hand it might decrease over time if training and extension services turn out to be successful.

Additional costs of cross compliance are comprised on the farm level of (1) the compliance costs of non-compliant farmers for pre-existing legislation (19 SMRs) and (2) the criteria defining GAECs. If they are very high, farmers may opt to forego direct payments if strict enforcement would entail higher losses, possible on farms specialised in intensive animal production. Costs of compliance depend on various conditions (farm structure etc.) and include different components from production losses to augmented paper work. Disregarding particularities in certain Member States it appears (Jongeneel et al., 2007) that the potentially highest extra costs of compliance of SMRs are related to the Nitrates Directive (91/676/EC) and the Animal Welfare Directives for housing calves (91/629/EEC) and pigs (91/630/EEC). With respect to costs of GAECs it seems that in general the requirements are so minimal that they hardly impact current farming practices. The administrative burden at the institutional level results from the increased controlling system, i.e. larger samples and higher rates of controls sometimes on farm (like for animal welfare) but so far comparative studies are missing.

The additional benefits of cross compliance can be expressed as an increased level of a targeted objective, like enhanced environmental quality or as an increased degree of compliance. So far it is unclear whether and to what extent cross-compliance leads to an improved environmental quality.<sup>18</sup> However, there are other fundamental issues with cross-compliance that the Communication does not address, and that should be taken into consideration if one wants to make short term reforms that are consistent with a longer term objective. One measure-specific issue relates to the fact that no GAEC on sustainable water use exist.

*Is the Commission's proposal consistent with a longer term vision?* The first question is whether or not cross-compliance is a promising venue in the longer run. Most economists would subscribe to the "targeting principle" conceptualized since the 1950s saying that it is more efficient to use one instrument that targets a particular issue than to use a multipurpose instrument that aims at addressing several problems.<sup>19</sup> If the objective is to obtain an environmental effort (or animal welfare, food safety, etc.), the targeting principle suggests to abandon cross compliance, phase out the SFPs and design payments that will target directly the public goods or positive externalities provided by farmers. Especially for the food safety related SMRs the link is indeed weak: for food safety the processing sectors play a major role which is not addressed by the SMRs.

A justification recognises that the legal framework (SMRs, criteria for GAEC) has continuously developed in the last decades in EU Member States trying to counteract negative externalities from agriculture on environmental, food safety and animal welfare objectives. There is no reason to consider that farmers have a "natural pollution right" in all cases and that they should be compensated for not doing so. However, if regulatory constraints are not imposed on European competitors, the corresponding payments may also be viewed as compensation for these legal constraints. For future viability of this justification both EU citizens as well as WTO partners will require that there be no overcompensation. In this case the direct payments would also cease to be multi purpose. The demarcation line for the application of the polluter pays principle will be a contentious issue, mostly political with some economic aspects. An appropriate implementation of Natura 2000 schemes would seem to fall mainly under national responsibility but poor enforcement due to regional lobbying could call for some EU surveillance.

Regardless of their justification clear political statements have been made that "cross compliance is here to stay" (Fischer Boel, Brussels, 29 March 2007). In the future, public support in the EU will probably not be provided without some kind of environmental and other conditionality any more, as respect of basic statutory standards is an eligibility rule which is easy to communicate and appears in line with common sense. Accepting this some problems related to such conditionality mechanisms should be kept in mind.

The present requirements regarding SMRs and criteria for GAEC are designed for horizontally uniform implementation, and are thus comparatively lax. They are also enforced in a very relaxed way in several countries, with a low percentage of farms inspected, which moreover has been announced in public (1 percent of farms per year or 5 percent regarding animal registration) However, the increased sanctions in case of intention or repetition present a high punishment, which easily can exceed the amount of legal fines. Enforcement is strengthened due to this threat. Whereas cross compliance has been announced as here to stay it is equally clear

<sup>18</sup> Currently different research projects are aiming at an in-depth analysis on the net effects, e.g. the projects "Cross Compliance" led by LEI/Wageningen, "Cross compliance assessment tool" led by Alterra/Wageningen, the Cross Compliance Evaluation in the frame of the "Cross compliance network project" led by Institute for European Environmental Policy.

<sup>19</sup> Classical references include the work by Tinbergen, even though the theory is often referenced as Bhagwati's general targeting principle (Bhagwati 1971).

that the value of direct payments from Pillar I of the CAP will decrease over time. This reduces their effectiveness as a way to enforce standards. One answer can be to (increasingly) concentrate on those SMRs and standards where the cost-benefit-ratio appears to be promising, i.e. with high non-compliance, strong impacts on socially valued goods and low administrative costs, a strategy that is consistent with the Commission proposals. For other public concerns targeted specific programmes in the Second Pillar need to be applied or national enforcement via usual criminal law needs to be strengthened. Cross compliance may be taken to reveal that Member States did not enforce EU standards accordingly in the past. Where appropriate national enforcement of SMRs has been in place there is a risk of undermining pre-existing control and enforcement structures, or duplicated efforts. Therefore, the use of enforcement procedures performed by specialised authorities at national or regional levels should be strengthened (or at least not weakened).

### 3.4.2. Agri-environmental payments.

Agri-environmental measures account for roughly half of the EAFRD budget and they are the main measures that give a practical content to the concept of second pillar. These measures have been implemented since the beginning of the "accompanying measures of the 1992 reform", and after roughly ten years of significant programs, some thorough assessments have recently been published, often with a disappointing evaluation. Because they are costly to monitor and enforce, the cost of these programs is often disproportionate to their actual effectiveness. In addition, it seems difficult to extend them to countries with a very large number of very small farms such as some of the new members, because of transaction costs and difficulties in monitoring and enforcement. In brief, even though the reallocation of the budget from the first to the second pillar is conceptually desirable, in practice the difficulties to make an efficient use of the money devoted to environmental programs are formidable. The evaluation of the first generation of agri-environmental payments hardly suggests that this is an adequate way to spend a large share of the EU agricultural budget (see Box 1.).

The fact that effects of many existing AEM often cannot be proved satisfactorily together with the tightening budget for such measures highlights the need to look for existing successful and efficient examples as well as for new approaches. There are indeed cases where measures have been proven to be highly beneficial as indicated by the growing literature:<sup>20</sup>

- Measures specifically targeted at individual bird species in the UK (see eg. Kleijn and Sutherland, 2003, or European Commission, 2005). Field margins and hedgerows were shown to enhance the diversity of wild flora and fauna. Also schemes that aimed at reducing the input of agro-chemicals have proven to be beneficial for biodiversity (measures within REPS; schemes for integrated production in Italy). Further successful examples have been the restoration of wetlands in Sweden and late and very late mowing or grazing of meadows in Belgium (European Commission, 2005).
- The development of nature conservation plans for whole farm management is an innovative approach, permitting to involve the wider landscape rather than only looking at single plots. Examples are the "whole farm approach" in the UK or nature conservation plans in some regions in Austria, the latter ones being as well an example of co-operation between a group of farmers and lower nature conservation authorities.
- When conditions are result (outcome)-oriented, they are more closely related to the environmental benefits sought by the programme. A successful example is the scheme

<sup>20</sup> See, e.g. Kleijn et al., 2006; Braband et al., 2003; Hole et al., 2005.

“species-rich grassland” offered in some German regions (Osterburg and Nitsch, 2005). Farmers are free how to manage the contract area but have to prove the existence of a certain number of flowering plant species out of a list of 28 indicator species. Other examples for an orientation towards specific environmental goals are the Biodiversity Action Plan in England with detailed aims concerning certain habitats and species and bonus point systems in Germany and Austria.

- Case studies on agri-environmental measures impacts on biodiversity have shown success of long-term strategies going beyond fifteen years, and including the participative involvement of farmers utilising the yields from this extensive grassland (Schumacher, 2007; Michels, 2007).
- Also, mass statistical analysis based on farm accounting data (including data on mineral nitrogen inputs) and on soil monitoring data (residual nitrogen in autumn) have shown high and significant impacts of agri-environmental measures compared to situations without such support (Osterburg, 2005 and 2007; Schmidt et al., 2007). Due to high variance of conditions, data requirements on the control group without intervention are rather high. Providing empirical evidence on impacts of single regional AEMs in all years thus may be even impossible.

Where land management above the minimum requirements of cross compliance is highly desirable (e.g. grazing), agri-environmental measures should be targeted to such management and to certain designated areas, especially Natura 2000 areas. New, more dynamic and interactive approaches for implementing agri-environmental measures should be strengthened (e.g. result-oriented measures, whole farm plans, call for tenders, see Bonnieux 2007, Rousseau and Moons, 2006).

The weak point of EU agri-environmental policy has been so far to implement cost efficient programs and to minimize control and management costs. The Commission does not make detailed proposals in the Communication, but implicitly assumes that they may be overcome.

One of the guiding thoughts of agri-environmental schemes is that farmers are in the best position to manage the rural areas. In line with the idea that giving up farming will lead to abandonment and degrading of the natural environment, farmers are remunerated to stay put. Many schemes revolve around this idea, and are mainly concerned with assuring land management to prevent a loss in biodiversity and historical landscape. According to Dupraz and Pech (2007) these schemes are therefore close to the Less Favored Areas (LFA) measure. They reason it would be better to use a more simplified support scheme, like the LFA measure, to attain this goal rather than the agri-environmental measures, as a LFA-type of measure is easier and cheaper to administer.

### **3.4.3. Other rural development issues**

Instead of opening a necessary general discussion on the justification of a sector specific regional policy the Commission only focuses on some areas and agricultural sectors which may be affected by the changes of the first pillar, e.g. the possible negative impact that the abolition of quotas could have on dairy farmers in mountainous areas, to be tackled with specific national envelope measures. This suggests a rather narrow version of rural development as an "accompanying measure".

Compared to the EAFRD reform 2005 the current Commission's draft proposals on rural development is a step back as it does not refer anymore to any further harmonization or even integration of all Regional Policy Funds: even though territorial coherence is a declared relevant

principle – addressed in the Strategic Guidelines of Rural Development 2006 and as a relevant criterion used in the Commission's evaluation of the national Rural Development Programmes – no sign is given in the Communication regarding the future relation of Rural Development and Cohesion Policy.

### **3.5. Climate change mitigation and agro-fuels**

The Commission's Communication considers that agriculture faces new challenges in the area of climate change, bio-energy and water management. Agriculture will have to contribute more to curbing greenhouse gases emissions in the future, but because it suffers from climate change itself, it has to adapt, which involves a more sustainable management of water, in particular.

Regarding agro-fuels, the Commission reiterates the global energy roadmap, i.e. the 10 percent renewable fuel target in transport fuel. The Commission stresses the need to offer incentives to assist the development of the second generation of agro-fuels. However, the Communication stresses that the primary vocation of agriculture will continue to be the production of food and feed, suggesting that there is no willingness from the Commission to develop extra measures in favour of the first generation of agro-fuels at the EU level. In addition, the Commission proposes to examine whether the €45/ha payment is "still cost effective". The Communication states that incentives for mitigation and adaptation to climate change and for better water management could be provided through the strengthening of existing rural development measures or through cross compliance.

**The energy crop payment.** The case is weak for public support to agro-fuels. Recent life cycle analyses suggests that their environmental record is not impressive, and the cost effectiveness of the public subsidies (provided at the national level by Member states) is questioned (Bamière et al, 2007; Doornbosch and Steenblik, 2007; Crutzen et al, 2007). Other environmental effects, including pressure on fallows, an increase use of pesticides and fertilizers, are now seen as particularly negative. The most optimistic scenarios show that EU production of agro-fuels would hardly dent the imports of oil (European Commission 2007b).

The energy crop payment is the main form of pan-EU support to agro-fuels.<sup>21</sup> Even though it represents a very small budget whose importance should not be overestimated, this payment is hardly consistent with other provisions of the CAP. It conflicts with conservation programs by drawing more land into the production of arable crops. In several countries, support to agro-fuels is motivated by the desire to support the farm sector (Bamière et al, 2007). Dismantling this payment would let Member states deal with the increasingly controversial issue of supporting agro-fuels (and their farmers) with their own budget. Even though the Communication does not propose to end the direct payment for energy crop, it rightly questions its effectiveness.

Defenders of the energy crop subsidy put forward several arguments. One is that the energy crop payment contributes to protect the competitiveness of EU agro-fuels in an "infant industry" phase. Under the combined pressure of a WTO agreement and of the willingness of some Member states to liberalise imports, it is likely that Brazilian ethanol will sooner or later be imported in large quantity. However, the present payments mainly benefit oilseeds, which do not face serious protection in the EU, rather than ethanol based production. Given that the promising "second generation" of agro-fuels is most likely to be ethanol based, the "infant

<sup>21</sup> It is at the national level that the two main incentives, i.e. tax exemption and mandatory incorporation in transportation fuel, are set. The EU-wide target incorporation rate has so far not been made really compulsory in the sense that countries that would fall under this target do not face particular sanctions.

industry" argument is particularly weak: there is little point in supporting a production and distribution chain of bio diesel if the future industry is based on different crops and a different technology.

***Support to second generation of biofuels.*** The Commission proposes to strengthen research and innovation on the second generation of biofuels, and also to give more incentives to the second generation through rural development measures. Potentially, the second generation could be a real breakthrough in terms of energy balance. However, the technology for converting cellulosic plant materials into ethanol is complex and capital intensive. That is, research and development should be funded and the EU framework programs are potentially a good vector given the scale of the investments required. The case is weaker for funding large scale policies under the CAP, given the considerable uncertainty on both the technology and the environmental effects (the risks of exhausting rather poor soils with certain crops).

### **3.6. Financial issues**

***Financial consequences of the Commission's proposal.*** The proposal to allow Member States to move towards a per hectare flat payment would have no implications for the EU budget, given that the Communication leaves intact the national envelopes. However, providing flat rate payments is a way of removing the reference to "compensatory payments", and this would make it more difficult for Member States to invoke past reforms to argue that they should receive a particular envelope for direct payments.

From the financial point of view, the main feature of the Health Check Communication is to shift spending from Pillar 1 to Pillar 2 under a variety of mechanisms: increasing compulsory modulation, maintaining voluntary modulation and introducing limitation of payments. These proposals would not change the overall budget of the CAP either. However, this is not simply a matter of re-allocating the existing level of spending, as the two pillars have different financing rules and moving a greater proportion of spending to Pillar 2 would affect the allocation of the budget among the Member States. Pillar 2 expenditure requires some proportion of matching national funds. Simulations based on the Commission's data on the distribution of direct payments across holdings permit to approximately estimate the possible funding raised through modulation and capping of payments on a sliding scale (digression): each extra 2 percent modulation could add slightly more than 500 million euros to the rural development budget.

***Is the deepening of this strategy a promising avenue for the post 2013 CAP?*** Should the modulation rate be further raised to 20% or even 30% after 2013? The positive aspects of this strategy are that it uses a well established mechanism. In addition, the fact that the funding largely remains in agriculture could make it more acceptable from a political standpoint. Once there is agreement that modulated funds remain with the original Member State, this option only has an indirect effect on inter-MS distribution if a MS either cannot or will not draw down its allocation by putting up the required co-funding. Second pillar spending requires the Member States to come up with additional national funding if they are to draw down the EU funds - at least 40% and maybe more. There is evidence that member states have difficulty in drawing down on funds because of difficulty in finding sufficient national co-funding resources – though this can be partly addressed by raising EU contribution rates and differentiating them. Member State positions at the informal ministerial meeting in Porto on September 18 2007 suggest that there are some political acceptance problems. Some Member States will find that they will not receive back in Pillar 2 spending what they give up to the EAFRD in terms of modulated funds under the Allocation Key agreed to divide up these funds - although, conversely, this could be



an attraction to other Member States which might stand to gain a somewhat larger transfer of funds from Brussels as a result (Balkhausen and Banse, 2006).

Potential problems with this strategy are that an ambitious policy would lead to a significant increase in funding for second pillar measures, when it is not clear if this expenditure yields good returns or if there are sufficient good projects available to absorb these funds. Even if such a policy could also lead to an overall increase in agricultural spending because it attracts further Member State resources, it might be strongly opposed by farm organizations because it reduces the value of the Single Farm Payment or the remaining coupled direct payments, at a time when its value is anyway being reduced by inflation and there is the likelihood that cuts will be required under the financial discipline provision once the new Member States reach close to the EU15 level of payments.

The use of voluntary modulation rather than compulsory modulation could be one way to soften some of the political difficulties, as allowed under Article 4 of Regulation 1259/1999 establishing common rules for direct support schemes under the CAP. However, EU experience in this area has been rather unconvincing. France made the most radical use of it for a period, until it called a halt, in large measure because it found it could not spend monies already allocated for this purpose. The UK introduced voluntary modulation under a rather creative interpretation of the circumstances provided for in Article 4, but farmers opposed it, even though most of those funds were being returned to them in the form of higher agri-environment payments, and the modulated payments leveraged a further financial contribution from the UK Exchequer (40% in England) which otherwise would not have been available.

Moreover, very different rates of voluntary modulation across Member States could raise the issues that the European Parliament has put forward after the decision of the December 2005 Council to allow a larger percentage of modulation on a voluntary basis, i.e. the fear of a distortions of competition (EU Parliament, March 2007). However, now that the bulk of Pillar 1 payments are decoupled, the potential for distortions in competition are more limited than in the past.

**Capping payments.** The CAP Health Check Communication does not propose capping, but rather a degressive tapering of payments to the very largest farms. While this may decrease the opposition of member states with a higher proportion of larger farms, it also considerably reduces the volume of resources which would be made available to Pillar 2 under this mechanism. Based on the illustrative thresholds in the Commission's Communication, the amount of money transferred to Pillar 2 under this mechanism in the member states affected would be less than €0.5 billion. About 70% of this money would be collected in Germany, due to the farm structure in East Germany, another 10% in the UK (Kleinhanß, 2007). The justification of capping relies on the assumption that support through public funds should aim at correcting inequalities by supporting those who derive fewer advantages from the market organizations. To be consistent with such logic the CAP should move more openly towards a social policy. While capping is desirable in the short term, it must be acknowledged that it would only limit visible excesses that are turning the public opinion against the direct payments policy, but it does not provide a sound basis for the allocation of public support.

**Is the Commission's proposal consistent with a longer term (budget) vision?** The CAP including rural development currently accounts for 40 percent of the EU budget compared with 65 percent in 1990, and will represent about 35 percent of the EU budget by 2013. Moreover, these expenditures represent only about 0.43 percent of EU Gross National Income.

Clearly, any major change in CAP budget would affect the net contributions of each Member state to the EU budget. This would open a very complex debate, with links to the other complex issues such as the distribution of structural funds and the various budgetary "rebates". It is

becoming clear that the present system of financing the EU budget needs to be revised fundamentally. The CAP budget is part of a knot of issues that will be addressed together in the debate on budget priorities which the Commission has just launched.

It was not in the mandate of the Commission to make recommendations regarding the future funding of the CAP in its Health Check Communication. Thus, the Communication does not make significant proposals regarding global financial issues. It assumes that the CAP budget will follow what was planned in the next financial framework for the 2007-2013 period. It refrains from making any statement on the (as yet unknown) budget level in 2014-2020, how this might be distributed between the different components (agriculture and rural development) and what the implications for the net contribution positions of Member States might be.

In order to assess whether the Commission's proposals are in line with future reforms, the overall budget context has to be considered. The desire to pursue the objectives of the Lisbon agenda plus a possible reluctance by net contributors to see any further increase in EU budget is likely to mean less resource for CAP in next financial perspective. The budget debate, together with new developments arising from the "reform Treaty", will lead to a discussion on new budget priorities. In this perspective, the continuation of a large CAP budget in line with what has been decided for the 2007-2013 financial guidelines is not guaranteed.

In the budget debate, it is often argued that money spent for the CAP could be allocated with greater social benefits to other EU policies, such as the promotion of information technology, research, infrastructure or projecting the EU's role in the world. One scenario is that the future allocation of the EU budget will see an overall decrease in public expenditure on agricultural policy, probably made up of a phasing out of Pillar 1 spending and some limited increase in spending on Pillar 2 in the EU budget. For example, the 2003 Sapir report to the Prodi Commission proposed a 45 percent growth fund, a 35 percent convergence fund for poorer countries and a 20 percent restructuring fund. The latter would include agricultural expenditures, meaning it would receive approximately 15 percent of the Community budget, or approx. €25 billion per year less than now. This would be considerably less than figure currently foreseen at the end of the present Financial Perspective: 35 percent for the year 2013.

From a purely financial perspective, the main attraction of this scenario is that it would allow the EU to increase spending under other headings without a significant overall increase in the size of the EU budget. Other changes might also follow in this scenario. For example, rural development spending under Pillar 2 might be more closely integrated or even merged with rural spending under Structural Funds and Cohesion programmes. Land management and agri-environment funding could be transferred to LIFE and administered by DG Environment. The fear that rural areas would lose out if responsibility for second pillar spending was given to structural funds could be addressed by a changed territorial classification which combined rural, agricultural and employment criteria. However, this proposal could lead to significant redistribution between member states if the underlying reallocation keys were not transferred to the new responsibility. New member states, in particular, could complain that the older member states benefited from agricultural support, which now would be eliminated for the new member states. On the other hand, old member states may want to maintain a significant budget for the first pillar even if the net budgetary gains/losses from financing direct payments through the EU budget are now rather small for many of them. A further shift towards structural and cohesion headings, as a matter of fact, would only benefit the new member states (Balkhausen and Banse, 2006).

Assessing the relative merits of financing different policies would lead us to address the much more ambitious issues related to the definition of the financial framework beyond 2013, which is beyond the scope of this report. However, a general comment on the Commission's proposal

is that, perhaps because of the fear of opening a Pandora's box, the Commission does not propose any ambitious change on the financial issues. According to the Health Check, total spending on the CAP is broadly maintained but spending is shifted from Pillar 1 to Pillar 2 under a variety of rather technical changes (ceiling, modulation, changes in the modalities of attributing the direct payments) and the Commission clearly states that the budget saved should stay in the same Member State.

***Co-financing of CAP expenditure.*** This may be seen as a lost opportunity, since bolder and deeper reforms, based on an analysis of what functions will be needed at EU level after 2013 and then what resources will be required to fulfil these effectively, could allow the CAP to be better-equipped for the budget debate. If the European level resources for agriculture are going to shrink, an obvious candidate to raise additional funding is co-financing, which has been advocated in various reports from the European Parliament (Böge 2006; Lamassoure 2006). In this perspective, the ongoing process to shift spending from Pillar 1 to Pillar 2 could be considered as a "budget-consistent" strategy to maintain an EU agricultural policy.

On the other hand, if we accept the arguments for the continuation of Pillar 1 funding after 2013 presented elsewhere in this report, the maintenance of an EU budget for the first pillar could be secured by some degree of co-financing. At least four different co-financing models can be distinguished:

The cost-sharing model would transfer some (or, more radically, all) of the burden of financing the direct payments to the Member States. The crucial characteristic of this option is that the level of expenditure would remain mandated at EU level. However, constitutionally the EU has no powers to mandate that Member states commit to a pre-specified level of expenditure, so legally this option is not a runner.

- The "second pillar" model. Under current second pillar arrangements, Member States are assigned reference expenditure amounts but, in order to draw these down, they are required to provide some co-financing (the amounts varying according to whether or not a region has Objective 1 status and the type of measure). This model allows a member state to reduce the level of direct payments to its own farmers, but at the cost of foregoing a budget transfer from the EU. This model could be applied to Pillar 1 in a similar manner, by assigning to each country a reference amount (which would be smaller than the current national ceilings for Pillar 1 direct payments) but requiring Member States to match this funding according to some key, which would be differentiated to reflect the financing capacity of individual Member States. The fine-tuning of co-financing rates could be used to influence the balances between national contributions to and receipts from the EU budget. This model could, in principle, allow for an increase in Pillar 1 spending given that a euro of EU spending would now leverage some fraction of a euro of national spending, depending on the co-financing rates which were established and the agreed size of the Pillar 1 budget after 2013. From a farmer's perspective, however, the total amount of resources likely to be available for support would become more uncertain, because it would be subject to decision-making at two separate levels. For domestic policy reasons, some Member States might not wish to put up the national financing to fully draw down the available EU budget.

The top-up model, a variant of which is currently used in the new Member states. Member States would be allowed to increase the value of the SFP provided it was funded from their own resources. In the new member states, this is allowed during the transition period to full EU payments but only to the extent that the overall payment does not exceed the value of the EU payment. Allowing Member States to fund higher values of the SFP would raise concerns that competition within the single EU agricultural market would be distorted, although in principle the rhetoric around the SFP is that it does not have a production effect where it is fully

decoupled. To alleviate such concerns, the EU could specify a maximum value to the top-up payment which would be allowed as implemented for the New Members in their phasing-in period.

- The renationalisation model, which is simply the top-up model carried to the extreme that funding for direct payments from the EU budget would cease, and responsibility would fall entirely to member states both to determine the appropriate level of payment and to finance it. If the rationale for these payments is either income redistribution within a Member State or remuneration for public goods whose benefits are largely captured within each Member State, this model would be in line with the principle of subsidiarity introduced by the Amsterdam Treaty. The impact on the overall level of direct payments to European farmers is unclear, as some Member States would make use of this freedom to reduce direct payments, while others might be expected to increase them, relative to a continuation of the current baseline.

At least in principle, co-financing has many positive aspects, such as limiting the collusion between producers and national authorities to maximize the returns from the EU budget. Depending on the model of co-financing introduced, the overall value of direct payments to EU farmers could increase, decrease, or stay the same relative to a continuation of the current baseline. National cofinancing of direct payments of 25%, for example, would lighten the EU budget by more than €9bn in the year 2006 and at the same time lower the payments of the net contributors. This would save Germany €78m, the United Kingdom €430m and the Netherlands €169m, while France would have to pay €49m and Ireland €196m more (German Council).

## 4. Conclusion

In 2005 the Commission announced a review of the CAP (Health Check) to be undertaken at the end of 2007. It was the compromise needed to end a sharp disagreement between some Member states on budget priorities, and on the future of the CAP. In the end, it was agreed that the CAP would continue receiving most of its funding as before but that in 2007 a review procedure would be started from which interim adjustments of the CAP could result, to reinforce the earlier reforms on decoupling and to leave sufficient time to formulate a new policy package to be implemented from 2013 onwards.

Part 1 and Part 2 of the present report present options for an open debate on what the CAP could be about after 2013, irrespective of current regulations. The point of departure for this discussion is the classical question of subsidiarity that has rarely been stated explicitly let alone settled in relation to the CAP, apart from some aspects of financial renationalisation. The question revolves around what should be done at EU level and what at national or even sub-national level, possibly by the private sector, commercial as well as non-profit, or by some mixed public-private arrangement? It is striking that the Commission Communication does not address this issue at all. This report proposes a provisional list of the major fields where the CAP should still have a major role at EU level. This leaves important tasks mainly to the national level in the sphere of social security, fiscal policy, regional development, nature management, and animal welfare, as well as to the private sector, such as provision of adequate risk management tools. For each of these it remains to be decided how much EU involvement is needed, e.g. to monitor and preserve competition, if at all.

Rural development is another issue where the Commission's document falls short of expectations. Second pillar measures are seen as mainly accompanying measures to the reforms. In addition, relatively vague second pillar measures are often presented as a general solution to a variety of problems, from risk management to biodiversity, some of them resulting from the very proposals made in the Communication. More specific suggestions would be welcome for those set-aside areas which have acquired a high ecological value due to long lasting lack of operation and could be threatened from abolishment or set-aside. While well-targeted measures at the local level could potentially be adapted to a variety of issues, a more comprehensive and coherent vision of rural development is needed. Given the extra resources that the Commission proposes to allocate to rural development, a more precise assessment of the goals and the cost efficiency of these measures would be needed. More specific proposals would be useful to explain how second pillar measures could tackle the challenges raised by the new market environment which might undermine many of the recent efforts to promote a more "multifunctional" agriculture, by providing incentives to produce more and more intensively.

Regarding the short term proposals made by the Commission, the report concludes that most of its proposals and suggestions are well adapted to the new market environments. This is the case for the proposals to eliminate compulsory set-aside, to get rid of dairy quotas, and to phase out the energy crop subsidy. In addition, the Commission's proposals are consistent with a longer term ambition for the CAP, in the sense that they leave options open, and even prepare for future reforms by making the present provisions simpler and by leaving a degree of freedom for Member states to adjust to a changing environment. The proposed encouragement to Member states to move towards a flatter rate for Single Farm Payments, for example, would make these payments simpler, and by confirming that payments are no longer designed to compensate an individual farmer for past reforms, would pave the way for a sounder support, directed towards the remuneration of public goods, or as compensation for using techniques demanded by consumers and citizens. In that sense, the Commission's proposal has a high "option value" in

the sense that it does not hamper future developments of the CAP, does not lock European agriculture into rigid options and leaves a lot of flexibility for adjustment to future conditions.

Because the relative roles of the Member states and the EU level in the future CAP have been considered to be clearly outside of the mandate of the Health Check, this also results in the lack of a clear guideline for future reforms with significant consequences for financial issues. On this aspect, the Commission's Communication carefully remains within the existing financial framework, only suggesting that the financial discipline mechanism (i.e. a reduction of direct payments when meeting a certain budget constraint) could apply during the 2008-2013 period. This may turn out later as a missed opportunity for a brave opening in the coming budget debate.

## Bibliography

- Baldock D., Dwyer J. and Sumpsi J.M., *Environmental Integration and the CAP*, DG Agriculture, European Commission, September 2002
- Baldwin R.E., *Is the United States Headed for Double Bubble Trouble?*, Vox-Eu, 2 oct 2007, downloadable from <http://www.voxeu.org/index.php?q=node/587>
- Bamière L., Bureau J.C., Guindé L., Guyomard H., Jacquet F., Treger D., *Prospects for EU Biofuel Production and Trade*, Tradeag Working paper WP 2007-12, downloadable from [www.tradeag.eu](http://www.tradeag.eu)
- Balkhausen O., Banse M., *Impact of alternative direct payment options on budgetary outlays, Working Paper Series of the Joint Research Project: The Impact of Decoupling and Modulation in the Enlarged Union: A Sectoral and Farm Level Assessment*, Deliverable No. 21, University of Goettingen, 2006.
- Barbut L.; Baschet J.-F., *L'évaluation des politiques de soutien de l'agro-environnement*, Notes et Etudes Economiques, n°22, Ministère de l'agriculture, Paris, 2005, pp. 37-68.
- Baum S., Cook P., Strange H. and Weingarten P., *Agricultural Employment Trends in and Enlarged European Union. SERA project*, DG-Agri, European Commission (see Copus et al 2006), 2006
- Bhagwati J., «The Generalized Theory of Distortions and Welfare», In J. Bhagwati, R. Jones, R. Mundell and J. Vanek (eds), *Trade, Balance of Payments and Growth*, North Holland, Amsterdam, 1971
- BirdLife, *Birds in the European Union: A Status Assessment*, Birdlife International, Wageningen, 2004
- Birdlife, *Don't set-aside set-aside: Europe's nature under further threat as Commission decides to reduce set-aside to 0%*, Press release 14-09-2007, 2007a, downloadable from <http://www.birdlife.org/news/news/2007/09/set-aside.html>
- BirdLife, *New challenges, new CAP: BirdLife International's vision for the future of the EU Common Agricultural Policy*, BirdLife International, Wageningen, 2007b
- Böge R. (rapporteur), *Report on the Inter-Institutional Agreement on budgetary discipline and sound financial management*, (2004/2099(ACI)), Committee on Budgets, European Parliament, A6-0150/2006.
- Bonnet C., P. Dubois and V. Orozco, *Food Consumption and Obesity in France*, mimeo, Toulouse School of Economics, 2007
- Bonnieux F., *Farming and the Environment: prospects and proposals*, Introductory Paper to the task force 10 September 2007. Notre Europe, downloadable from [http://www.notre-europe.eu/fileadmin/IMG/pdf/F\\_Bonnieux\\_-\\_Farming\\_and\\_Environnement.pdf](http://www.notre-europe.eu/fileadmin/IMG/pdf/F_Bonnieux_-_Farming_and_Environnement.pdf)
- Bonny S., *Consumers' concerns about industrialized agriculture and food safety*, Animal Research, 49, 3, 2000, pp. 273-290.
- Bouët A., Bureau J.C., Decreux Y., Jean S., *Multilateral Agricultural Trade Liberalization: The Contrasting Fortunes of Developing Countries in the Doha Round*, The World Economy, 28, 9, 2005, pp. 1329-1354.
- Bouamra-Menemache Z., Requillart V., *Report on Dairy Policy Simulations, EDIM – European Dairy Industry Model*, Toulouse, 2005

Braband D, van Elsen T, Oppermann R, Haack S., «Ökologisch bewirtschaftete Ackerflächen – eine ökologische Leistung? – Ein ergebnisorientierter Ansatz für die Praxis», Aus: Freyer B (Hrsg.), *Beiträge zur 7. Wissenschaftstagung zum ökologischen Landbau – Ökologischer Landbau der Zukunft*, Wien, Universität für Bodenkultur. Institut für Ökologischen Landbau, 2003, pp. 153-158.

Buller H., «The Agri-environmental Measures (2078/92)», In Brouwer F. and Lowe P. (eds), *CAP Regimes and the European Countryside, Prospects for Integration between Agricultural, Regional and Environmental Policies*; CABI Publishing, 2000, pp. 199-211.

Bureau J.C. "Freer International Trade and the Consequences for EU Rural Areas". *Economia Agraria y Recursos Naturales*, 6,12, pp 69-92., 2006

Bureau J.-C. and Valceschini E., *The European Food Labeling Policy: Successes and Limitations*, *Journal of Food Distribution Research*, 34 (3), 2003, pp. 69-76.

Butault J.-P., Bureau J.-C., Hassan D., Lerouillois P. and Rousselle J.-M., *Formation et répartition des gains de productivité dans les agricultures européennes*, *Cahiers d'Economie et de Sociologie Rurales*, 20, 1991, pp. 63-90.

Bureau J.-C., Jean S. and Matthews A., *The Consequences of Agricultural Trade Liberalization For Developing Countries : Distinguishing Between Genuine Benefits and False Hopes*, *The World Trade Review*, 5, 2, 2006, pp. 225-249.

Butault J.P., *La baisse des revenus et l'essoufflement de la productivité dans l'agriculture française depuis 1998*, *Inra Sciences Sociales*, 2, juin, 2006, pp. 1-8.

Butault J.P. and Rouselle (2007). Une autre repartition des aides agricoles est elle possible? Document de travail INRA-SAE2 AgroParisTech, LEP-LEF, 54 p (a summary is downloadable at [www.inra.fr/internet/departements/ESR/publications/iss/iss07-2But.pdf](http://www.inra.fr/internet/departements/ESR/publications/iss/iss07-2But.pdf))

Butault J.P. and Bureau J.C., *WTO Constraints and the CAP: Domestic Support in EU-25 Agriculture*, *Tradeag Working Paper WP2006-11*, 2006, downloadable from [www.tradeag.eu](http://www.tradeag.eu)

Carey P.D. et al *A Comparison of the Ecological Quality of Land Between and English Agri-environmental Scheme and Countryside as a Whole*, *Biological Conservation*, 108,2, 2002, pp. 183-97.

Carpy Goulard F., Daniel K., Kephaliacos C., Mosnier C., Ridier A., Van de Moortel C., *Conditionnalité des aides directes : Impact de la mise en œuvre de certaines BCAA et de la mesure de maintien des pâturages permanents dans des exploitations d'élevage et de grandes cultures*, *Notes et études économiques n°25*, Ministère de l'Agriculture, 2006, pp. 137-164.

Chambers, R.G., *Insurability and Moral Hazard in Agricultural Insurance Markets*, *American Journal of Agricultural Economics*, 71, 1989, pp. 604-616.

Chatellier V., *La sensibilité des exploitations agricoles françaises à une modification des budgets et des instruments de soutien*, INRA, Nantes, Document de travail, *Prospective Agriculture 2013*, Institut National de la Recherche Agronomique, 2007.

Chavas J.P. "Structural Change in Agricultural Production: Economics, Technology and Policy". In B. Gardner and G. Rausser (eds), "Handbook of Agricultural Economics" vol 1.A, chapter 5, North Holland, Amsterdam, 2002.

Ciaian, P. and Swinnen J.F.M., *Credit Market Imperfections and the Distribution of Policy Rents: The Common Agricultural Policy in the New EU Member States*, Discussion Paper 183/2007, LICOS Centre for Institutions and Economic Performance, Katholieke Universiteit Leuven, 2007, downloadable from <http://www.econ.kuleuven.be/licos/DP/DP2007/DP183.pdf>



CJC, *Economic Evaluation of Agri-environment Schemes*". CJC Consulting, Department of Environment, Food and Rural Affairs, Londres, 2002

Copus A. et al, *Study on Employment in Rural Areas (SERA)*, Final Deliverable, report prepared for the European Commission, DG-Agri, Brussels, 2006

Crutzen P.J., Mosier A.R., Smith, K.A., Winiwarter W., "N<sub>2</sub>O release from agro-biofuel production negates global warming reduction by replacing fossil fuels" *Atmospheric Chemistry and Physics Discussions.*, 7, 2007, pp. 11191–11205.

Dehn J., Gilbert C. L. and Varangis P., «Commodity Price Volatility». In J. Aizenman and Pinto B (eds.), *Managing Volatility and Crises: A practitioner's guide*, 2005

Doornbosch R., Steenblik R., *Biofuels: Is the cure worse than the disease?*. OECD, Paris, 2007

Dubois P., *Obesity is on the rise – let's have the courage to tax junk food!* Voxeu, 17 October 2007. downloadable from <http://www.voxeu.org/index.php?q=node/635>

Dupraz, P., Pech M., *Effets des mesures agri-environmentales*, INRA, Sciences Sociales, recherches en économie en sociologie rurales. No. 2-3, Septembre 2007

ECA (European Court of Auditors), *Special Report No 14/2000 (pursuant to article 248 (4) of the EC Treaty) on Greening the CAP together with the Commission's replies*, (OJ, No C 353, 8.12.2000, p. 1), 2000

EEA, *Agriculture and Environment in EU-15: the IRENA indicator report*, European Environment Agency, Copenhagen, 2005

EEA, *Integration of Environment into the EU Agriculture Policy- The IRENA Indicator Based Assessment Report*, European Environment Agency, Copenhagen, 2006

Etilé F., *Taxation ou information? L'analyse des politiques de santé nutritionnelles*, Inra Sciences Sociales, 3-4, décembre 2005. downloadable from <http://www.inra.fr/internet/Departements/ESR/publications/iss>. See also, Etilé, "Taxer la 'junk food' une mesure inefficace contre l'obésité". *Le Monde*, 8/10/2007

European Commission, *The 2007 Outlook for World Agricultural Commodity Markets*, Monitoring Agri-Trade Policy, 01-07, May 2007, 2007a

European Commission, DG Agri, *Prospects for agricultural markets and income in the European Union 2007-2014*, July 2007, 2007a, downloadable from [http://ec.europa.eu/agriculture/publi/caprep/prospects2007b/index\\_en.htm](http://ec.europa.eu/agriculture/publi/caprep/prospects2007b/index_en.htm)

European Commission, *Communication from the Commission, Reforming the budget, changing Europe – A public consultation paper in view of the 2008/2009 budget review*, Brussels, 12.9.2007, 2007c.

European Commission, *Agri-environment measures: Overview on General Principles, Types of Measures and Application*, European Commission, DG-Agri, 2005.

Evenson R.E. "Economic Impacts of Agricultural Research and Extension". In B. Gardner and G. Rausser (eds), "Handbook of Agricultural Economics" vol 1.A, chapter 11, North Holland, Amsterdam, 2002.

Falconer K., Whitby, M., *Untangling Red Tape: Scheme Administration and the Invisible Costs of European Agri-environmental Policy*, European Environment, 10,4, 2000, pp. 193-204.

FAO, *Crop Prospects and Food Situation*, 2007, downloadable from <http://www.fao.org/docrep/010/ah873e/ah873e04.htm> (accessed october 5).

FAPRI-Ireland Partnership, CAP Health Check Analysis: Impact of EU Milk Quota Expansion, TEagasc Rural Economy Research Centre, Athenry, Galway, Ireland, October, 31, 2007

Gardner B., *Rollover Hedging and the Missing Long Term Future Markets*, American Journal of Agricultural Economics, 71, 1989, pp. 311-25.

Glauber J.W., *Crop Insurance Reconsidered*". American Journal of Agricultural Economics, 5, 2004, pp. 1179-1195.

Gohin A., Guyomard H. and Le Mouel C., *Measures of Internal Support: The Decoupling Issue*, Working paper INRA Rennes, France, 2001

Gollier C., *Some Aspects of the Economics of Catastrophe Risk Insurance*, Working paper CESinfo 1409, 2005

Goodwin, B.G., Mahul, O., *Risk Modeling Concepts Relating to the Design and Rating of Agricultural Insurance Contracts*, World Bank Policy Research Working Paper 3392, Washington DC, 2004

Guyomard H., Chatellier V., Courleux F. and Levert F., *La politique de soutien des revenus agricoels dans l'Union européenne: Quel avenir pour les droits à paiement unique*, Club Demeter, Mars 2007

Hodge, I, Reader, M., Revoredo, C., Crabbtree, R., Tucker, G., King, T., *Project to assess future options for set-aside*, Final report for DEFRA, Cambridge, 2006, downloadable from <http://statistics.defra.gov.uk/esg/evaluation/futuresetaside/default.asp>

Hole, D.G.; Perkins, A.J.; Wilson, J.D.; Alexander, I.H.; Grice, P.V.; Evans, A.D, *Does organic farming benefit biodiversity?*, Biological conservation 122 (2005), 2005, pp. 113 - 130

Inra-Wageningen Consortium, *Study on the Impact of Future Options for the Milk Quota System and the Common Market Organisation for Milk and Milk Products*, 2002, downloadable from [http://ec.europa.eu/agriculture/publi/reports/milkquota/inrawag\\_en.pdf](http://ec.europa.eu/agriculture/publi/reports/milkquota/inrawag_en.pdf).

INRA-CEMAGREF, *Pesticides, agriculture et environnement*, Institut National de la Recherche Agronomique et Institut de Recherches pour l'Ingénierie de l'Agriculture et de l'Environnement, Paris and Antony, 2005

INRA. Prospective "Agriculture 2013" Résultats et enseignements généraux par thème. Downloadable from [www.inra.fr/presse/prospective\\_agriculture\\_2013](http://www.inra.fr/presse/prospective_agriculture_2013), Guyomard H. coordinator, 2007

Isermeyer F., *Umsetzung des Luxemburger Beschlusses zur EU-Agrarreform in Deutschland – eine erste Einschätzung*, Arbeitsbericht 03/2003, Braunschweig, 2003

Isermeyer F, Brockmeyer M, Gömann H., Hargens R., Klepper R., Kreins P., Offermann F., Osterburg B., Pelikan J., Salamon P., Thiele H., *Analyse politischer Handlungsoptionen für den Milchmarkt*, Braunschweig/Kiel, 2006.

Jongeneel, R. et. al., *Mandatory standards in 7 EU countries and 3 non-EU countries: Synthesis Report*, Deliverable 9, Agricultural Economics Institute, The Hague, 2007

Jongeneel R., Bezlepkina I., *Facilitating the CAP reform: Compliance and competitiveness of European agriculture*, Background report. Cross Compliance Project, European Project funded by the European Commission under the 6<sup>th</sup> Framework program for research and development. Deliverable D13, 22 october, 2007

Kilian S., Salhofer K., *Single Farm Payments of the CAP: Where do the rents go?*, Technical University Munich, Environmental Economics and Agricultural Policy Group, Discussion Paper

01-2007, 2007, downloadable from [http://www.wzw.tum.de/gewisola/beitraege-endfassung-pdf/kilian\\_dp\\_01\\_2007.pdf](http://www.wzw.tum.de/gewisola/beitraege-endfassung-pdf/kilian_dp_01_2007.pdf)

Kleijn D., Baquero R. A., Clough Y., Díaz M., De Esteban J., Fernández F., Gabriel D., Herzog F., Holzschuh A., Jöhl R., Knop E., Kruess A., Marshall E. J. P., Steffan-Dewenter I., Tschardt T., Verhulst J., West T. M., Yela J. L., *Mixed biodiversity benefits of agri-environment schemes implemented in contrasting European countries*, Ecology Letters 9, 2006, pp. 243 – 254.

Kleijn, D., Sutherland, W. J., *How effective are European agri-environment schemes in conserving and promoting biodiversity*, Journal of Applied Ecology 2003, 40, 2003, pp. 947-969

Kleinhanß, W., *Avenir des soutiens et réforme de la PAC 2013 Découplage en Allemagne*, SAF-agriculteurs de France: Cycle de Prospective PAC – Paris 10 mai 2007, 2007

Krugman P., *Will There Be a Dollar Crisis?*, Economic Policy, No. 51, 2007, pp. 435-467.

Lamassoure A. (rapporteur), *Report on the Future of the European Union's own resources*, (2006/2205(INI)), Committee on Budgets, European Parliament, A6-0066/2007.

Langley S., Somwaru A., Normile M.A., *Trade Liberalisation in International Dairy Markets, Estimated Impacts*, ERS Report No. 16, Washington D.C., 2006

Lence S.H., Hayenga M.L., *On the Pitfalls of Multi-Year Rollover Hedges: The Case of Hedge-to-Arrive Contracts*, American Journal of Agricultural Economics, 83, 2001, 107-119

Lips, M. and P. Rieder, (2005): "Abolition of raw milk quota in the European Union: a CGE analysis at the member country level", Journal of Agricultural Economics 56 (2), 2005, pp. 1-17.

Mahé L.-P. and Ortalo-Magné F., *Politique Agricole, un modèle européen*, Presses de Sciences-Po, Paris, 2001

Mahul O., *Vers une redéfinition du rôle de l'assurance agricole dans la gestion des risques sur récoltes*, Cahiers d'économie et sociologie rurales, 49, 1999, pp. 38-58.

Ménard C., *Gestion des risques climatiques en agriculture*, Assemblée Nationale, Paris, 2004

Michels C., *Landesweite Erfolgskontrollen des Vertragsnaturschutzes*, Naturschutz-Mitteilungen 1/07 2007, pp. 29-35.

Newman C., Matthews A., *Evaluating the Productivity Performance of Agricultural Enterprises in Ireland using a Multiple Output Distance Function Approach*, Journal of Agricultural Economics , 58, 1, 2007, pp. 128-151.

OECD, *An Analysis of Dairy Policy Reform and Trade Market Liberalisation, Trade and Economic Effects of Milk Quota Systems*, COM/AGR/TD/WP(2004)19/FINAL, Paris, 2005

Oréade-Brèche (2002). *Evaluation de l'impact des mesures communautaires concernant le gel des terres*, Oreade-Breche, Auzeville, 2002, downloadable from [http://ec.europa.eu/agriculture/eval/reports/gel/index\\_fr.htm](http://ec.europa.eu/agriculture/eval/reports/gel/index_fr.htm)

Olson, M., *The Principle of 'Fiscal Equivalence': The Division of Responsibilities. Among Different Government*, American Economic Review 59, 1969

Oates, W., *An Essay on Fiscal Federalism*, Journal of Economic Literature/, Vol. XXXVII (September 1999), 1999, pp. 1120-1149.

Osterburg B., «Assessing long-term impacts of agri-environmental measures in Germany», In: Organisation for Economic Co-Operation and Development (eds), *Evaluating agri-*

- environmental policies : design, practice and results*, Workshop on Evaluating Agri-Environmental Policies held on 6-8 December 2004 in Paris, Paris : OECD, 2005, pp 187-205
- Osterburg B., *Analysen zur Wirkung von Agrarumweltzahlungen auf die Senkung von N-Salden*, Landbauforsch Völkenrode SH 30, 2007, pp. 253-266
- Osterburg B., Nitsch, H., *State of the art and methods: Report on Germany*, 38 p, Framework programme priority 8 : policy-oriented research 6 ITAES-WP2-P51-DR-01, 2005
- OXFAM, *Dumping on the World*, Oxfam Briefing Paper 61, Oxfam, London, UK, 2004
- Panagariya A., *Agricultural Liberalization and the Least Developed Countries: Six Fallacies*, The World Economy 28, 9, 2005, pp. 1277-99.
- Potter C., «Agri-environmental policy development in the European Union» In Brouwer F. and van der Straaten (eds.), *Nature and Agriculture in the European Union, New Perspectives on Policies that Shape the European Countryside*, Edward Elger Publishing Limited, 2002, pp. 67 – 88.
- Primdahl J., Peco B., Schramek J., Andersen E. et Onate J.J.. *Environmental Effects of Agri-environmental Schemes in Western Europe*, Journal of Environmental Management, 67, pp. 129-138., 2003.
- Rousseau S., Moons E., *Auctioning conservation contracts: An application to the Flemish afforestation policy*, KU Leuven, Centre for Economic Studies, Energy, Transport & Environment (ETE) Working paper 2006-06, 2006, downloadable from <http://www.econ.kuleuven.be/ete/downloads/ETE-WP-2006-06.pdf>.
- Sapir J. (coordinator) (2003), "An Agenda for Growing Europe". Rapport du groupe de travail indépendant au Président de la Commission Européenne, Juillet, Bruxelles.
- Sarris A., Conforti P and Prakash A. "The Use of Organized Commodity Markets to Manage Food Imports Price Instability and Risk". Food and Agriculture Organisation, 2005.
- Schmidhuber J., *"Biofuels: An Emerging Threat to Europe's Food Security? Impact of an Increased Biomass Use on Agricultural Markets, Prices and Food Security: A Longer Term Perspective"*. Discussion Paper, Notre Europe, May 2007, 2007a
- Schmidhuber J., *Land for Food and Energy: The case of Sugar*, 16th ISO Seminar, East Witergardern, London, 27-28 November 2007, 2007b
- Schmidt TG, Gödecke B, Antony F., *Wasserschutzwirkung von Agrarumweltmaßnahmen statistische Auswertung von Herbst-Nmin-Werten aus niedersächsischen Wassergewinnungsgebieten*, Landbauforsch Völkenrode SH 307, 2007 pp. 229-251.
- Schumacher W., *Bilanz – 20 Jahre Vertragsnaturschutz*, Naturschutz-Mitteilungen 1/07, 2007, pp. 21-28.
- Skees, J.R., Hazell P. and Miranda M., *New approaches to crop yield insurance in developing countries*, EPDT discussion paper 55. Washington DC: IFPRI, 1999.
- Steffan-Dewenter I. et al (2005). Pollinator Diversity and Crop Pollination Services at Risk. *Trends Ecol. Evol* 20, 267-373. Downloadable from [www.old.uni.bayreuth.de](http://www.old.uni.bayreuth.de) website
- Sunding D. and Zilberman D. "The Agriculture Innovation Process: Research and Technology Adoption in a Changing Agricultural Sector ". In B. Gardner and G. Rausser (eds), "Handbook of Agricultural Economics" vol 1.A, chapter 4, North Holland, Amsterdam, 2002.
- Van Hullenbroeck G., Whitby M., *Countryside stewardship : Farmers, Policies and Markets*, Pergamon Press, London, 1999

Van Montagu M. "GMOs, the future of agricultural policies". Presentation at the Workshop organised by Notre Europe, Paris, November 26 2006.

Vaissière B. L'impact des pollinisateurs sur la production des cultures. Inra, Paris, 2007. (see also "Un monde sans fruits et légumes" in Le Monde, Infos de la Planète, 14-10-2007).

World Bank, *Managing Food Price Risks and Instability in an Environment of Market Liberalization*, The World Bank, Washington D.C. 2005.

World Bank, *Managing Agricultural Production Risk*. The World Bank, Washington D.C., 2006.

World Bank, *Global Development Finance*, Vol 1, Review, Analysis and Outlook., 2007a, downloadable from [http://siteresources.worldbank.org/INTGDF2007/Resources/3763069-1179948748801/GDF07\\_completeFinal.pdf](http://siteresources.worldbank.org/INTGDF2007/Resources/3763069-1179948748801/GDF07_completeFinal.pdf)

Wright B.D and Williams J.C. (1991). *Storage and Commodity Markets*, Cambridge University Press, 1991



## Annexes

### ***Annex 1: A synthesis of the information available on future world markets***

**In the short run.** The Food and Agriculture Organisation (FAO 2007) anticipates a significant growth in world cereal demand in the short run. This is unlikely to allow any replenishing of world reserves from their very low opening levels. As a result, the world cereal stocks-to-use ratio is likely to remain at around 20 percent, which is the smallest since the beginning of FAO's tracking of the global cereal market some 30 years ago in 2008/2009. That is, in the short run, there is a consensus that world prices will remain steady.

**In the medium run.** It is expected that world agricultural prices will remain steady, but that they will go down. The different institutions that specialize in market outlook see an uneven evolution across commodities. The confidence interval is caused mainly by uncertainties on the exchange rates, the government policies regarding agro-fuels, and the level of imports from emerging economies. The European Commission (2007a) foresees sustained world prices for cereals because of imports from Middle East, Africa and East Asia and demand for ethanol in major grain producing regions. The World Bank (2007a) expects a weakening of agricultural prices over the next years but under the assumption of lower petrol and fertilizer prices, as well as a strong reaction of agricultural good producing countries in their domestic policies. INRA (2007) expects prices to remain higher than in the past but points out that the recent peaks result from short run phenomena, such as droughts and floods and speculative attitudes.

The growing demand at the world level is the major factor that explains forecasts of steady prices in the medium run. It is less linked to the growth in world population that is likely to slow down in the next few years and barely exceed 1 percent per annum, than to the growth in real income and changes in diets. In particular, real GDP in India and China is expected to continue at a rate of 7 to 8 percent for the next decade, and a rather conservative scenario for the world is that of FAPRI with a 3.3 percent growth worldwide between 2010 and 2020. With still 840 million people that suffer from hunger and 3 billion people who live on less than two dollars a day, a large share of the extra income for the bulk of population is likely to go to food and medical expenses, with a larger intake of meat that will require more proteins and cereals.

Among the different sources of uncertainty is the exchange rate. For example, the EU Commission's predictions of high world prices rely on a rebound of the dollar, which is not necessarily likely in the medium run. Indeed, leading economists see the dollar falling further against the euro for several years (Baldwin, 2007a, Krugman 2007). Prospects regarding the use of agricultural products for energy are also a source of uncertainty. The demand for agrofuels that drives higher prices is highly dependent on political decisions and fiscal preferences. Given the new information available that questions the environmental impact of agro-fuels as well as the cost for public finances, the future of these policies are uncertain (Bamière et al, 2007). Should the incorporation targets be revised downwards, tensions in the rapeseed, palm oil, corn, cassava and wheat markets could be reduced significantly. The U.S farm bill is another source of uncertainty. During the 1990s, between 25 and 30 percent of US agricultural production went to the world markets. Even though its role as a major exporter has gone down, with the emergence of large exporters such as Brazil, and with the use of new domestic outlets (agro-fuels), US production still has a large impact on world prices. For example, 40 percent of US commodity support is concentrated on maize, so any changes to current policy will have an impact on global cereals markets.

**In the longer run.** The confidence interval clearly becomes larger when one attempts to assess the world environment during what would correspond to the next financial perspective, i.e.

2014-2020. Many factors interfere. Economic growth at the world level is subject to much uncertainty. A central scenario is to consider that the recent growth rates observed in Asia will go down, and that this effect will only be partly matched by steadier growth in Africa. Resources constraints, in particular in water, will limit the expansion of low cost agricultural production. It was expected that the effect of global warming on agricultural production would only become significant 50 to 70 years from now. Recent findings suggest that it could start impacting food production through a more variable climate (droughts, floods) during the next decade.

The supply response is controversial. In many areas of the world, there are ways to produce more efficiently, waste a smaller percentage of harvest. Some land may also be converted to agriculture, or grown more intensively, even without a larger recourse to deforestation. However, there are other areas where the intensification mode ("green revolution") followed in the past will hit environmental as well as economic constraints. The extra use of pesticides and fertilizers cannot expand indefinitely. In China, in spite of rapid technical changes, arable land is increasingly used for non agricultural purposes (it has decreased by 8 percent in 9 years).

Scientists claim that a second generation of biotech will soon enable significant progress in the above mentioned areas (van Montagu, 2006). The widespread and quick adoption of GM crops could lead to increase yields significantly during the next decade. Argentina has been experiencing a fast adoption, and the technology is catching on quickly in China, Brazil, Australia, India and other countries. However, technical change is also likely to make the use of agricultural products for energy purposes more efficient, so that this outlet would compete more with the use for food.

Overall, there are many reasons to believe that the historical decline in agricultural prices is over.

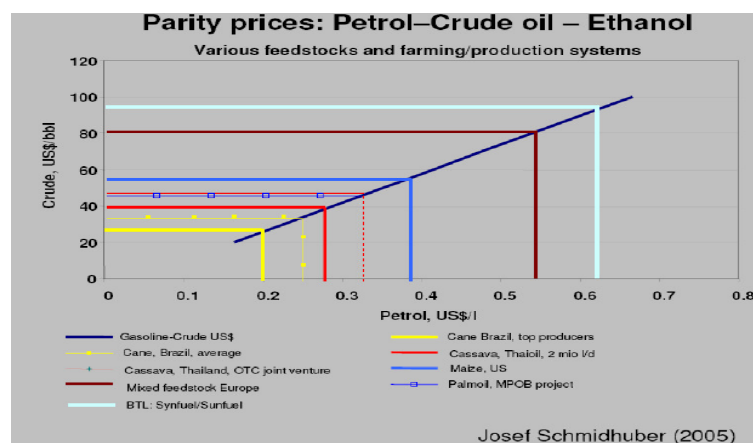


## Annex 2: Will there be a "natural floor price in the future?"

During the recent years, a tighter link has taken place between food and energy markets. The fluctuations of oil prices have affected the price of sugar and both the sugar and the ethanol market have shown tight correlations. This suggested that the three markets were now so interdependent that oil price was becoming a major driver of food prices. Indeed, in the case of Brazil, bioenergy demand had created a quasi-intervention system, with cane going to the ethanol sector when sugar prices went under a certain threshold (Schmidhuber, 2007b). With higher energy prices the range of products competitive in the energy markets has increased so that the floor price effect spills over a large set of crops. This issue is particularly important since it could potentially provide a de facto minimum price for agricultural markets and make the need for market management policies, such as the EU intervention system, less and less relevant. It could also limit fluctuations at least on the downward side, and make risk management instruments less useful or at least less costly by reducing the risk premium and therefore the insurance premium demanded by insurers.

Typically, there is a parity price for the conversion from crude oil to petrol which allows mapping agricultural parity prices for energy use. Schmidhuber (2007a) calculated some of these break even points for various agricultural commodities. Even though technology is evolving and these figures are likely to change in a near future, a price of oil of US\$28/bbl allows for a profitable use of cane into ethanol for producers in Brazil's south-centre region, at US\$35/bbl for the average in Brazil, at US\$38/bbl for large scale cassava-based ethanol production in Thailand, at US\$45/bbl for palm oil-based biodiesel in Malaysia, US\$58/bbl for maize-based ethanol in the US and can up to nearly US\$100 for BTL production in Europe (these parity prices have been calculated for very specific production and conversion environments and may thus not necessarily apply to the same or similar feedstocks in different production environments (Figure A1). Likewise, they are based on the exchange rate to the US Dollar that applied for the underlying year of the calculations and may change for the same year and feedstock over time). Such calculations suggest that the possible outlets in the energy sector provides a floor price for corn and sugar, but for most feedstocks, including palm oil, rapeseed, sunflower, cassava, etc.

Figure A1. The oil price at which energy use of agricultural products becomes competitive



Source: figure taken from Schmidhuber (2007a)

However, some recent issues make things a bit more complex. First, if the two markets, agricultural and energy are more interdependent, the dependency is very asymmetric. The potential of agricultural production as a source of energy is very small compared to the huge size of the energy market. The current use of agro-fuels account for 0.3 percent of total energy

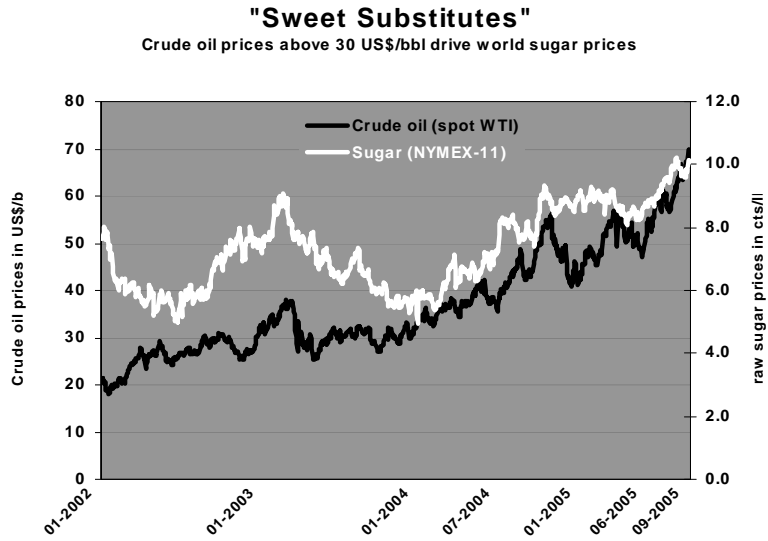
supply and could not exceed more than a few percentage points in a near future.<sup>22</sup> That means that the use of agricultural products in biofuels will have no impact on the price of fossil oil, while the price of the latter will affect the price of the former. That is, if the agrofuel market manages to create a de facto intervention system for food and feed crops, this floor price will fluctuate with the price of fossil oil. In addition, some experts believe that the present high prices of oil (\$US70 to US\$90/bbl) is conjunctural but that in the medium run, an equilibrium price is more likely to be around US\$50/bbl (Chaney 2007). At this price, EU feedstocks are unlikely to be processed profitably into ethanol, with the exception, perhaps, of rapeseed turned into biodiesel.

Second, during the year 2007, the correlation between energy and agricultural prices has recently become less tight than what had been observed during the 2001-2006 period, a period where the apparent closer and closer correlation had led economists to conclude that fossil fuel price created a floor price for agricultural products (Figure A2 and Figure A3). In addition, the price of sugar has not followed the price of other crops such as wheat, corn and cassava, while it was expected that the use of these products for ethanol would lead their price to move closer.

---

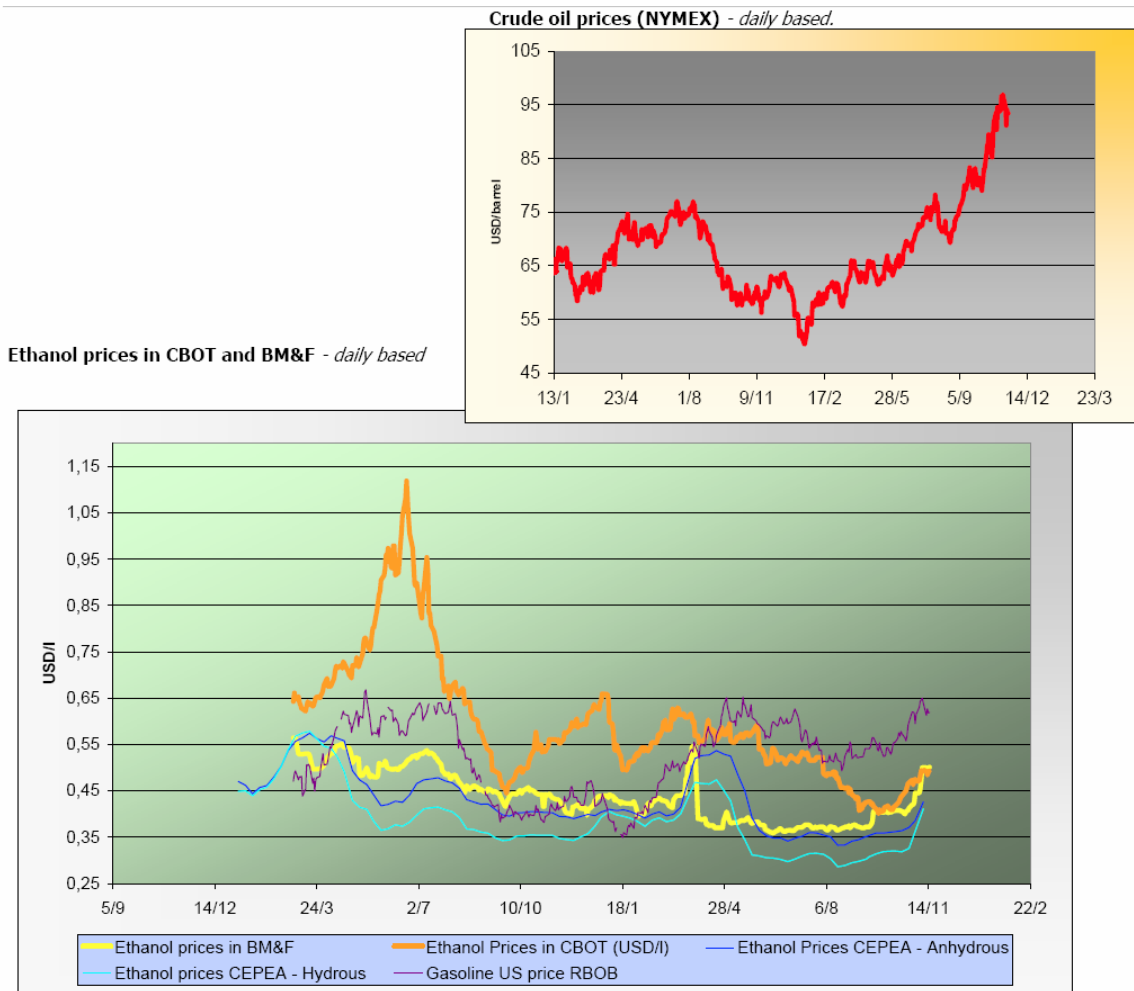
<sup>22</sup> In medium run projections, the technical viable potential of agriculture is estimated to be in the range of 150EJ/a (today's actual global biomass use accounts for roughly 50EJ/a if one counts combustible and waste, including wood, charcoal, cow dung, etc), while energy needs are projected to reach 850EJ/a. Because of the current conversion ratios, agrofuel production could not exceed 50EJ/a. See Schmidhuber 2007a for a synthesis.

Figure A2. A closer link between crude oil and prices (source Schmidhuber 2007a)



Source: figure taken from Schmidhuber (2007a)

Figure A3. A looser correlation during the recent months



Oil, gasoline and ethanol price changes from past week and from week#01 2006:

Source: World Association of Beet and Cane Growers. Courtesy from O. Crassard

Were economists who thought that the dual use of agricultural products provided a floor price too optimistic? It is noteworthy that the correlations between the price of fossil oil and sugar has become looser, the mechanisms still seem to work well with those crops that are used in biodiesel production. A number of short term explanations and bottlenecks might explain this still imperfect linkage between the sugar and energy markets. Record crops in India and in other parts of the world, the limited number of flexible fuel cars in Brazil (the share of flexible cars is high in new registrations but the renewal of the fleet is slow) are one of them. There are numerous constraints in the distribution of agrofuels that limit demand, technical problems in transportation, that explain, for instance, the low price of ethanol in the US at the end of the year 2007 in spite of very high gasoline prices. The protection of the US and EU ethanol markets is such that price fluctuations cannot be absorbed on a large market. For heating fuels, bottlenecks include logistical problems within households, lack of storage capacity given the much higher space requirements and the lower energy density of biofuels, unresolved emission problems, etc.

However, there seem to be a growing trend for building plants that are less versatile in countries like Brazil (i.e. dedicated either to sugar or to ethanol production). While it is likely that the energy market and the agricultural ones will be more tightly linked in the future, short term gaps and different fluctuation patterns are likely to persist.

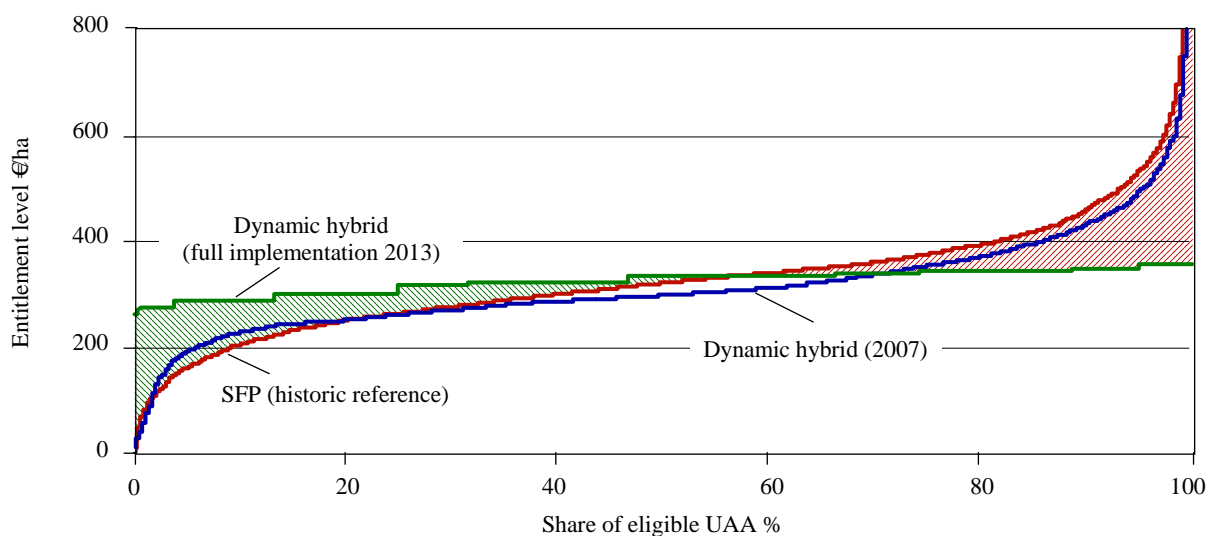
### Annex 3: The impact of a regional flat rate in Germany and France

#### The impact of a flat rate SFP in Germany

Germany has opted for a so-called ‘dynamic hybrid model’ in 2004. This model starts to distribute about 35 percent of the payments (mainly sourced from arable payments, adult slaughter premiums, 50 percent of extensification premiums) according to the regional model (with a lower rate for grassland than for arable land) whereas the rest is initially allocated according to the historic model. The share of the regional model is increased from 2010 onwards to reach 100 percent in 2013. The corresponding intrasectoral redistributions have been investigated in simulations based on the German FADN dataset of 2005/06, including the full implementation of the milk market reform, but excluding premiums of the sugar market reform (Kleinhanß 2007).

Figure A4. shows the distribution of entitlement levels in Germany for a hypothetical implementation of the historic model, for an intermediate step of the dynamic hybrid model (referring to 2007) and for the final implementation of the regional model. In the historic model, entitlement levels are below 200 €/ha and above 500 €/ha for about 10 percent of the UAA each. High entitlement levels are given mainly to farms with intensive beef fattening and intensive milk production. For the hybrid model, the distribution does not change much in 2007, because the most important premiums are still paid according to individual reference amounts. But fully implemented regional flat rates (2013) would induce significant redistributions in favour of extensive farms and Less Favoured Areas, while intensive cattle farms are negatively affected.

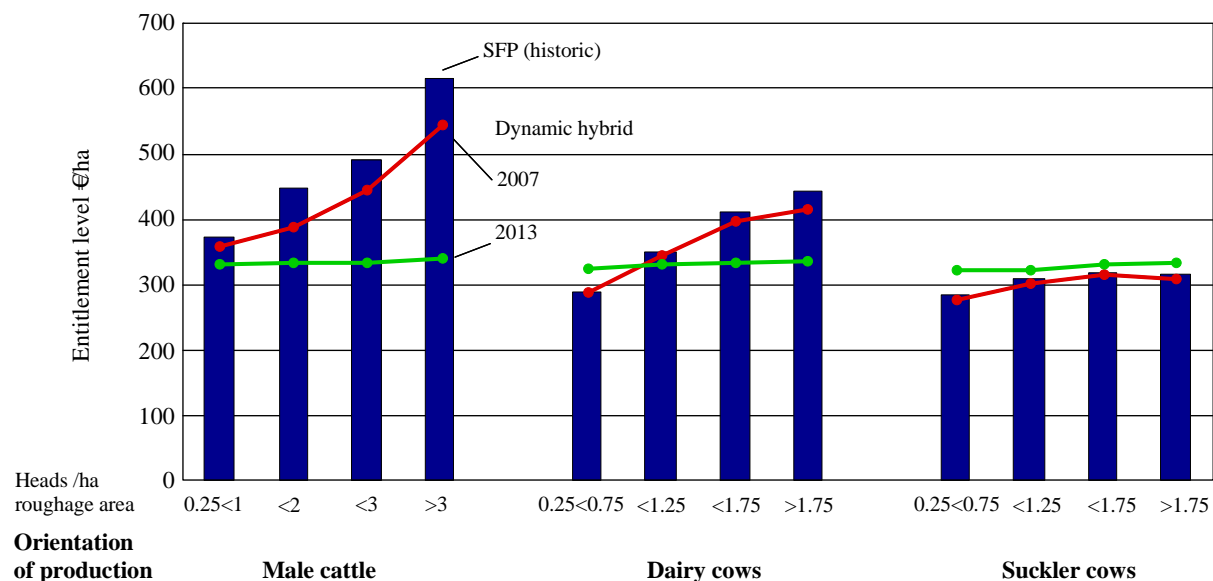
**Figure A4. Distribution of entitlement (levels) in Germany – full implementation of milk market reform**



Source: Kleinhanß 2007

The variation of premiums depends mainly on livestock densities (Figure A5): Rather extensive bull fattening farms are not affected much, but those with more than 3 bulls/ha of roughage area will lose almost half of direct payments. This tendency is also true for dairy farms but it is less pronounced. Farms with suckler cows will be positively affected on average, because this is typically an extensive production system.

Figure A5. Change of entitlement levels under the German dynamic hybrid model



Source: Kleinhanß 2007

### The impact of a flat rate SFP in France

France is an illustrative case of the impact of a flat per hectare payment. Indeed, agriculture is particularly heterogeneous, with mountains and fertile plains, sometimes within the same geographical area. The SFP is topped by coupled payments in cereals, oilseeds and proteins, the suckler cow payment, and by payments for less favoured areas. Several large scale agri-environmental schemes also provide significant amounts of direct payments, especially to pastures. Consequently, the payment amounts differ considerably between farms according to the historic and current production orientation, as arable crops and beef farmers receive high direct payments, and to the farm size, as payments are proportional to historic and current activity levels.

Flattening the current allocation of the SFP would result in significant transfers between farmers (Butault and Rousselle 2007; Chatellier 2007). Assuming that all the remaining coupled payments are fully decoupled (which is consistent with the Commission's proposal) and that current payments are reallocated on a per hectare basis within each administrative region (without differentiation of grassland and arable land) sheep producers would experience an increase in income which is very large in percentage (34 percent in Butault-Rousselle's simulation, 64 percent in Chatellier's simulations, but the initial income is very small). Grain producers would suffer an decrease in income ranging from 8 percent (Butault-Rousselle) to 16 percent (Chatellier). At the national level, the change would be fairly neutral for dairy and beef producers according to Guyomard et al. (2007). However, Chatellier shows that within dairy producers, the income of the most extensive systems (those that do not use silage corn) would increase significantly.

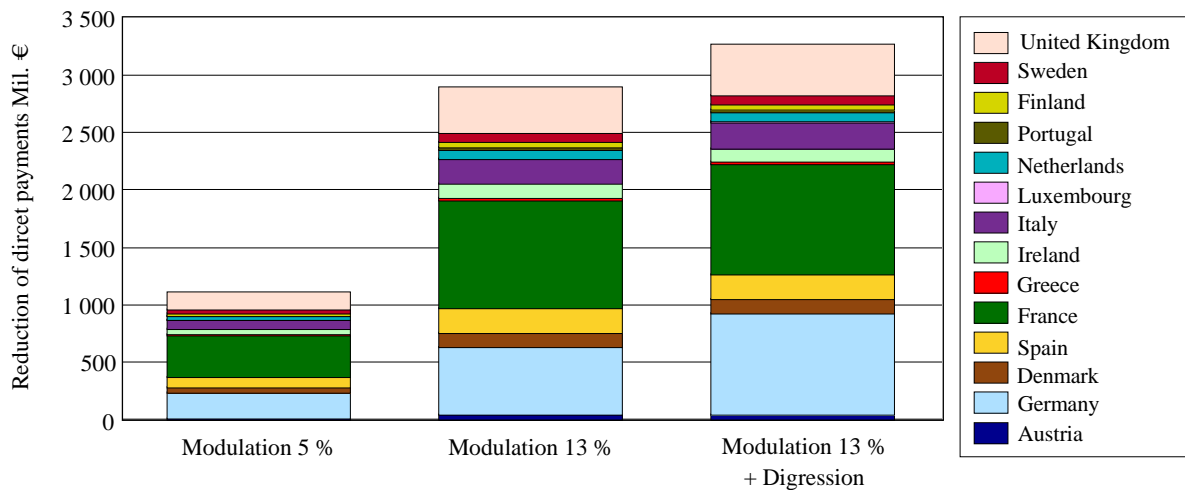
There would nevertheless be very significant redistribution within. For example, farm income would increase significantly in some mountain areas such as Auvergne, Franche Comté and Limousin, by more than 40 percent (i.e. by roughly 10000 to 13000 euros). Regions that specialise in arable crops, such as Nord Pas de Calais, Picardie or Haute Normandie would experience significant losses. Even within a region where income would go up, such as Franche Comté, there would be a major redistributions between producers who are presently entitled to payments (arable crops, beef producers) and those who were not under the historical model that was chosen by France

## Annex 4: Financial impact analysis of modulation and digressive capping

Simulations based on EU-FADN data for EU-15 permit to approximately estimate the possible funding raised through modulation and capping of payments on a sliding scale (digression). Simulations are based on data of 2004/05, where milk premiums are adjusted to the final level in 2007 but premiums for sugar beets are excluded. The total of direct payments for farms represented is €26.7 bn. The increase in modulation in favour of Pillar II from 5 to 13 % would clearly make a more contribution than capping (see Figure III.4). The amount of modulation increases from €1.1 bn (5 %) to €2.9 bn (13 %).

Reduction of premiums under a sliding scale capping by 10 % (100-200 K €), 25 % (200-300 K €) and 45 % (> 300 K €) would yield €428 m only. Germany will be affected most (€288 m), due to the farm structure of the New Laender, followed by the UK (€44 m) and Italy (€17 m). Other countries such as France and Denmark contribute less than €10 m each. 81 % of the premium cap occurs at the 3<sup>rd</sup> step, 8 % at the 2<sup>nd</sup> step and 10 % at the 1<sup>st</sup> step.

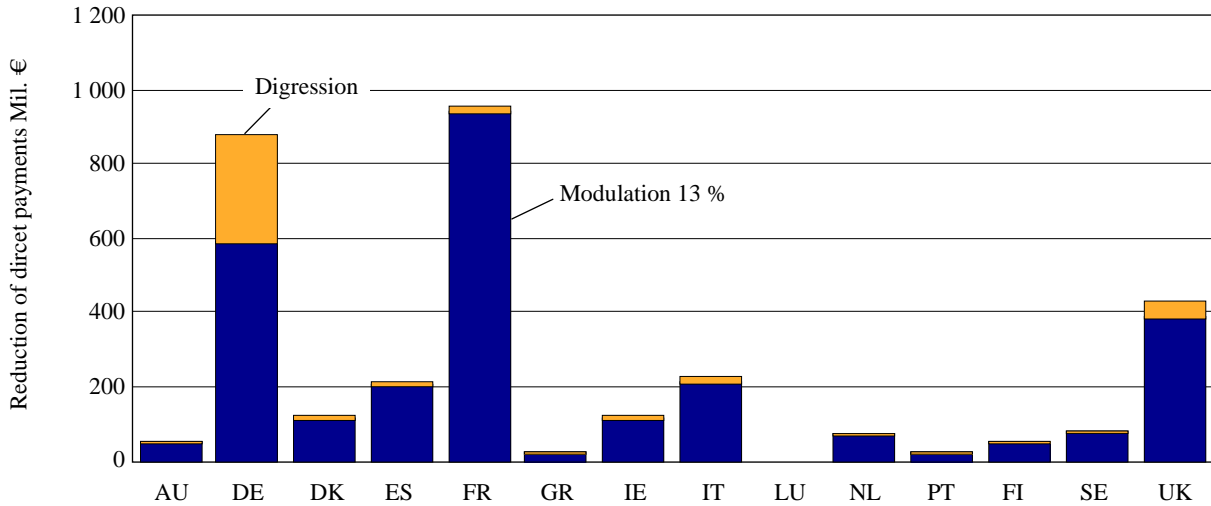
Figure A6. Impacts of premium cuts from Modulation/Digression in EU-15



Source: Kleinhanß 2007

Including digression, premiums will be reduced by €3.26 bn on total. About 1/3<sup>rd</sup> of this originates in France (mainly modulation), another 30 % in Germany (1/3<sup>rd</sup> digression) and the UK (8 %; thereof 15 % by digression).

**Figure A7. Partial effects of increasing Modulation/Digression compared to 5 % Modulation**



Source: Kleinhanß 2007

Without considering budget transfers via Pillar II, Farm Net Value Added will be reduced by 5-6 % in France, Germany and UK, 9% in Sweden. Other Member States will be less affected. Percentage income reduction depends on the premium cut, on the shares of premiums and Farm Net Value Added total revenues.



## **Annex 5: Financial instruments to cope with price variability**

*A forward contract* is an agreement to buy and sell an asset at a certain future time for a certain price (a spot contract is a particular case where the future time is today). Commodity *futures* are commitments to make or take delivery of a good at a particular location and time. A future contract is therefore a rather similar agreement to a forward contract, but future contracts are normally traded on an exchange, which requires specifying some particular features and guarantees (given that parties do not know each other). If markets are large enough to function well, only a small percentage of the contracts lead to actual product delivery. In all other cases, traders offset their commitments by taking out another position in the same contracts. Price fluctuates and this leads to profits or losses for holders of the contracts between the time they take their initial position and the time they close it. By taking out future positions whose returns are negatively correlated with profits from production, trading or processing operations, the cash positions become hedged, and the portfolio risk is reduced. There are many possibilities of contracts with more complex features than this simple case. It is noteworthy that the future contracts can deal with criteria that are not the price itself but derivatives. Since 1995 the Chicago Board of Trade has offer financial products based on the aggregate crop yield on a particular area. The variable on which hedging takes place is therefore the number of bushels per hectare rather than the price.

*Options* are different from futures in that they give the option buyer the right but not the obligation to buy (call option) or sell (put option) the future contract at a strike price specified in the option contract. The option can be exercised at a specify date (or before). Trade in options can be used to put a floor under losses but still allow individuals and firms to participate in gains when prices move in their favour. Options therefore operate a lot like price insurance, because a premium (the price of the option) is paid upfront in order to reduce risk by guaranteeing a minimum return (World Bank, 2006). Again, options can be defined on the basis of a yield per hectare to cover climatic risks. The buyer of a put option will therefore exercise his option depending on whether the observed year at the specified date is higher than the forecasted yield

Options have an advantage over futures for some agents (for example when there is the need to manage a strategic reserve), first because of their role as price insurance, and second because purchasing options requires only a single, up-front premium whereas futures can entail continuing margin calls if prices moves unfavourably. However, in any case, an effective hedging strategy requires considerable investments in analytical capacity and the capacity for long run commitments. Options and future markets could be a major vector in a policy that would seek to ease the effects of price fluctuations (Sarris et al, 2005).

*A swap* is an agreement between two parties, the hedger and the hedger provider in which the edger agrees to pay a fixed price and receive a floating price for a specified volume of a commodity over a specified period. That is, swaps obligate two parties to exchange a floating price for a fixed price for a given among of a commodity at specified time intervals and have been developed in the Over The Counter market as long term price risk management instruments. They are normally purely financial transactions not entailing physical delivery of the commodity. They are mostly used in the oil market. There are some difficulties for agricultural producers to use swaps, namely the fact that the prices to be used in swaps are difficult to determine when they are based on future contracts where the level of backwardisation is highly volatile.

