EU Enlargement and Agriculture

Risks and Opportunities

Friends of the Earth Europe

September 2004

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EU Enlargement and Agriculture: Risks and Opportunities

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ABBREVIATIONS

AEP	Agri-Environmental Programme
CAP	Common Agricultural Policy
CEE	Central and Eastern Europe
CEE-10	The current 8 CEE new member states (Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia) + Bulgaria and Romania (supposed to join the EU in 2007)
EU	European Union
GFP	Good Farming Practice
GATT	General Agreement on Trade and Tariffs
GMOs	Genetically modified organisms
HNV	High Nature Value
ICM	Integrated Crop Management
IPM	Integrated Pest Management
LFA	Less Favoured Area
NVZ	Nitrate Vulnerable Zone
RDP	Rural Development Plan
SAPARD	Special Assistance Programme for Agricultural and Rural Development
TFI	Treatment Frequency Index
WTO	World Trade Organisation

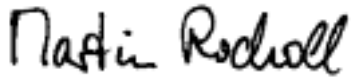
Foreword

After 15 years of post-communist transformation, the countries of Central and Eastern Europe (CEE) face a new challenge – their accession to the European Union. Sustainable use of natural resources is vital for the long-term development of these countries. EU membership will mean both opportunities and risks. On the one hand, EU enlargement will improve the environment because of the implementation of EU environmental legislation. On the other hand, the absence of sustainable EU policies in the areas of agriculture, transport and regional policy will pose serious threats to the environment in the new EU countries. If these policies are not reformed, EU membership could well mean more toxic pesticides sprayed on the fields, more pollution from road transport and a drastic loss of biodiversity.

This publication focuses on agriculture, an area where EU contribution to its new member states will be particularly controversial, mainly due to the unsustainable nature of the EU's Common Agricultural Policy (CAP). Friends of the Earth Europe (FoEE), a network of 31 national environmental organisations, has long campaigned for sustainable agriculture in Europe and a radical green reform of the CAP [1]. Our campaign on genetically modified (GM) food advocates for the right of consumers to eat GM-free food and for stricter laws to avoid gene contamination. Another campaign, 'Billions for Sustainability?' monitors the use of EU regional funds in Central and Eastern Europe and promotes their sustainable and efficient use.

Recently, our member groups in seven of the new countries – Estonia, Latvia, Poland, Czech Republic, Slovakia, Hungary and Cyprus - have been involved in a common project focused at the implementation of CAP in their countries. In November 2003, we organised an international conference 'EU Accession and Agriculture: Making CAP Work for People and the Environment' held in Krakow, Poland [2]. We also initiated a Declaration for Sustainable Agriculture in the Enlarged Europe, signed by more than 200 organisations from many countries and presented to all EU agriculture ministers. The publication you hold in your hands is also an outcome of this project, based on extensive research and consultations with experts.

Despite the recent partial reforms of the CAP, a more fundamental transformation is still needed. The EU needs to ensure that taxpayers' money does not support environmental and social damage, the suffering of farm animals and production of hazardous food. With this publication, we appeal to civil society and decision-makers in the new member states to make sure that CAP is implemented in the most environmentally friendly way. There is a degree of flexibility on the national level, which must be used to promote sustainable agriculture. At the same time, we are looking forward to the support from Central and Eastern Europe for our urgent demands to further reform and green CAP at the EU level.



Martin Rocholl, Director, Friends of the Earth Europe

Executive Summary

On May 1, 2004, ten new countries acceded to the European Union. Some 4 million farmers and agricultural workers in the new member states thus joined their 7 million colleagues in the old EU-15. The EU's Common Agricultural Policy (CAP) was extended to some 38 million more hectares of farmland. In the first three years, the EU will pour around €13 billion of CAP subsidies into agriculture in the new member states.

The introduction of CAP is going to have far-reaching impacts on farmers, food, landscape, environment and rural jobs in the new member states. Implementation of other EU laws and policies and the elimination of trade barriers will also lead to profound changes. This publication provides an overview of the potential impacts on the new member states with policy recommendations for their decision-makers.

The publication focuses mainly on the eight current new member states in Central and Eastern Europe (less on Cyprus and Malta). Often it also refers to all CEE-10 countries, including the candidate countries Romania and Bulgaria that are scheduled to join the EU in 2007.

In comparison to the EU-15, agriculture in the CEE-10 countries currently employs more people, uses lower amounts of pesticides and fertilisers, produces lower yields and often hosts richer wildlife (see table 1).

Table 1. Key features of agriculture in EU-15 and CEE-10 countries

	EU-15	CEE-10
Agricultural employment (thousands of people; 2000) [3]	7,100	8,900
Share of agriculture in total employment (2000) [3]	4.3%	21.4%
Utilised agricultural area (thousands of ha^2)	130,000	59,000
Share of agricultural area in total area (2000) [3]	40.2%	54.6%
Share of organically farmed land in agricultural area (2002) [4]	3.8%	0.85%
Cereal yield (tonnes/ha; average for 2000-03) [5]	5.5	3.0
Use of pesticides (kg of active ingredients/ha; 2001) [5]	2.3	0.6
Use of nitrogen fertiliser (kg/ha; 2002) [5]	63	36

Agriculture is an area, partly due to flaws in the CAP, where EU enlargement can cause a great deal of social and environmental damage: a loss of agricultural jobs and rural depopulation, higher use of chemical pesticides and fertilisers in fields, a huge loss of biodiversity, more pollution of air, water and soil, and closing down of small food processing enterprises as well as small farms.

On the other hand, the EU offers the new countries possibilities to boost organic agriculture, maintain extensive farming on pastures and meadows, and revitalise rural areas. The EU also brings them bans on the use of some hazardous pesticides, higher animal welfare standards and legislation limiting pollution from farms.

In sum, the EU enlargement brings serious risks but also distinct opportunities for agriculture and the environment in the new member states. A lot now depends on decision-makers in the new countries themselves. Will they make use of the opportunities and avert the risks or will it be the other way round?

The CEE region is far from homogeneous. During preparations of the first Rural Development Plans in individual countries, large differences between their political approaches to agriculture have appeared. On the one hand, Slovenia or the Czech Republic seem willing to use Agri-Environmental Programmes on a large scale to develop organic farming and maintain species-rich pastures and meadows. On the other hand, Poland – by far the largest of the new member states with the largest number of farmers – has so far had one of the most short-sighted agricultural policies. Despite very good conditions for development of organic agriculture, Poland's farm policy only seems focused on productivity increases, which add to its already high rural unemployment.

Key messages:

- Agriculture is not an industrial sector, but a multifunctional one. Agriculture should produce healthy food, maintain diverse landscapes and provide employment in rural areas. Pure focus on productivity increases helps neither of the three, is obsolete and misguided.
- Modernisation of CEE agriculture should not mean blind following of the intensive, industrial model. After the BSE crisis and other food scandals of recent years, Western Europe is slowly but inevitably turning away from it. The new member states should use the opportunity and directly shift to sustainable agriculture rather than repeat the old mistakes.
- Environmentally friendly farming does not have to mean a return to "traditional" practices. Organic and integrated farming systems employ highly modern, innovative and sophisticated cultivation methods.
- Environmentally friendly farming is not only good for the environment, but also for the economy and society, for farmers as well as consumers.
- It is better and cheaper to maintain and develop the existing social and ecological wealth (living countryside, diverse landscape and species richness) than it is to destroy it and then pay to recover it.
- It is better and cheaper to tackle environmental pollution at its source through the development of more sustainable practices than it is to cause pollution and then pay to clean it up (e.g. water polluted by pesticides and fertilisers).
- The new member states are now co-responsible for the future of the EU and its Common Agricultural Policy. Their political commitment is needed to change CAP into a policy that supports sustainable agriculture, produces healthy food and does not harm developing countries.

The future of farms and rural areas: depopulation or revitalisation?

Agriculture in CEE countries employs more people and has much lower productivity than farming in Western Europe. However, narrow focus on productivity increases would lead to a loss of agricultural jobs and rural decline. Intensive agriculture substitutes human labour and knowledge with chemical pesticides and fertilisers. To reach only half of the EU-15 agricultural productivity would involve the destruction of 4 million jobs in the CEE countries.

☹ **Risk:** Millions of people will be pushed out of agriculture. The already high rural unemployment and poverty will increase.

☺ **Opportunity:** Governments will make a clever use of rural development funds to support organic agriculture, young farmers, marketing of local products, rural tourism and biomass energy production. They will create new jobs in rural areas and revitalise their countryside.

More pesticides and fertilisers?

Dependence on chemical pesticides and fertilisers is one of the most adverse aspects of intensive agriculture, with negative environmental, health and economic impacts. In the 1990s, consumption of pesticides and fertilisers in CEE countries sharply dropped for economic reasons. This gives them an advantage over many West European countries, which are now striving to reduce their dependence on agro-chemicals.

☹ **Risk:** Introduction of CAP subsidies together with increased competition on the EU market will induce farmers to use more pesticides and fertilisers.

☺ **Opportunity:** Governments will condition subsidies by appropriate environmental standards. Farmers will thus be encouraged to invest income from subsidies into more efficient application equipment, or will directly switch to organic or integrated production.

Livestock farms, animal welfare and food safety

The recent series of major food scandals such as the "mad cow" disease has shown where emphasis on productivity at any cost can lead. In CEE countries, numbers of livestock declined to less than a half over the 1990s. CEE countries should not follow the impasse of the industrial

model. They should shift directly to free-range or high quality indoor systems with plenty of space, fresh air and daylight for animals.

☹ **Risk:** Large intensive "factory farms" will be built in CEE countries by foreign investors, polluting their surroundings and pushing smaller producers out of the market.

☺ **Opportunity:** Governments will use rural development funds to support small local food processing companies and good animal welfare conditions at farms.

Landscape and biodiversity

Diverse landscapes connected to mixed, less intensive agriculture help prevent floods and erosion and attract rural tourism. In most CEE countries, communist collectivisation of agriculture led to the ploughing up of field boundaries and massive biodiversity losses. Nevertheless, there are still mosaic landscapes in many areas with high richness of farmland plants, birds, mammals, butterflies and other insects.

☹ **Risk:** CAP will encourage more pesticide and fertiliser use, specialisation in monoculture crop cultivation and further ploughing up of field boundaries and wildlife habitats. There will be a dramatic decline in biological and landscape diversity.

☺ **Opportunity:** Governments will establish environmental conditions for CAP subsidies and use broad Agri-Environmental Programmes to maintain and increase landscape diversity and species richness.

Pollution and erosion

Intensive agriculture leads to soil degradation and environmental pollution. These result into high economic costs, e.g. for water treatment, which are paid for by the whole society. Pollution of soil, water and air decreased in the CEE countries in the 1990s due to the decline of livestock numbers and reduced use of pesticides and fertilisers.

☹ **Risk:** Land consolidation, higher use of agro-chemicals and construction of new “factory farms” will once again increase pollution and erosion.

☺ **Opportunity:** Governments will link CAP subsidies to adequate environmental conditions. They will also upgrade training and advisory services to help farmers improve their farming practices.

Extensive farming and semi-natural grasslands

From Baltic coastal areas through the Carpathian mountains to the steppic grasslands in the Hungarian puszta, the CEE region still hosts a great variety of semi-natural grasslands with high biodiversity. Their maintenance is dependent on extensive management – appropriate mowing of meadows and grazing of pastures.

☹ **Risk:** Abandonment of semi-natural grasslands will continue. Introduction of CAP subsidies with national top-ups for arable crops will also encourage farmers to plough up grasslands.

☺ **Opportunity:** Proper implementation of Agri-Environmental Programmes and Less Favoured Area payments in the second pillar of CAP will make extensive farming on meadows and pastures economically viable. Both intensification and abandonment will thus be prevented.

Supermarkets and long-distance transport of food and animals

Food is now travelling further than ever before, but ever increasing transport is not sustainable. Long-distance transport of live animals causes great suffering to the animals and risks the spreading of diseases. Big multinational retail companies, which play a central role in the de-localisation of food distribution, have burst into the CEE countries in recent years. They rapidly acquired huge shares of the food market. They demand large supplies of standardised products from farmers and increasingly dictate prices to them.

☹ **Risk:** EU enlargement and elimination of trade barriers will further increase long-distance transport. The expansion of large retail chains will push small farmers out of the market.

☺ **Opportunity:** With the help of properly targeted rural development funds and the LEADER+ programme, small local food processing enterprises and farmers' markets will undergo a revival.

Genetically modified crops

Genetic modification of farm crops takes industrialisation of agriculture to the extreme, exacerbating the negative impacts of intensive monocultures. Despite the promises of the biotech industry, GM food has brought no benefits but instead created novel risks for the environment, farmers and consumers. Introduction of GM food to Europe has failed due to its rejection by consumers. GM crops have been commercially cultivated only in Spain, Romania and Bulgaria.

☹ **Risk:** The new member states will start commercially growing GM crops without a proper legal framework and controls and will restrict the rights of their citizens for information on GM field locations.

☺ **Opportunity:** Governments will issue temporary bans on GMOs approved in the EU but not yet in their countries. Regions will set up GMO-free zones, in which the cultivation of GMOs is completely banned.

Sustainable alternatives: organic and integrated agriculture

Organic farming, which avoids the use of chemical pesticides and fertilisers, and integrated farming, which significantly reduces their use, present great opportunities for CEE farmers who often use relatively low amounts of agro-chemicals. These modern farming systems are not only good for the environment and public health, but also help to solve social and economic problems of rural areas, as they create more jobs. Organic production in Europe is no longer a marginal niche sector and has grown rapidly in CEE countries as well.

☹ **Risk:** The new member states will focus on productivity increases and lose the advantage they currently have in low usage of agro-chemicals for switching to organic production.

☺ **Opportunity:** Agri-Environmental Programmes and other rural development measures will be used to boost organic farming and other green farming methods and to strengthen the organic food market.

Key policy recommendations for the new member states

To make the EU membership a success for rural areas, the environment and consumers, decision-makers in the new member states should pursue policy measures in three areas. Firstly, they need to make use of the existing possibilities within both pillars of the CAP at the national level. Secondly, the success scenario also requires further policies and actions at national level. Thirdly, they need to press for a real greening of the CAP at the EU level.

1) Implementation of CAP at the national level:

a) Use the following options in the **first pillar of CAP**:

- Establish **environmental and animal welfare conditions for farms to receive direct payments** (such as cross-compliance or good farming practice). Environmental damage, unsafe food and animal suffering must not be subsidised by public funds.
- If using **national top-ups** to direct payments, target them to environmentally friendly farming sectors, such as extensive or organic farming.
- Ensure **fair distribution of production limits (quotas)** in order to maintain extensive livestock farming.

b) Use the following options in the **second pillar of CAP (rural development)**:

- **Do not shift money back** from the second pillar to the first pillar to top-up direct payments.
- Spend at least **50%** of rural development funds on well-designed **Agri-Environmental Programmes** enabling participation of a large number of farmers.
- Use rural development funds to stimulate local **direct marketing schemes** such as farmers' markets and to support small **local food processing enterprises**.
- Use the measure for **meeting EU standards** to encourage farmers to improve their farming practices, animal welfare and handling of polluting substances.
- Establish **environmental and animal welfare conditions** for rural development measures and **target** them to support green farming methods.
- Ensure good design and implementation of rural development measures through proper **monitoring, evaluation and involvement** of a broad range of stakeholders.

2) Accompanying policies and actions at national level:

- Upgrade **training and advisory** services for farmers in order to improve their farming practices and raise awareness of the environmental impacts of agriculture.
- Develop ambitious **action plans for organic farming** to increase the share of organic farmland to **10%** by 2010 (following e.g. Germany).
- Develop ambitious **action plans to reduce pesticide and fertiliser use,** including introduction of environmental taxes on pesticides and fertilisers (following e.g. Denmark).
- Lower the VAT **taxes** for organic agricultural products.
- Develop ambitious **action plans to prevent increases in intensive livestock farms** and to support farms with good animal welfare conditions
- Take an extremely cautious and publicly transparent approach to **genetically modified organisms**, adopt strict national legislation on co-existence and liability, and permit regions to set up GMO-free zones.
- Ensure broad scope and proper implementation of the EU nature protection network **Natura 2000.**
- Properly implement and enforce the existing **EU environmental legislation**, notably the Nitrate Directive and the Water Framework Directive.

3) Changes in CAP at the EU level:

- Press for a **new, real CAP reform** towards a policy that supports sustainable agriculture and vigorous rural areas, produces healthy food and does not harm developing countries.
- Press for an **improvement and strengthening of cross-compliance** so that it goes beyond the existing legislation and brings real environmental, food safety and animal welfare benefits.
- Press for **more modulation**: a shift of at least 20% of funds from the first to the second pillar.
- Press for the **elimination of export subsidies** and a stop to EU food exports under production price.
- During the negotiations on the **sugar reform**: demand a reduction of sugar production quotas by at least 33% and a complete removal of export subsidies for sugar.
- During the negotiations on the **new Rural Development Regulation** for 2007-13: oppose abolition of the Good Farming Practice and reduction of co-financing for Agri-Environmental Programmes.

4) Changes in other policies and legislation at the EU level:

- Press for an **overhaul of EU trade policy**. Stop the EU pressure on developing countries to open their markets to subsidised competition from the rich countries.
- Press for stronger **EU strategy on pesticides, EU soil protection strategy, EU action plan for organic food and farming and EU biodiversity action plan** with concrete and legally binding targets and timetables.
- Press for further and faster improvement of the EU **animal welfare legislation**, including an overall time limit on the transport of live animals.
- Press on the EU to introduce **environmental taxes on transport** to make food prices reflect the true costs of transport, including its negative environmental impact.
- Press for stricter EU **legislation on GMOs**, including EU-wide rules on co-existence and liability and the seed contamination limit of 0.1%.

Introduction

On May 1, 2004, ten countries – Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia, Cyprus and Malta – acceded to the European Union. The EU was thus extended to some 38 million more hectares of farmland. Around 4 million farmers and agricultural workers in the new member states joined their 7 million colleagues in the old 15 member states. The farmers became part of the EU's single market as the last trade barriers were removed. Most of them will also begin to receive subsidies from the EU's Common Agricultural Policy (CAP). In the first three years, the EU will pour around €13 billion of CAP subsidies into agriculture in the new member states.

Perhaps no other policy affects the everyday lives of European citizens as directly as the CAP. Agricultural policy decides the quality of our food, the landscape where we live and the jobs of people in rural areas. The introduction of CAP in the new member states – together with other EU laws and policies and the elimination of trade barriers - is thus going to have far-reaching consequences.

Agriculture is supposed to provide sufficiency of healthy food, diverse landscape and employment in rural communities. Today's intensive, industrial agriculture brings the opposite: food contains pesticides and other hazardous substances; soil, water and air are contaminated by tonnes of agro-chemicals; landscape features are ploughed up; birds and other wildlife are disappearing; farm animals suffer in factory farms; and villages are losing jobs and becoming depopulated.

All this has been happening despite – or even because of – large sums of taxpayers' money invested into agriculture every year. Notwithstanding the last year's partial reform of CAP, much more political effort still has to be made in order to bring about the transformation of Europe's agriculture from quantity to quality. Signs of the necessary change are nevertheless already underway, for example in the continuing boom of consumer demand for organic food and food without pesticides, antibiotics or GMOs.

In comparison to the EU-15, agriculture in the CEE-10 countries currently employs more people, uses lower amounts of pesticides and fertilisers, produces lower yields and often hosts richer wildlife. Once in the EU, it is expected to undergo a deep "restructuring" and "modernisation" to become more alike agriculture in Western Europe. However, the model of intensive, industrial agriculture is itself in need of deep transformation. The limits of intensive, industrial agriculture have been reached with the BSE crisis and other food scandals of recent years and Europe will have to turn away from it.

The new member states should not follow the same old-style route of intensification but take a shortcut to a sustainable future. After all, most of the countries have already experienced the promotion of an agri-industrial model under the Communist regimes. The currently low use of pesticides and fertilisers gives them an advantage before many West European countries, which are now striving to reduce their dependence on these chemical inputs. Similarly, the many small farms and greater rural labour force constitute a resource for rural development rather than a burden that has to be quickly eliminated.

Structure of the publication

This publication provides an overview of the potential impacts of EU membership on farmers, food, landscape, environment and rural jobs in the new member states, with policy recommendations for their decision-makers. The publication focuses mainly on the eight current new member states in Central and Eastern Europe (less on Cyprus and Malta). Often it also refers to all CEE-10 countries, including the candidate countries Romania and Bulgaria that are scheduled to join the EU in 2007.

The publication is divided into two parts. The first part deals with key issues in the relationship between farming, society and the environment in the context of EU enlargement: pesticides and fertilisers in arable farming; animal welfare and food safety in livestock farming; social and economic aspects of agriculture; impacts of agriculture on landscape, biodiversity, air, water and soil; extensive farming on meadows and pastures; genetically modified agriculture; and organic and integrated agriculture. Each chapter shows the situation in the EU-15, the situation in the CEE countries, the potential impacts of the enlargement, the relevant EU policy instruments and concludes with policy recommendations aimed at decision-makers in the new member states.

The second part explains how the Common Agricultural Policy works, what is its history, structure and budget. It also describes how CAP has been reformed and shows why further change is needed. Last but not least, it explains how this complex policy is being extended to the new member states, with particular emphasis on the second pillar of CAP – rural development.

1 IMPACTS OF THE ENLARGEMENT ON FARMING, SOCIETY AND THE ENVIRONMENT IN THE NEW MEMBER STATES

1.1 The future of rural areas: depopulation or a living countryside?

Agriculture in CEE countries employs more people and has much lower productivity than farming in Western Europe. However, narrow focus on productivity increases would lead to a loss of agricultural jobs and further rural decline, thus increasing the already high rural unemployment and poverty. A clever use of rural development funds can reverse the rural decline. Support for organic agriculture, young farmers, marketing of local products, rural tourism and biomass energy production can create new jobs in rural areas.

EU: rural exodus under the CAP

The Common Agricultural Policy is supposed to help keep jobs and life in European countryside. Yet, it has not prevented massive losses of agricultural jobs and rural depopulation in the EU. By supporting **intensification**, i.e. replacement of human labour with chemical inputs and mechanisation, CAP has actually for a long time contributed to the outflow of jobs from agriculture. Presently, the number of people working in agriculture in the EU is 4% of the total labour force, a huge drop compared to more than 20% half a century ago. The result has been a "rural exodus" – depopulation of the countryside and migration of people to cities.

In the period between 1975 and 1999 alone, the agricultural sector in the EU-9 lost 49% of its workers – some 3.8 million people. Intensification has been accompanied by **concentration**: the size of the average farm rose from 12 to 19 hectares (ha) over the same period [6]. More than half of the farmers in the EU-15 are over 55 years old and their proportion has been increasing [7]. As holdings grow in size, it makes it financially more and more difficult for young farmers to take over [6].

CEE: more employment, lower yields

Farm structures in CEE countries reflect the region's history. During **collectivisation** under the Communist regimes, agriculture in most CEE countries was forcibly consolidated into large collective and state farms. In Poland, however, resistance of peasants halted the attempts at collectivisation, which was thus largely confined to the large, old Prussian estates in the West and Northeast. Yugoslavia also kept most of its agriculture in the hands of small family farmers. Poland and Slovenia thus emerged from Communism in 1990 with 77%, respectively 92% of their farmland in private hands. In all other CEE countries it was at most around 10% [8].

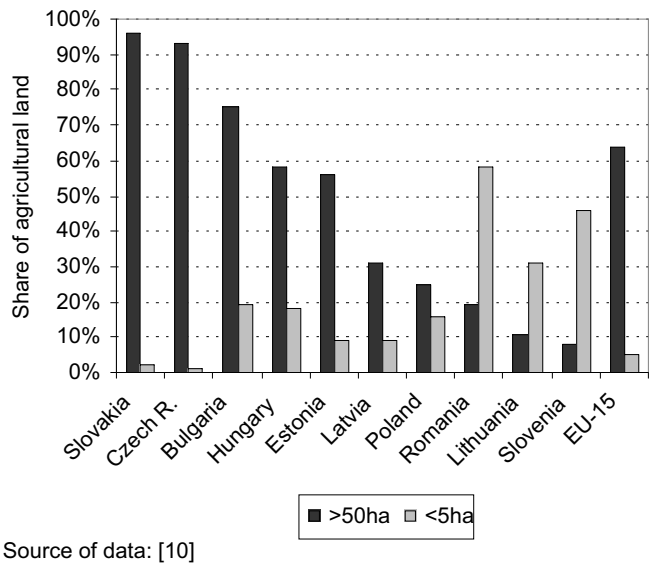
In the **1990s**, CEE countries returned most of the land and farm property to private ownership or private operation. The transfer occurred through various combinations of restitution and compensation to former owners, distribution to current users, privatisation and transformation of the collective and state co-ops into business entities. Until today, complicated and unclear property relationships persist. Many farmers lease the land on which they work from different owners. Complicated property relationships remain one of the major obstacles to farming in CEE countries.

Different forms of de-collectivisation gave rise to very different farm structures in CEE countries [8]. In the Czech Republic and Slovakia, the farm sector is **extremely concentrated** even in comparison with Western Europe. During privatisation in the 1990s, the large state and collective co-ops were turned into joint-stock or co-operative holdings but many were left relatively intact. Many family farms sprang up, but these use a smaller proportion of land. In the Czech Republic and Slovakia, around 75% of farmland is used by the largest 5% farms (usually successors to socialist co-ops) with sizes above 500 ha [9].

In Romania and the Baltic countries, on the other hand, a larger share of the collective land was divided among its users or former owners, which gave rise to a great number of small family farms [8]. The situation became similar to that of Poland and Slovenia where land remained **extremely fragmented** into many small farms. The share of land used by farms above 50 ha is rather low (see figure 1) [10].

Notwithstanding the differences, all CEE countries are generally characterised by a **dual farm structure** – a small number of very large enterprises on the one hand and a large number of very small farms on the other. The large enterprises, usually with several hundreds or thousands of hectares, are mostly former collective and state holdings. The small farms are usually family farms that survived collectivisation or were established after privatisation in the 1990s. The large holdings will now obviously receive a lot more CAP subsidies than the small ones.

Figure 1. Share of farmland used by large and small farms in CEE countries and EU-15.



Source of data: [10]

Overall, farms larger than 50 ha account for only 1% of the 9 million farms in the CEE region but take up 38% of its farmland. Farms smaller than 5 ha account for 82% of all farms in CEE countries but take up only 27% of all farmland [10]. In the EU-15, farms above 50 ha account for 9% of all the 7 million farms and take up 64% of all farmland; farms below 5 ha account for 58% of all farms and take up 5% of farmland [11].

Many small farmers - especially in Romania, Bulgaria, Poland and Lithuania – are **semi-subsistence farmers** who produce partly for their own consumption alongside production for the market. According to a study for the European Commission, there are about 5 million semi-subsistence farms in CEE-10 that account for more than half of the overall food production in the region (estimated at 53% in Poland, 36% in Hungary and at least 25% in the Czech Republic as against 14% in France) [12]. Out of the 1.2 million farms producing milk in Poland, only 380,000 delivered milk to dairies in 2002 [13]. The rest have usually between one and five cows and consume their milk on the farm or sell it directly to their neighbours. In the Czech Republic, Slovakia and Estonia, the share of production for own consumption is more modest (see table 2).

Semi-subsistence farming is sometimes denigrated as **hidden unemployment** that needs to be eliminated. However, from another point of view it functions as a **social safety net** in times of economic hardship and high unemployment. During the economic decline and lay-offs after 1990, semi-subsistence farming prevented mass unemployment and poverty at a cheap cost to the state budgets. Although many semi-subsistence farms are partly dependent on welfare benefits, it is a less expensive alternative than open unemployment and its associated costs. Semi-subsistence farms are also generally friendly to the environment. These farms usually use low amounts of agro-chemicals and thus support biodiversity and cause less pollution. On-farm consumption decreases transport of goods, packaging and waste.

Agricultural employment in CEE countries is on average **much higher** than in the EU-15 but there are big differences between countries. The share of farming in total employment in Hungary or the Czech Republic is quite close to West European proportions (around 5%). On the other hand, in countries where agriculture is less concentrated and less intensive and where there are many semi-subsistence farms, the share of agricultural employment is much higher: especially in Romania (around 40%), Poland and Lithuania (around 20%) (see table 2) [3].

However, the statistics on agricultural employment are highly relative. According to the European Commission's figures used here, there are 2.6 million people employed in agriculture in Poland. But according to the Polish national census, there are 10.5 million people engaged in agricultural activities. For half of them, agriculture is the main or only source of income [14]. At the same time, the official number of farms in Poland is 2.9 million. Yet only 1.6 million out of them are registered, which enables them to apply for direct payments under CAP [15]. Most of the remaining farms are too small (below 1 ha) and therefore not eligible for the subsidies.

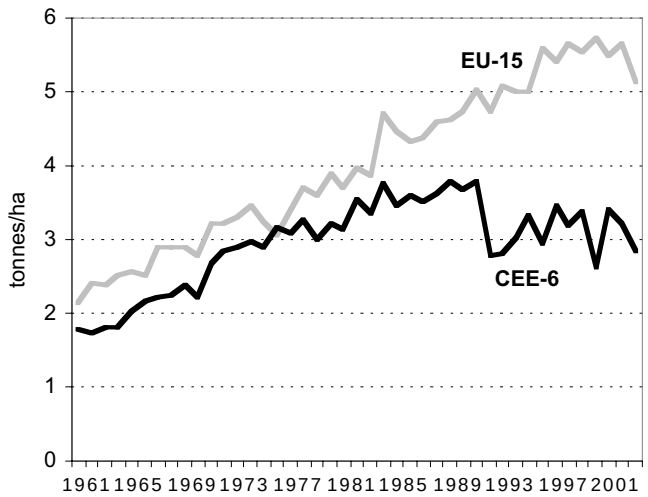
Table 2. Agricultural employment, market production of milk, and cereal yield in CEE countries and EU-15.

	Agricultural employment (thousands) (2000)[3]	Share in total employment (2000)[3]	Percentage of milk handled by dairies [13]	Cereal yield (tonnes/ha) (average for 2000-03)[5]
Czech Rep.	193	5.2%	92%	4.1
Estonia	32	7.4%	80%	2.0
Hungary	227	4.8%	77%	3.9
Latvia	118	13.5%	53%	2.3
Lithuania	262	19.6%	63%	2.8
Poland	2,698	18.8%	61%	2.9
Slovakia	119	6.7%	87%	3.5
Slovenia	81	9.9%	75%	4.9
Bulgaria	342	11.3%	n.a.	2.8
Romania	4,861	42.8%	n.a.	2.5
CEE-10	**8,933**	**21.4%**	**n.a.**	**3.0**
EU-15	**7,129**	**4.3%**	**95%**	**5.5**

Agricultural **yields** in all CEE countries except for Slovenia are **considerably lower** than in the EU-15 – on average by 30% or more for crop yields as well as animal yields (milk, meat, eggs) (see table 2 and figure 2). Until the 1980s, the EU-15 and CEE countries followed similar paths of intensification. In the 1990s, due to the sharp reduction in the use of pesticides and fertilisers and other economic changes (see chapter 1.2), the yields in CEE countries dropped and remained stagnant since.

In sum, farming in CEE countries employs more people and produces less output than agriculture in Western Europe. Both factors combine into a much **lower labour productivity**, which is often taken as the core of the "problem" of CEE agriculture [12].

Figure 2. Cereal yield in the EU-15 and CEE countries.



Note: The CEE-6 trend includes data for Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia.
Source of data: [5]

Risks after EU accession

The danger is that the complex needs of CEE agriculture will be narrowed down to increasing productivity, while ignoring the environmental, health and social aspects of food production. A study contracted by the European Commission says: "To reach only half of the average productivity of the EU-15 would already involve, with constant production, the destruction of 4 million agricultural jobs in the ten CEE countries", especially in Romania and Poland [12]. The Commission itself acknowledges that "a key risk during the early years after accession is that the restructuring process and Community instruments will be associated with growing rural unemployment and poverty" [16].

Already now, unemployment is around 20% in Poland, Bulgaria and several regions in other CEE countries. People normally leave agriculture, when there are better job opportunities elsewhere. With unemployment so high, farmers have nowhere to go.

Many expect that EU membership will rapidly “restructure” CEE agriculture to West European proportions: move the “excessive” labour force out, concentrate small farms into larger units, and intensify production [17]. Introduction of CAP subsidies, exposure to sharp EU competition due to elimination of trade barriers as well as the takeover of the food market by large retail chains could all contribute to this process.

For example, the director of the agricultural chamber for the Wroclaw region in Poland estimates that fewer than half the farmers there will survive: "In this region the 40,000 with seven hectares or less will not survive. Many of these farms provide an income to four or five people. We will have to find jobs for those who have to leave the land. There will be a move to more intensive production," he recently said to *The Guardian* [18].

Ironically, less fundamental structural changes are expected in countries such as the Czech Republic or Slovakia, where a high degree of "restructuring" was already achieved by the Communist collectivisation, which concentrated and intensified agriculture. Still, even in Slovakia, at least 20% of farms are expected to go out of business due to increasing competition [19].

Narrow focus on productivity increases in the new member states would contradict the objectives of the European multifunctional model of agriculture. The function of agriculture is no longer seen only in production of food but also in food quality, landscape maintenance, protection of the environment and development of rural areas. Rural development cannot be achieved by concentration of the farming sector and elimination of rural jobs. Large-scale farming is not an aim in itself.

With proper policies, productivity can be optimised through knowledge, education and sophisticated skills rather than heavy machinery, field enlargement, higher use of agro-chemicals and shedding of labour. An average organic farm in the EU-15 has a higher labour productivity than an average conventional farm in CEE, without using almost any chemical pesticides and fertilisers.

Many rural areas in the CEE region have been witnessing decline. Village schools, post offices and shops have been closing down and important services concentrated in towns. Bus and train connections have been reduced. As a result, rural population and especially young people have been leaving for cities. The second pillar of CAP - rural development funds - offers a chance to reverse this trend, if properly used. Indeed, it is necessary to use this chance in order to prevent further social disruption in the form of emigration from rural areas and a rise in unemployment.

The new member states should not follow the EU-15 route of rural depopulation and successive costly attempts to revitalise the countryside. They should take advantage of their rural situation and use the rural development funds to encourage people to stay on the land (see box on the following page).

Policy priorities for the new member states:

1) **Make a full use of rural development funds to create jobs in rural areas:**
2) **Use the Agri-Environmental Programmes and other rural development measures to support organic agriculture and other green farming methods.**
3) **Use the rural development measure for semi-subsistence farmers, make it accessible for small family farms and attach environmental and animal welfare conditions to it.**
4) **Use the rural development measure for the setting-up of young farmers (currently in the programmes under Structural Funds), but only with environmental and animal welfare conditions and compulsory environmental trainings.**
5) **Use the rural development measures for diversification of rural economies (currently in the programmes under Structural Funds) to stimulate new local economic activities and links such as rural tourism and direct marketing.**
6) **Use Structural Funds to support sustainable biomass energy projects.**

Opportunities for revitalisation of the countryside

- **Organic farming and other types of environmentally friendly agriculture** require more human labour than intensive farming and thus create and keep more jobs in rural areas. Organic agriculture generates employment both on the farm and off the farm in related activities such as processing and marketing [20, 21]. The second pillar enables countries to support green farming through Agri-Environmental Programmes but also other rural development measures, if properly targeted.
- **Small and semi-subsistence farms** constitute an asset for rural development rather than a burden that must be quickly eliminated. Countries can make use of the rural development measure for semi-subsistence farming that encourages conversion from semi-subsistence to commercial farming, i.e. production for the market rather than for own consumption. If properly implemented, this measure can allow more of the small farms to survive the period of "restructuring". On the other hand, market orientation can lead farmers to more intensive production. Semi-subsistence farmers should be specifically encouraged to convert to organic or integrated farming rather than intensive methods. At the very least, environmental conditions should be attached to the semi-subsistence measure [22]. Furthermore, semi-subsistence farming does not have to be fully commercialised but should be allowed to develop in combination with additional incomes from non-agricultural activities such as rural tourism and other services.
- **Young farmers:** Like in the EU-15, most farmers in CEE countries are old. In order to prevent rural depopulation and excessive land concentration, it is important to keep the upcoming generation in agriculture [23, 24]. Countries can support setting up of young farmers through programmes for agriculture and rural development under Structural Funds. The new generation of farmers will shape the countryside of CEE countries. It is therefore necessary to accompany the support with environmental and animal welfare requirements and compulsory environmental training. Rural development subsidies must encourage beginning farmers to opt for environmentally friendly methods rather than for old-style intensification, maximum yields and high use of agro-chemicals.
- **Local economies** safeguard local jobs by keeping money within the area rather than adding to the profits of large corporations elsewhere. Semi-subsistence farmers often directly market their products within the local community. Local food economies can be stimulated e.g. by supporting farmers' markets and local small-scale food processing enterprises. Farmers' markets keep small farmers and food processors afloat and have a high local multiplier effect - the number of times money circulates in the local economy before leaving. Rural development funds can be used to encourage local initiatives. The LEADER+ programme in particular supports initiatives of local action groups that develop small-scale projects.
- **Diversification of rural economies:** The rural development measure 'Adaptation and development of rural areas' (Article 33), financed under Structural Funds, can be used to support all kinds of rural activities: renovation of villages, protection of rural heritage, crafts, rural tourism, basic services for the rural economy, land reparcelling, rural infrastructure, water resources management, marketing of traditional local specialties and protection of the environment. The common aim is to create new rural income sources outside of agriculture. Rural tourism, for example, can help farmers and other rural inhabitants gain additional income. Many tourists seek recreation in an enjoyable and diverse rural landscape. Article 33 can help with investment into accommodation and other services for tourists. For the next generation of Rural Development Plans for 2007-13, the European Commission proposes that member states must allocate at least 15% of rural development funds to diversification of rural economies [25].
- **Biomass energy production:** Biomass is an efficient source of renewable energy whose potential is largely unused but can today be realised with the help of modern technologies. Biomass includes all kinds of organic material of plant, tree or animal origin that can be used to generate energy: specifically grown energy crops such as rapeseed, sunflowers, and sugarbeet or trees such as willows; residues from agriculture and forestry such as straw and wood; and wastes such as manure, sewage sludge and woodchips. Today biomass is a highly prospective business that can generate many long-term jobs in rural areas. Meeting a target to produce 15% of electricity from biomass by 2020 could create about 400,000 jobs in OECD countries [26]. Since its last reform, CAP includes special direct payments for energy crops - any crop grown for energy purposes except sugar beet. Structural Funds can also be used to support biomass energy projects. However, all support should be given only under the condition that biomass is grown and used in an environmentally friendly manner. Intensive cultivation of energy crops in large-scale monocultures should be avoided.

1.2 More pesticides and fertilisers?

One of the most adverse aspects of intensive agriculture is the dependence on agro-chemical inputs, namely pesticides and fertilisers. In most CEE countries, the use of agro-chemicals is currently relatively low. This gives them an advantage over many West European countries, who are now striving to reduce their use. One of the biggest risks associated with EU accession is that the introduction of the CAP subsidies will result in an increased use of pesticides and fertilisers in the new member states.

Pesticides, including herbicides, insecticides and fungicides, are toxic chemicals used in agriculture to kill unwanted organisms such as pests and weeds. However, they are rarely selective – interfering with other organisms and affecting the health of workers engaged in their production, farm workers who apply them, and consumers who eat and drink their residues in food and water.

Chemical **fertilisers** (such as nitrogen, phosphate and potassium) are used alongside animal manure to replace vital nutrients taken from the soil by growing crops. Fertilisers, unlike pesticides, are not deliberately designed to be toxic, but they can also pollute water, air and soil and remain in food as harmful substances.

The dependence of farming on chemical inputs is bad for the environment, health, the economy and farmers themselves (see box).

Negative impacts of pesticides and fertilisers

- **Environmental impacts:** When pesticides and fertilisers are applied to crops, the crops use a part of it, while other parts remain in the soil, leach into the surface or ground water, or are vaporised into the air. Contamination of soil and water by toxic pesticides is a major factor in the decline of bird populations, amphibians, insect populations, etc. Nitrates and phosphates from fertilisers cause eutrophication of lakes and rivers. Eutrophication is most visible in proliferation of algae, depletion of water oxygen and production of toxins, which are poisonous to fish, cattle and humans. Nitrous oxide (N_2O) from fertilisers contributes to the depletion of the ozone layer and global climate change. These negative impacts are multiplied, if agro-chemicals are applied improperly or excessively.
- **Health effects:** The long-term health hazards associated with pesticide residues in food include weakened immunity to diseases, disorders of the nervous system, disruptive effects on hormone functions, lower sperm quality and various types of cancer [27]. Nitrogen fertilisers are a major source of nitrates in food and drinking water. In the stomach, nitrates are transformed into nitrites, which develop nitrosamins that are considered carcinogenic [28]. Phosphate fertilisers often contain highly toxic cadmium and concentrations in food can reach high levels [29]. Foetuses and children are especially vulnerable to pesticides and nitrates [30, 31]. Pesticide residues are found in approximately 40% of food samples in the EU and the legal limits for pesticides and nitrates in drinking water are frequently exceeded [32].
- **Economic costs:** Water pollution from pesticides and nitrates is a major example of negative externalities. Water companies and food industries have to pay clean-up costs for drinking water and pass these costs onto consumers. The annual cost has been estimated at around €85 million in the Netherlands [33] and more than €200 million in the UK [34]. Purifying water of pesticides is even more complicated and costly than in the case of nitrates. In present agriculture, a few hundred pesticides are used. Each chemical group of pesticides requires a different method of purification. In practice, water purification of all pesticides is unworkable [35]. Furthermore, insecticides used to treat sunflower and maize seeds have caused high mortality among European bee populations and thus inflicted an estimated loss of €150 million to French beekeepers alone [36]. The health effects of agro-chemicals also give rise to high healthcare costs.
- **Consequences for farmers:** Use of pesticides benefits the agro-chemical industry but comes at a high cost to farmers. Prolonged, intensive use of pesticides weakens crops and frequently leads to pests becoming resistant. Pesticides have the side effect of killing beneficial organisms that prevent pests and often lead to the outbreak of secondary pests [37]. While the consumption of insecticides has grown tenfold since World War II, losses caused by insects have grown from 7% to 13% [38]. This necessitates even more spraying, creates a vicious circle of dependence of farmers on chemical companies and contributes to their growing indebtedness.

EU-15: turning away from chemical inputs?

The **use** of both pesticides and fertilisers has increased dramatically in the past 50 years and agriculture has become heavily dependent on them. Around 300,000 tonnes of active ingredients of pesticides and around 9 million tonnes of nitrogen fertiliser are applied yearly to the farmland in the EU-15. In the last 15 years, however, the growth has stopped and the use of agro-chemicals has even declined in countries such as the Netherlands, Austria, Denmark, Sweden and Finland, which have recognised their negative impacts and taken active policies to reduce their use [39, 40]. These countries have demonstrated that use reduction can be achieved without reducing agricultural productivity.

Pesticide and/or fertiliser **taxes** have been applied e.g. in Denmark, Finland, Sweden and several states of the USA to internalise some of the negative external costs [41]. The taxes encourage more efficient use of resources and thus stimulate innovation. The revenue raised from the taxes is used, in Denmark for example, to promote alternative methods of crop management among farmers.

Photo: Tussengas

Spraying agro-chemicals in the Netherlands, the country with one of the highest application levels per hectare in Europe.

Alternative pest controls and fertilisation practices have proven to be economically beneficial for farmers. They include non-chemical methods of pest control such as biological pesticides and fertilisation practices such as crop rotation, planting cover crops and ploughing in crop residues. Chemical inputs and their negative impacts can also be reduced through rationalised application of correct doses at the appropriate stages. Two comprehensive alternatives are **organic farming**, which uses almost no chemical inputs, and **integrated farming**, which reduces chemical use through sophisticated cultivation methods and pest and weed control techniques (see chapter 1.9).

How Denmark halved its use of pesticides and fertilisers

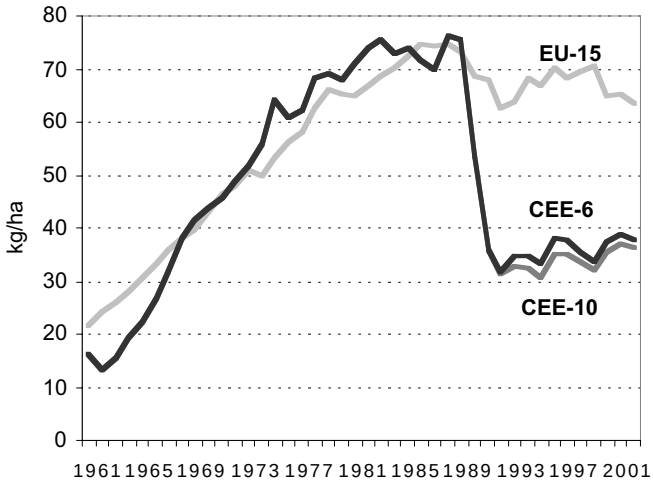
The Danish government started its first Pesticide Action Plan in 1987. Under the plan, almost 50% of registered pesticides were banned or withdrawn from the market. The plan also set the aim of 50% reduction in pesticide use. Between 1989 and 1999, pesticide use did indeed drop from 2.0 kg per hectare of farmland to 1.0 kg/ha [5]. In 1996, pesticide taxes were introduced in Denmark, at a rate of 54% of value-added for insecticides and 33% for other pesticide groups. The focus then shifted to reducing the average number of times per year a field is sprayed with pesticides, measured by the treatment frequency index (TFI). An expert committee set up by the government concluded that TFI could be almost halved over a 10-year period without economic effects on farmers or society. A second Pesticide Action Plan in 2000 set a target to reduce the TFI from 2.5 to below 2.0 by 2002 alongside other measures such as protection zones along water courses, where pesticide use is severely restricted. The plan also set a target to more than triple the area of organic farmland. Denmark continues to strengthen the policy: the current Pesticide Action Plan 2004 - 2009 aims to reduce TFI below 1.7. An integral part of the Danish success is a national agricultural advisory service, partly funded by the pesticide taxes, that helps farmers meet the requirements for pesticide reduction. As key strategies, the advisory service develops action plans for individual farms and sets up experience sharing groups of 5-8 farmers regularly meeting with the advisor. Farmers have been reported to be enthusiastic about reducing pesticide use voluntarily, while achieving economic optimisation of their business [42].

Denmark also has a strong policy on fertilisers. The result has been the halving of the use of synthetic fertilisers between 1989 and 2002 [5]. Since 1994, Danish farmers have had to prepare fertilisation plans and the amounts have been regulated to make sure nutrients are in balance on their farm; in addition, 65% of their cultivated area must be covered by a green crop in winter [29]. Furthermore, Denmark has also reduced water pollution from nitrogen. The Danish parliament decided in 1987 that nitrogen leaching from agriculture into the sea, lakes and groundwater must be reduced by 49%. By the end of 2003, it had decreased by 48%. This has mainly been achieved through more efficient utilisation of manure, increased organic farming and re-establishing of wetlands [43].

CEE: will accession lead to increased use of agro-chemicals?

Until the 1980s, **Central and Eastern Europe** broadly followed the same trend of increasing chemical inputs as Western Europe. After the collapse of the communist regimes and drastic reduction of agricultural subsidies, the **use of agro-chemicals sharply dropped** to less than a half (see figures 3 and 4). In 2001 - 2002, the EU-15 applied on average 2.3 kg of active ingredients of pesticides and 63 kg of nitrogenous fertiliser per hectare of farmland, whereas in the CEE countries the figures were 0.6 kg/ha and 36 kg/ha, respectively [5]. Among the CEE countries, the Baltic countries use the lowest amounts of agro-chemicals, while Slovenia, Czech Republic, Hungary and Slovakia use the most.

Figure 3. Nitrogenous fertiliser consumption in EU-15 and CEE countries.



Note: The CEE-6 countries include Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia. From 1992 onwards, data for all CEE-10 countries are available.
Source of data: [5]

Despite the current low average use levels, **pollution from pesticides and fertilisers** is a serious problem in CEE countries The main causes lie in weaker regulation and law enforcement, old spraying equipment, poor storage facilities and frequently improper handling of agro-chemicals (e.g. over-application or wrong timing) due to a lack of advisory and training services for farmers [39]. Sandy soils, more common in CEE, are more prone to run-off than heavy soils.

Large stockpiles of **obsolete pesticides** are a particular problem in the CEE region, severely threatening human health and the environment [44]. The stockpiles are often left under poor control, and their localities are often unknown. In Poland, the quantity of these old unused pesticides was estimated at 60,000 tonnes [45]. Governments should ensure their safe disposal and prevent illegal trading of them.

Photos: Martin Rosta

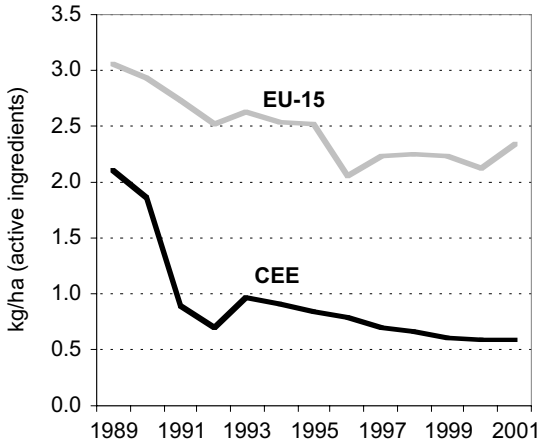
Spraying agro-chemicals on a field in the Czech Republic.

While the decline of the use of agro-chemicals in Denmark and Sweden was a result of deliberate policies and environmental awareness, the decline in Central and Eastern Europe was a result of financial constraints. After the **accession to the EU**, CEE farmers will receive significantly higher subsidies than they have so far. The question is how they will use the money? One of the biggest risks associated with the accession is that the CAP subsidies together with market pressures will lead farmers to once again buy more pesticides and fertilisers. The taxpayers' money intended to support farmers would thus be used to the detriment of the environment and food safety and would end up in the pockets of the agro-chemical industry. Farmers should be encouraged to use higher subsidies to improve management of agro-chemicals and to use alternative pest control and fertilisation methods rather than to become more dependent on agro-chemicals. Direct payments

should therefore be conditioned on appropriate environmental standards (i.e. some form of cross-compliance – see chapter 2.1.2).

The **key choice for the CEE countries** is: will they shift directly to sustainable forms of agriculture that use little or zero chemical inputs, or will they go through another period of damaging agricultural practices? If intensive methods of farming spread, it will affect not only the environment but also people's health - and water bills. The lower use of agro-chemicals in CEE countries gives them an advantage over many West European countries, which are now striving to reduce their use.

Figure 4. Pesticide consumption in EU-15 and CEE countries.



Note: Due to limited data availability, the figure shows the pesticide use for countries available in a given year per their total farmland. From 1993 onwards, all CEE-10 countries except Bulgaria are included. Source of data: [5]

Another potential threat brought by the EU accession is related to the EU's trading **standards** for the shape, size and aesthetic look of fruit and vegetables. Much of the current pesticide use is not related to yield at all but to ensure cosmetic quality and uniform produce. Standardisation comes at the expense of local varieties and in particular discriminates against organic producers. Over 2300 apple varieties exist in Northern Europe, but only few appear on supermarket shelves. EU Regulation 85/2004 provides that apples with less than a minimum diameter of 55mm or weight below 80g or with skin defects extending over 2.5 cm^2 may not be sold as an apple.[1] As a result, massive amounts of pesticides and fertilisers are used to produce the uniform spotless apples. Similar EU standards apply also for pears, plums, peaches, carrots and other products.

Fertilising maize…

…and spraying sugar beet in the Czech Republic.

Photos: Martin Rosta

Intensification of farming in CEE countries can occur even without large increases in agricultural production. The case of Spain after its accession to the EU (1986) is a telling example. Between 1990 and 1999, the total agricultural production in Spain increased by 8%, but the consumption of fertilisers (kg/ha) increased by 30%. Over the same period, the number of farms and agriculture labour force rapidly shrunk. Thus, human labour was replaced by chemical inputs while the total production increased only moderately [46].

[1] Commission Regulation (EC) No 85/2004 of 15 January 2004 laying down the marketing standard for apples. However, this is not an invention of the "Brussels bureaucrats", as the standardisation is required by the member states in the European Council. See Council Regulation (EC) No 2200/96 of 28 October 1996 on the common organisation of the market in fruit and vegetables.

Main EU laws and policies related to pesticides and fertilisers

Apart from the above-mentioned threats, the accession brings a number of EU laws and policies on agro-chemicals that can mean an improvement for the new member states. However, the legislation on agro-chemicals has been harmonised at the EU level primarily in order to ensure free trade and avoid potential trade disputes resulting from different standards rather than to avoid negative impacts of pesticides on health and the environment [47]. The new member states should therefore not take EU directives for granted as being safe. Their representatives will also be co-responsible for upcoming decisions on new EU laws and policies.

- **Pesticide Prohibition Directive** (79/117/EC): over the last 25 years, about 25 pesticides have been banned under this directive. They include some of the most hazardous pesticides such as DDT.
- **Pesticide Authorisation Directive** (91/414/EEC) on the placing of plant protection products on the market. As a result of an ongoing re-evaluation of authorised pesticides, more than 450 substances are being withdrawn from the EU market since 2003. Some 60% of the over 800 active ingredients are then off the EU market, which also applies to the new member states except where they got transition periods for some substances. However, a number of hazardous pesticides, including 12 likely carcinogenic ones, are still approved [47].
- **Directives on maximum residue levels (MRLs),** fixing allowable limits on pesticides in food. More than 17,000 MRLs have been set for various pesticides and various commodities [47].
- **Thematic strategy on the sustainable use of pesticides** has been in preparation by the European Commission since 2002 [48]. The strategy is expected to introduce a set of EU-wide measures to reduce pesticide risk and use. The strategy is to be published by the Commission probably in the autumn of 2004 and then to be discussed by the other EU institutions. The European Parliament has already called on the EU to set up a special fund for disposal of obsolete pesticides in CEE countries under the thematic strategy [37].
- **Water Framework Directive** (2000/60/EC) aims to protect surface and ground water from pollution. The Directive lists a number of priority substances, including several pesticides, whose leaching into water must be eliminated [49, 50].
- **Drinking Water Directive** (98/83EC) sets maximum limits on pesticide residues in drinking water: 0.1µg/l for each individual pesticide and 0.5µg/l for total concentration of all pesticides.
- **Nitrate Directive** (91/676/EEC) aims to protect water from contamination by agricultural nitrates. Under the directive, member states have to designate **Nitrate Vulnerable Zones (NVZ)** with maximum limits on nitrogen application. Member states must develop **action programmes** for NVZ with a number of measures to limit application of manure and fertiliser and ensure good management and storage. NVZ cover about 37% of the total EU-15 area. An alternative to designating discrete NVZ is to proclaim the whole country a NVZ, with an action programme for the whole territory [51]. The main problem with the Nitrates Directive in both old and new member states is, however, its insufficient implementation. The European Commission has opened infringement proceedings against all EU-15 member states with the exception of Denmark, for failing to fully implement the directive. The CEE countries widely differ in progress with the directive. While Slovenia and Hungary have already started with the implementation ahead of accession, Poland initially argued that there is no need to designate NVZ in Poland and has been pressed to do so by the Commission.
- Several instruments within the **Common Agricultural Policy** can help reduce dependence on agro-chemicals. **Cross-compliance**, established by the 2003 CAP reform, includes respect of the pesticide Authorisation Directive and the Nitrate Directive among the conditions for farmers to receive first pillar direct payments (but not the other directives mentioned above). However, cross-compliance will not be compulsory for the new member states before 2009 (see chapter 2.3.1). The code of **Good Farming Practice** (GFP) stipulates further standards on the use of pesticides and fertiliser as a condition to receive agri-environmental and less-favoured area payments under the second pillar (see box on p. 65). Finally, **Agri-Environmental Programmes** (AEPs) can reward farmers for higher reductions of pesticides and fertilisers going beyond both cross-compliance and the GFP. They also support integrated or organic farming methods that use little agro-chemicals. AEPs have led to documented reductions in pesticide and fertiliser use [52].

Overall, the EU legislation and policy on pesticides is very weak and does not ensure reduction in pesticide use. The EU needs a new legally binding directive that will set specific and mandatory targets and timetables for pesticide use reduction and oblige all member states to implement national pesticide use reduction plans. Suggested text of such a directive - **directive on pesticide use reduction in Europe (PURE)** - has already been published by non-governmental organisations led by the Pesticide Action Network [53].

The impacts of EU accession on the use of agro-chemicals in the new member states will therefore be mixed. On the one hand, there will be pressure for intensification; on the other, there will be stricter regulation and more incentives for environmentally friendly alternatives. Whether this package of EU policies will be able to reduce or at least arrest the intensification of input use is a big question. The answer will ultimately depend upon the countries themselves – how seriously they take this issue.

Policy priorities for the new member states:

1) **Develop and implement a strong Pesticide Action Plan to prevent an increase in pesticide use after the EU accession. The Plan should include measures to improve management of pesticides on farms and concrete targets and timetables to reduce the use, the frequency of application and the environmental and health risks of pesticides.**
2) **Make nutrient accounting systems with fertilisation plans compulsory for farms to avoid unnecessary use of fertilisers and ensure nutrients on farms are in balance.**
3) **Ensure CAP subsidies do not lead to an increased use of agro-chemicals through appropriate environmental conditions for direct payments (some form of cross-compliance).**
4) **Introduce taxes on pesticides and fertilisers to internalise some of their external costs and use the revenue to advise farmers on alternative methods of pest control and fertilisation.**
5) **Boost organic and integrated farming as alternatives minimising the use of agro-chemicals.**
6) **Provide strong support for well-designed Agri-Environmental Programmes.**
7) **Fully implement and enforce the EU directives on pesticides, the Water Framework Directive and the Nitrate Directive.**
8) **Identify stocks of obsolete pesticides and ensure their safe disposal.**
9) **Press for a strong EU thematic strategy on the sustainable use of pesticides so that it includes legally binding mechanisms for pesticide use reduction, following the PURE directive proposed by non-governmental organisations.**
10) **Press for a review of EU's cosmetic standards that encourage unnecessary pesticide use.**

1.3 Livestock farms, animal welfare and food safety

In recent years, Europe has been hit by a series of major food scandals caused by livestock diseases and animal feed. The scandals showed where intensive animal farming and emphasis on productivity at any cost could lead. Western Europe has reached the limits of intensive and industrial agriculture and is slowly beginning to turn away from it. The new member states should not follow the impasse of the industrial model. Instead, they should use the advantages of their farm structure to shift directly to free-range or high quality indoor systems providing more space, access to open runs and natural daylight. They should also maintain extensive and mixed farming.

Food scandals

In 1986, **bovine spongiform encephalopathy (BSE)**, or "mad cow disease", was first reported in the UK. The fatal disease, characterised by spongy degeneration of the brain, was caused by the practice of feeding meshed meat and bones of dead cows to live ones – an inexpensive way to increase weight gain and boost milk production. In 1996, a new variant of Creutzfeldt-Jakob disease (CJD), the human version of BSE caused by consumption of meat products contaminated with BSE, was first reported in the UK. By the end of 2002, the disease killed 130 people, most of them in the UK [54]. The disease has a long incubation period. There will probably be many more victims in the coming years. Only in 2001 did the EU adopt a total ban on feeding meat and bone meal to all farm animals.

In 1999, Europe was hit by a further food scandal when it was revealed that cancer-causing **dioxins** and other polychlorinated biphenyls were present in animal feed consumed by poultry and pigs. The contamination appeared in Belgian chickens and eggs, also affected France and the Netherlands and spread to other farm animals such as pigs and cattle. Thousands of animals had to be killed and food products destroyed. Up to 10% of food production in Belgium was affected. According to Belgian scientists, the contamination will cause a large number of cases of cancer [55].

In 2001, **Foot and Mouth disease (FMD)**, caused probably by imported feeds, paralysed parts of the European countryside [56]. Costs in the UK alone in terms of lost tourism, government compensation, etc. were estimated at 9 billion pounds [57]. As with BSE, animals were shot and burned en masse in great pyres or incinerators.

In 2003, Europe was hit by the **avian influenza** (bird flu) virus. More than 30 million birds were killed in the Netherlands, Belgium and Germany.

There have been numerous other food safety crises caused by **contamination of food with bacteria** such as Salmonella or Escherichia coli. Cases of food poisoning have increased rapidly in the UK, for example [58]. There have also been repeated food scandals with feeding animals with illegal substances or products from sewage sludge.

Factory farming

The contemporary food crises have common roots in the intensive industrial methods of food production or long-distance transport. In traditional extensive mixed farming systems, animals and crops are farmed together. Animals live on a large enough area of land so that their food can be provided from it and their manure spread and absorbed on it. Over the last 50 years, livestock farming has become increasingly concentrated and mixed holdings have been replaced by specialised units. The pig population in the EU-12 countries increased from around 80 million in the mid-1970s to 108 million in 1996 while the number of farms more than halved over the same period [59]. The majority of animal production in the EU now takes place in what are aptly called "factory farms".

Photo: Ken Hammond, USDA

Intensive pig farming.

Negative effects of factory farming

Animal welfare: In factory farms, animals are not regarded as sentient beings but as units of production which are required to grow fast and produce the maximum possible meat, milk, eggs or offspring, as required. Animals are typically kept indoors for the whole of their lives crammed into barren, overcrowded sheds or cages or, in the case of sows, isolated for weeks at a time in stalls so narrow that they cannot even turn round. Around 90% of laying hens in the EU are housed in cages, with 4-5 birds per cage. Most intensively produced birds have their beaks cut as these very cramped conditions lead to them pecking each other. Overcrowding does not allow for natural behaviour or normal growth patterns. Pigs are prevented from rooting and hens from spreading their wings. Animals are routinely separated from their young, they develop deformities and are fed unnaturally.

Diseases and food safety: Cramped and often dirty conditions provide the perfect breeding ground for outbreaks of bacterial infections. Sick and "healthy" animals alike are fed cocktails of drugs and antibiotics to keep them alive long enough to facilitate production. Also the stresses associated with intensive farming often lead to animal diseases. Food safety and animal welfare are two sides of the same coin. If farm animals were given less stressful and cramped conditions, animal diseases and food safety crises would be much less frequent.

Environmental impacts: Animals are kept at an unsustainably high stocking density, requiring huge supplies of feed and producing excessive amounts of manure and wastes. Arable crops are in turn grown in isolation from livestock and need heavy inputs of artificial fertiliser. The surplus nutrients from concentrated animal manure pollute rivers, lakes, ground- and seawater, damaging plant and animal life and contaminating drinking water. Factory farms are also major sources of emissions of ammonia, carbon dioxide, methane and nitrous oxide, which are variously associated with global warming and acid rain [60]. At a local level, factory farms complicate life for people in the surrounding areas. Besides a bad smell, ammonia emissions cause health problems to people with asthma. Air around big poultry farms abounds with dust and bacteria and causes higher incidence of allergies [28].

Animal feed: Factory farming requires production and transport of high energy and high protein animal feed crops grown in intensive monocultures. European agriculture is capable of feeding Europe's people but not its farm animals. Imported feed for European cows and pigs, such as soya and cassava, makes up about 30% of all European animal feed [61]. EU livestock farming thus uses up large areas of land outside the EU, contributing to the destruction of rainforest, massive soil erosion and displacement of small local farmers by big export-oriented landowners in countries such as Brazil. Much of the imported soya that is fed to animals in the EU is now genetically modified (see chapter 1.8).

Economic costs: Keeping animals free-range mostly involves only slightly higher production costs than in factory farms. Moreover, factory farming has high hidden costs not included in the food prices: clean-up costs of environmental pollution, higher medical expenditures due to more frequent food poisoning and other food-borne diseases and the costs of dealing with crises such as Salmonella and BSE. Better animal welfare standards are not only a moral expectation, but also an economic necessity [62].

Antibiotics in animal feed

Just as plant production has become dependent on the use of chemical pesticides and fertilisers, intensive livestock production has become addicted to a massive use of antibiotics. Antibiotics are routinely fed to animals in factory farms to prevent bacterial infections as well as to promote quicker growth. In 1997, 4,700 tonnes of antibiotics were fed to farm animals in the EU, especially in countries with most intensive animal husbandry such as the Netherlands, Belgium, Denmark and France [63]. Overuse of antibiotics has led to the emergence of antibiotic-resistant bacteria at an alarming rate, e.g. of Salmonella and Campylobacter. The resistant bacteria also infect humans and can make antibiotics used in medicine less effective - a threat much greater than that posed by BSE, for example [64]. Antibiotics also remain as residues in food: a study in the Netherlands has found antibiotic residues in 10% of the chickens sampled [65].

Sweden set a trend in Europe by banning the use of antibiotics in animal farming except for therapeutic purposes. In 2002, the EU has introduced a **total ban** on the use of antibiotics as growth promoters, due to come into force in 2006. However, a large majority of antibiotics fed to animals in the EU are used to prevent infections in factory farms, which will still be allowed. A real

solution requires a change in livestock production methods from factory farms to free-range or good indoor husbandry.

Apart from antibiotics, **beta-agonists** and **anabolic hormones** are other growth promoters used in factory farming. Beta-agonists (e.g. clenbuterol) have been widely used to increase the amount of muscle in farm animals, although legally they can be used only for therapeutic purposes. Their residues in food can induce increased heart rate and heart tremors in humans and livestock [58]. Feeding hormones as growth promoters to farm animals and importation of hormone-treated meat has been banned in the EU since 1988. The USA, which lost a considerable export market as a result of the ban, launched a case against the EU at the World Trade Organisation. In 1999, the WTO ruled that the ban constitutes an illegal trade barrier and imposed a $120 million annual penalty on the EU. The EU has nevertheless kept the ban.

EU rules and policies: slow improvement

In recent years, the EU legislation and policy on animal welfare and food safety has begun to improve, but slowly and insufficiently. There is a general EU **directive on the protection of farm animals** (98/58/EC) and special directives for pigs, calves and laying hen (the other farm animals are protected only by the general directive), setting minimum animal welfare standards. The directives set, for example, that sows should no longer be tethered from 2006 and no longer kept isolated in single stalls from 2013. From 2007, veal calves can no longer be kept in small individual pens where they cannot even turn around. From 2012, cages for laying hen will have to be larger and include nests and perches [66]. However, governments can go beyond these baseline EU standards.

Photo: Eurogroup for Animal Welfare

Stalls for pregnant sows at a factory farm in the Netherlands. Such stalls can no longer be built in the EU and the existing ones have to be abolished by 2013, based on the EU Pigs Directive.

The 2003 CAP reform can benefit animal welfare through **cross-compliance** and **new rural development measures**. Cross-compliance means that in order to receive direct payments farmers will have to comply with the general directive on farm animal welfare and the pigs and calves directives, though not the directive on laying hens. Under the second pillar, countries will be able to include new objectives and measures related to animal welfare into their Rural Development Plans in order to support farmers who improve animal welfare conditions beyond the usual good animal husbandry practice [67].

Organic farming is especially beneficial for animal welfare, as it allows animals to exhibit their natural behaviour and to have contact with their young. Organic farming also includes minimum indoor and outdoor area requirements and does not use antibiotics.

CEE countries: new factory farms?

1960s and 1970s saw construction of many huge livestock enterprises in CEE countries. The resulting serious pollution of soil and water was rarely recognised as a problem. In the first half of the 1990s, the livestock populations experienced a drastic decline. The numbers of cattle and sheep fell by more than 50% in most CEE countries (from around 65 million in 1989 to about 25 million in 2003 in the whole CEE-10 - see figure 5). The numbers of pigs and poultry declined by more than 30% in the CEE region [5].

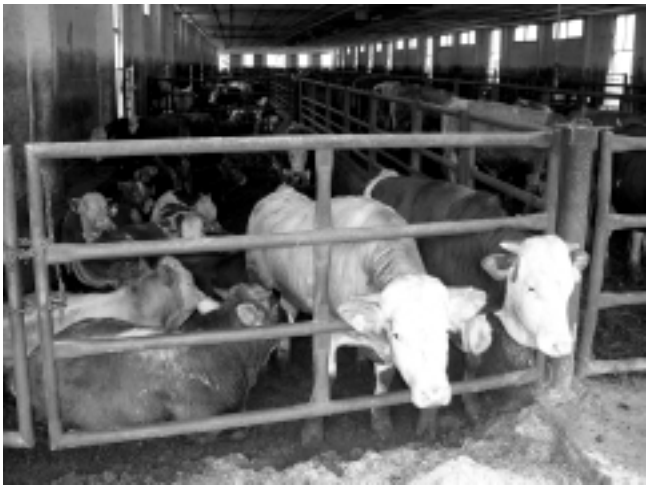


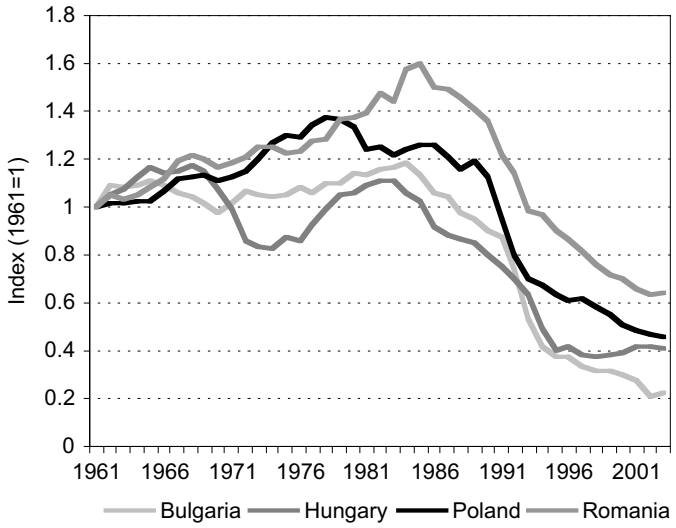
Photo: Daniel Lesinsky, Friends of the Earth Slovakia

Stock raising in Slovakia – a young bulls' farm.

The region is now characterised by a mixture of very small livestock herds (2-5 animals) and large specialised ex-collective factory farms. The former predominate especially in Poland and Lithuania, while the latter are most common in the Czech Republic and Slovakia.

The reduced **cattle** herds will never be rebuilt because milk quotas and limits to livestock numbers were set very low, to freeze the production at current low levels. Due to the predicted increase in milk production per cow and the decline of small semi-subsistence farming, the numbers may even decline further. At the same time, concentration and specialisation of production are predicted, especially where small mixed farms predominate.

Figure 5. Stocks of cattle and sheep in selected CEE countries.



Source of data: [5]

On the other hand, **some increase in pigs** and a **very strong increase in poultry** production are officially predicted, partly driven by foreign investment. The European Commission expects poultry production in the 10 new member states to increase from 1.4 million tonnes in 2001 to 2.7 million tonnes in 2010 [68]. However, other experts predict the very opposite: an increase in beef production and little change or even a decline in pork and poultry [69].

Overall, an increase in factory farming of animals can be expected after the accession, with all its negative impacts on animal welfare, food safety, the environment and economy. Unless the countries themselves take active policies to prevent it and to support good animal husbandry and extensive farming. Large intensive livestock farms are already taking root across the region, pushing out smaller producers. The negative impacts on animal welfare can be only partly mitigated by the introduction of the above mentioned EU animal welfare legislation. Some accession countries – Poland, the Czech Republic, Hungary and Slovenia – actually obtained **transitional periods** to postpone implementation of the minimum height of cages for laying hen till 2009 [70].

The CEE region has already been affected by the **"mad cow disease"**. Several cases of BSE have been reported in native cows in four CEE countries: Czech Republic, Slovakia, Slovenia and Poland [54]. By the end of 2003, all accession countries had a basic ban on feeding meat and bone meal to ruminants, but some were still feeding meat and bone meal to pigs and poultry – a practice prohibited in the EU [71].

Poultry factories in the Czech Republic

In 1997, a German poultry investor came to the Czech Republic with a plan to build 3 giant poultry farms in the Doma_lice district in South Bohemia, partly in nature protection zones. The farms would house 1,800,000 hens in battery cages, despite the overproduction of eggs on the Czech market. The investor obtained a building permit via a Czech intermediary, without the knowledge of local citizens. When they learned about the plan, they blocked the construction site together with environmental activists and managed to delay the project for several years. During the permit procedures, the investor repeatedly broke the law. Only later on did investigative journalists find out that the German investor behind the project was Stephan Pohlmann, who had been involved in a number of horrendous animal abuse scandals and law violations in Germany and the US and whose father was prohibited by a German court to keep farm animals for life. Their attempt to circumvent the EU animal welfare standards by building poultry factories in the Czech Republic did not fully work because in 2002 the country implemented the EU directive on laying hens, though with a transitional period on the minimum height for new cages. In the end, the civic associations did not manage to stop the project, but at least reached a compromise with the investor. The whole project was reduced to one third and subjected to a number of conditions for animal welfare, treatment of waste, etc. [72].

Pig factories in Poland

Photo: CEE Bankwatch Network

Entrance to the Smithfield pig farm in Poland.

Smithfield Foods, Inc., the world's largest hog producer and pork processor, came to Poland in 1999, promising to "modernise" the Polish pig industry and make it competitive on the world markets. The US company bought Animex, Poland's largest meat packer and exporter and a conglomerate with many slaughterhouses. Through another subsidiary, called Prima Farms, Smithfield has also been buying and converting large former state farms into intensive pig factories. The European Bank for Reconstruction and Development (EBRD) has supported Animex with a loan to help "restructure Poland's agri-business and food industry". The Smithfield-owned farms are now spreading mountains of pig faeces and waste on adjacent fields and stifle the surroundings with terrible odour. Children in nearby villages get infections and skin rashes and local hotels and restaurants complain about lost customers because of the smell [73]. State inspections found out that Smithfield farms had broken Poland's veterinary, health and construction laws – consistent with the company's long record of violations of labour rights and environmental laws in the US. Instead of bringing jobs, Smithfield has been actually laying off people to rationalise production in its farms and slaughterhouses. At a time when there already is an overproduction of pigs leading to low pork prices, expansion of the large-scale pig factories is squeezing small farms. Moreover, Smithfield-owned slaughterhouses would not slaughter pigs from small farms that do not produce the uniformly low-fat pigs that the company demands [74, 75].

In the meantime, the Danish pig industry also has established 10 large pig farms in CEE countries, mainly in Slovakia and Poland, and plans to expand further over the coming 4 years. In Denmark itself, the political climate for the pig industry has been worsening with public objections to its further expansion and the problem of slurry odours. The largest Danish pig farm in Poland produces 380,000 fat pigs from 16,500 sows [76].

Policy priorities for the new member states:

1) **Develop and implement a strong action plan to prevent an increase in intensive livestock farms and to shift towards free-range or high quality indoor systems with more space, access to open runs, natural daylight, etc.**
2) **Fully implement and enforce the EU animal welfare legislation and press for further and faster improvement of this legislation [79].**
3) **Use rural development funds to support small local food processing companies and good animal welfare conditions at farms; do not use them to support intensive livestock farms.**
4) **Ban the use of antibiotics in animal farming except for therapeutic purposes and commit to a reduction of their use.**

EU standards and closures of small food enterprises

Sometimes, EU legislation is part of the problem rather than the solution. The application of EU food safety and hygiene standards in CEE countries has led to the closing down of many small, local food processing enterprises such as slaughterhouses and dairies. According to estimates of experts published by the European Commission, 25% of dairy processing enterprises and 40% of meat processing companies in Poland are expected to close down because of not being able to comply with EU standards. In Latvia, more than 50% of dairies and 90% of slaughterhouses are expected to close down for the same reason (see table 3) [10].

Small companies cannot cover the costs of adjusting to the extensive and detailed EU requirements. In addition, further small companies will have to close down because of not being able to withstand EU competition. Only bigger companies will survive, often with foreign ownership. Western firms have invested hard in recent years and now have a 30% share of the Polish dairy product market, while the Hungarian dairy industry is already largely in the hands of foreign investors [13].

Closures of the small food processing companies lead to the precise opposite of the official EU goals. Instead of rural development and creation of rural jobs, the massive concentration of food processing equals to a destruction of jobs, increased unemployment, harm to local economies, rural decline, and increased transport of food and animals.

The concentration will also have a negative impact on small farmers, as larger dairy companies require big milk supplies and refuse to buy milk from small farmers. Moreover, milk farmers themselves also have to cope with EU quality and hygiene standards. In 2003, 20% of milk delivered to dairies in Poland still did not fulfil EU requirements. The costly adjustment to EU standards is worthwhile and possible only for farmers beyond a certain size [13].

Hygiene and food safety norms are important and necessary, especially to avoid diseases caused by large-scale production and long-distance food transport. However, the standards need to be designed and implemented in such a way so as not to harm smaller producers. These should be adequately compensated for the costs of meeting the standards. Some governments in the new member states have interpreted the EU rules too strictly and required absurd adjustments. On the other hand, several countries have requested and received transitional periods to upgrade a limited number of food processing plants after accession [71, 78].

Table 3. Estimated share of dairy and meat processing enterprises that will have to close down because of not being able to comply with EU standards

Country	Dairy sector	Meat sector
	Share of enterprises to be closed down	Share of enterprises to be closed down
Poland	25% (84 enterpises)	40% (1,800 enterprises)
Czech R.	12%	20%
Slovakia	8% (10 enterprises)	28% (61 enterprises)
Hungary	high	majority of total 827 companies
Slovenia	5%	20%
Lithuania	none	35% (200 enterprises)
Latvia	>50%	90% of slaughterhouses, 55% of meat processing enterprises
Estonia	50%	(91 enterprises)
Romania	20%	15%
Bulgaria	35-40%	35-49%

Source: [10]; for Slovakia [77]

1.4 Landscape and biodiversity

Diverse landscape connected with mixed, less intensive agriculture prevents floods and erosion and attracts rural tourism. The new member states need to ensure that landscape and species diversity are preserved after the EU accession rather than allowing new ploughing up of field boundaries. It is always better and cheaper to maintain or develop the existing landscape diversity and biological wealth than it is to destroy them and then pay to recover them.

Landscape: diverse or uniform?

Agricultural land takes up a larger share of territory in the CEE region than in the EU-15. Farmland covers 55% of the CEE area, compared with 40% in the EU-15, but with great variance among countries: from around 20% in Estonia and Slovenia to over 60% in Hungary and Romania [3]. Agriculture is thus an important factor in managing land and natural resources and in shaping the countryside. Moreover, the share of arable land is extraordinarily high in Poland, Czech Republic and Hungary. These three countries leave only about 20% of their farmland in permanent pastures used for livestock grazing, while in the EU-15 it is 38% [12].

Over the past decades, agriculture has dramatically changed the face of rural landscapes in both Western and Eastern Europe. The diverse mosaics of small fields, paths, hedges, stonewalls, meadows, scattered trees and groves created by traditional extensive agriculture have largely disappeared. In CEE countries, land consolidation and ploughing up of field boundaries were enforced by the communist collectivisation of agriculture. In Western Europe, broadly similar processes – enlargement of fields, clearing hedgerows and general loss of landscape diversity - were driven by CAP and market forces [80].

Land consolidation and intensification of its use have been accompanied by trends toward farm specialisation and increase in arable land areas. Mixed farming systems with mosaics of fields with various crops and grasslands have been replaced with large-scale specialised monocultures. Where traditional farmland was abandoned, landscape also lost on diversity due to overgrowing by shrubs or weeds or lack of maintenance of cultural elements such as traditional stonewalls [22].

In countries where traditional small-scale farming has survived, richer landscape patterns and mosaics of cropping have persisted. Even in countries with a more concentrated farm sector, smaller farms and diverse landscapes have at least partly survived in mountainous and other "less favoured" areas.

In the new member states, big changes in farm structures and therefore also landscape structures are expected **after the accession**, especially in countries with many small farms. While tiny Slovenia seems to be determined to protect its diverse landscape with strong Agri-Environmental Programmes, Poland seems to be looking forward to a grand "restructuring" and "modernisation" as encouraged by the European Commission, i.e. land concentration and agricultural intensification.

The numerous small Polish farmers do indeed operate on plots that are too small to be economically effective. The situation is often complicated by fragmented ownership. It happens, especially in south-eastern Poland, that a 3 ha farm consists of 30 separate miniature parcels. Here, some degree of reparcelling and land consolidation is necessary [35]. The point is not to keep land fragmented but to ensure that where consolidation occurs, landscape features and wildlife habitats are maintained and protected.

There are good environmental as well as economic reasons not to follow the path of land consolidation too far and without conditions. Loss of landscape diversity directly leads to a loss of biodiversity and increased soil erosion (see chapter 1.5), but also to increased risks of floods and loss of recreational potential of rural areas.

In recent years, several CEE countries were repeatedly struck with catastrophic **floods**. Uniform, ploughed up landscape, together with straightened and concreted water flows, have very little water-bearing capacity and thus strongly contributed to the damage. The remaining protected areas with meandering streams, floodplain forests and meadows still retained huge amounts of water during the floods and thus prevented much more damage [81].

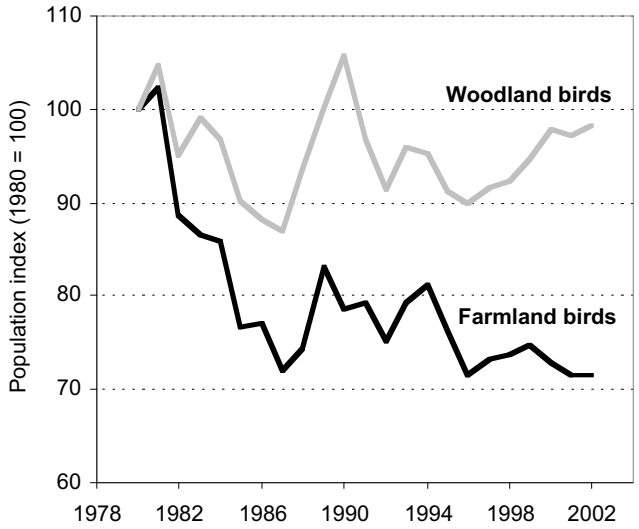
Uniform landscape also loses its **recreational potential** and attraction for rural tourism. Due to the ploughing up and removal of field paths, landscape becomes virtually impassable. A survey in a typical village north of Prague revealed that the length of field paths in its vicinity shortened 20 times in the second half of the 20th century [28].

Biodiversity

Species diversity is in direct relationship with the diversity of landscape and crops. Uniform, intensively farmed landscape with specialised monocultures is devoid of the rich habitats and food sources that were available in mosaic landscapes and mixed farming systems. Pesticides that kill insects and weeds also affect birds and mammals that feed on them. Fertiliser use, loss of rough grasslands, drainage of wetlands, mechanisation and switch to autumn sown cereals are other leading factors for the decline in biodiversity [82]. Abandonment of extensively farmed species-rich grasslands also negatively affects biodiversity, while abandonment of intensively farmed arable land usually benefits it [22].

These agricultural trends have caused a **huge impoverishment of flora and fauna in Europe** over the last decades. 38% of bird species and 45% of all butterflies are now threatened in Europe and 60% of wetlands have been lost [83]. The trend in populations of farmland birds is a good indicator of overall farmland biodiversity, as their numbers are related to diversity of insects and weeds. While populations of common and widespread woodland birds in Europe remained stable over the last twenty years, populations of common farmland birds declined by 29% (see figure 6). In the 1990s, the trend slowed down but did not stop. In the CEE countries, however, farmland bird populations very slightly recovered in the 1990s, probably due to decreased intensity of agriculture [84]. Prior to that, trends in CEE countries closely followed the rest of Europe. In the Czech Republic, for example, the number of partridges has declined from 6 million in 1935 to several tens of thousands today [85].

Figure 6. Trends of widespread woodland and farmland birds in Europe.



Note: The population index of farmland birds includes data for 24 common and widespread species from 18 European countries including 5 CEE countries. Source of data: [84]

CEE countries nevertheless still contain vast expanses of semi-natural habitats, especially in regions with less intensive agriculture and richer landscape pattern. Many species that are rare, declining or already extinct still have large populations in CEE countries. 64 bird species have been identified that have bigger populations in CEE countries than in the EU-15. These include globally threatened species such as Ferrugineous Duck, Spotted and Imperial Eagles and Corncrake [86].

Polish farmland supports a rich and diverse wildlife. Poland hosts up to 30% of continental population of Ortolan Bunting, 25% of White Stork and 20% of Skylark. There are some 40,000 pairs of Corncrake and 50,000 pairs of White Stork in Poland – more than the whole of Western Europe combined [87].

This relatively richer biodiversity is one of the biggest contributions that the new member states have already brought to the EU. However, **dramatic decline** of farmland birds and overall biodiversity is expected **after the accession** due to intensification, land consolidation and abandonment of extensive grasslands [88]. It is estimated that for every one tonne/ha increase in average cereal yield, there is 8.7% decline in the populations of farmland birds and an 11.1% decline for particularly vulnerable species [89]. Yet, the agricultural production in CEE countries is already sufficient. Standardised production could also lead to a loss of genetic diversity (e.g. traditional livestock breeds).

The predicted biodiversity loss would go completely against the EU's officially agreed goal of halting biodiversity decline by 2010 and against the objectives set in the **biodiversity action plan for agriculture** adopted by the Commission in 2001 [83]. It now depends mainly upon the new member states whether they allow loss of their wealth of species.

For protection of agricultural areas with the highest biodiversity values, **Natura 2000** will be an important instrument. Natura 2000 is an EU-wide network of protected sites for threatened species and habitats, established by the EU Habitats Directive (92/43/EEC). Governments need to ensure broad design and proper implementation of Natura 2000 to make use of its opportunities for biodiversity conservation, but also rural tourism and creation of jobs. **Article 16** of the Rural Development Regulation provides special LFA payments to farmers in Natura 2000 zones. The article can facilitate implementation of Natura 2000 in practice and its integration with agricultural policy [90]. Regrettably, not many new member states are planning to use the Article 16 in the period 2004-06. The new Rural Development Regulation for the period 2007-13, as proposed by the European Commission, will include two special measures with payments for agricultural land and forestry land in Natura 2000 areas [91].

While Natura 2000 will be important for safeguarding the biodiversity "hotspots", many valuable natural areas and a big majority of the farmland lie outside the protected zones [92]. To restrict environmental measures only to demarcated zones and allow unregulated intensification and environmental damage everywhere outside would be senseless. It is therefore necessary to ensure that CAP subsidies for all areas do not contribute to biodiversity losses but rather to its protection. Organic agriculture should be supported as a model that enables significantly higher farmland biodiversity [93].

Using CAP for landscape maintenance and biodiversity protection

Cross-compliance established with the 2003 CAP reform includes respect of the Wild Birds Directive (79/409/EEC) and Habitats Directive (92/43/EEC) and may include further requirements for the retention of landscape features and habitats maintenance (e.g. leaving uncultivated field margins). However, cross-compliance is not obligatory for the new member states in the first five years after accession – precisely when strong pressures for land consolidation and intensification are expected.

Given their higher biological and landscape diversity, but also the higher risk of their rapid loss after the accession, the new member states need to set even stricter **conditions for direct payments** and top-ups than the old MS. The conditions should ensure that where land consolidation occurs, landscape diversity is maintained. Farmers should be paid from public funds for maintaining the landscape and biodiversity as public goods, not for their destruction.

At the same time, it is necessary to implement **Agri-Environmental Programmes** on a large scale to ensure maintenance of a rich habitat pattern. The AEPs essentially compensate farmers for bigger income losses due to the maintenance of habitats and landscape features, which restrict the size of cultivated areas and effective machinery use. West European experience with AEPs so far shows that they do have positive impacts on biodiversity and landscape [94]. AEPs need to include both "deep and narrow" measures aimed at areas with especially high nature value and "broad and shallow" measures, in which a large number of farmers will participate. AEPs should also include support for extensive management of semi-natural grasslands and protection of traditional breeds. AEPs have to become a central tool of agricultural and rural development policy in the new member states.

Policy priorities for the new member states:

1) **Establish conditions for direct payments and national top-ups, including requirements to maintain landscape diversity and wildlife habitats.**
2) **Spend at least 50% of rural development funds on well-designed Agri-Environmental Programmes that will allow participation of a large number of farms.**
3) **Ensure broad scope and proper implementation of Natura 2000. Use the second pillar payments for farmers in Natura 2000 zones (currently article 16) to facilitate integration between agricultural policy and nature protection in these zones.**
4) **Support a continued boom of environmentally friendly farming systems, especially organic agriculture.**
5) **Ensure that the EU biodiversity action plan for agriculture gets fully implemented and press for a more ambitious plan to follow up.**

1.5 Pollution and erosion

Today's agriculture in Europe is a major source of soil degradation and environmental pollution that give rise to high cleanup costs paid for by the whole society. Due to the decline in livestock numbers and the reduced use of pesticides and fertilisers in the 1990s, negative environmental impacts of agriculture have partially eased off in the CEE countries. After the EU accession, it is necessary to prevent a potentially renewed pressure of farming on the environment. It is cheaper to tackle the pollution at its source than it is to pollute and then pay for its cleanup.

Soil

Soil, the basis of all agricultural activities, is a medium in which earth, air, water and living organisms interpenetrate. Due to its very slow rate of formation (1cm of topsoil in 100-400 years), soil must be considered a non-renewable resource and must be preserved. However, serious degradation can be seen across the whole of Europe, threatening the productivity of the soil [95]. The degradation occurs mainly through:


Photo: Martin Rosta

Ploughing the land in the Czech Republic.

- erosion and loss of organic matter
- compaction due to the use of heavy machinery
- contamination with pesticides and fertilisers (nitrates and phosphates)
- acidification caused by ammonia emissions.

Of all these threats, the contamination of soil with pesticides and fertilisers affects the largest area in Europe [95]. Since agro-chemicals are dealt with in another chapter of this publication (1.2), this section focuses on erosion, which also affects the majority of land in Europe [95].

Wind and water **erosion** of soil causes problems both on and off the farm. Costs for farmers result from reduced yields due to loss of organic matter, nutrients and crops and increased water run-off from the soil. Off-site costs arise when soil carried off farms blocks ditches and roads, damages property, pollutes water, and increases the risk of floods (erosion decreases the water-holding capacity of the soil).

Until the middle of the 20th century, traditional farming practices such as crop rotation usually ensured long-term conservation of soil fertility. The division of land into small plots, separated by field boundaries prevented fast water run-off. Since then, however, agricultural intensification (ploughing up and drainage of grasslands, use of heavy machinery, overgrazing), concentration (land consolidation and removal of field boundaries) and specialisation (relinquishment of crop rotation) have all contributed to soil erosion.

By now, more than half of the land in Europe has suffered various degrees of soil erosion by water and about a fifth has been eroded by wind [95]. In CEE countries, the situation is not better. Erosion is most severe in Bulgaria and Hungary [22]. After **accession** to the EU, accelerated land consolidation, as well as increases in the area of cereal cultivation are expected [10, 22]. These processes are likely to speed up erosion through ploughing up of field boundaries and grasslands, unless strong preventive measures are taken.

Erosion can be **prevented** through the establishment and maintenance of landscape features such as windbreaks or grass belts on slopes. It can also be reduced through the introduction of farm practices such as reduced tillage and maintenance of vegetative soil cover throughout the whole year. Stubble maintenance, green manures and cultivation of cover crops and catch crops enrich the soil with organic matter and prevent wind and water from carrying the soil away.


Photo: Theo Haslbeck

Sowing sugar beet in cover crops in order to prevent erosion (Bavaria).

The EU is now taking first steps towards a **European soil policy** that will supplement various national soil protection programmes. In 2002, the European Commission published a Communication ”Towards a Thematic Strategy for Soil Protection“, which outlines actions to reverse soil degradation across Europe [96]. The Commission is expected to present a communication on erosion, organic matter and contamination as well as a directive on soil monitoring, probably in 2005. Whether soil protection will receive an adequate level of protection will mainly depend on political support from the EU member states [97].

Water

Intensive agriculture threatens water resources through their overuse and pollution. Farming accounts for around 30% of total water use in Europe [51]. Agriculture is also a major polluter of surface and ground water. Pesticides, fertilisers and eroded soil from arable farms, farm wastes (e.g. slurry and silage effluent) and micro-organisms from livestock farms all pollute water. Eutrophication of water caused by run-off of fertilisers from fields leads to the growth of algae that can block filters in water treatment plants, stimulate bacterial growth, give drinking water an unpleasant taste and affect recreation [33].

The costs for the removal of all the polluting substances from water are incurred by water delivery companies and passed on to consumers. At the same time, public costs for water treatment plants are passed on to the taxpayers.

During the communist period in CEE countries, the building of huge livestock farms and overuse of pesticides and fertilisers in arable farming resulted in large-scale pollution of water resources. The sharp drop in the use of agro-chemicals and the decline of livestock numbers in the 1990s led to a reduction in the overall water pollution. However, inappropriate handling of farm wastes, manure and pesticides still lead to severe water pollution problems in many localities [22]. The volumes of water used for agriculture in CEE countries also sharply declined in the 1990s (by about 70% on average) because of reduced production and higher water prices [98].

If the use of agro-chemicals grows again after the **accession** and foreign investors build new intensive livestock farms, increased water pollution can again be expected across the CEE region.

Water pollution can be partly mitigated by proper implementation and enforcement of the **EU legislation** for water protection, especially the Nitrate Directive, the Water Framework Directive, the Groundwater Directive and the Drinking Water Directive (discussed in chapter 1.2).

The political question for each country is whether to invest in clean-up and filtration equipment or whether to invest in the development of environmentally friendly farming practices. It is cheaper and better for the environment to develop sustainable practices than it is to cause pollution and then pay to clean it up [33].

Air

Agriculture contributes to atmospheric pollution mainly through emissions of nitrous oxide (N_2O), methane (CH_4) and ammonia (NH_4).

Nitrous oxide and **methane** are greenhouse gases that contribute to global climate change. Agriculture accounts for 9% of greenhouse gas emissions in Europe [99]. Nitrous oxide is emitted from soil because of the application of nitrogen fertiliser, while the main source of methane are cattle herds. In CEE countries, heavy reduction of livestock numbers has caused methane emissions to decrease by as much as 46% since 1990 [22]. On the other hand, nitrous oxide emissions have remained approximately the same over the 1990s despite the reduction of fertiliser use [22].

Ammonia is emitted into the air mainly from animal manure and is a major nuisance and health problem for people living close to intensive livestock farms. Ammonia also contributes to eutrophication of water and acidification of soils and water. Due to reductions in livestock numbers, emissions in the CEE countries dropped by more than 40% in the 1990s [22].

Increased use of nitrogen fertiliser after the introduction of CAP payments in the new member states could trigger a new rise of nitrous oxide emissions. Construction of new intensive livestock farms could in turn lead to increased emissions of methane and ammonia. It is necessary to prevent these developments and achieve further air quality improvements through properly enforced legislation and active policies.

A comprehensive alternative that minimises the negative impacts on soil, water and air is **organic agriculture**, which does not use agro-chemical inputs and practices crop rotation. The new member states should discourage intensive, industrial agriculture which causes most environmental damage and encourage environmentally friendly farming systems, especially organic.

Making CAP work for soil, water and air protection

In the EU-15, **cross-compliance** will require farmers to respect the Nitrate and Groundwater directives as well as further "good agricultural and environmental conditions" that will include minimum requirements for soil protection (e.g. soil cover, stubble maintenance and crop rotation). However, cross-compliance is not obligatory in the new member states in the first five years after accession. This is the period when they are most likely to be induced to set on a path of damaging agricultural intensification. Therefore, direct payments for all farmers in these countries need to be conditioned by compliance with adequate standards and good farming practices that prevent soil degradation and minimise water and air pollution. Such conditions are necessary to ensure that CAP subsidies do not contribute to environmental damage with external costs for which everyone has to pay.

At the same time, the new member states need to implement well-designed and adequately funded **Agri-Environmental Programmes** that will allow participation of a large number of farms. West European experience with AEPs shows that they have positive impacts on water, soil resources and to a lesser extent air quality [94]. Besides support for environmentally friendly farming systems such as organic, AEPs should support e.g. investments into more demanding anti-erosion measures (such as windbreaks or grass belts). AEPs and afforestation measures can also be used to support ecologically appropriate grassing or afforestation of arable land on soils prone to erosion.

The new member states also need to upgrade **training and advisory services** for farmers and use the rural development measure for **meeting EU standards.** This measure can help farmers improve their practices, including the application of agro-chemicals on arable farms and storage of manure and waste disposal on livestock farms.

In sum, if CAP instruments are used cleverly, they can lead to improvement of soil health, water and air quality, rather than the degradation and pollution of these natural resources.

Policy priorities for the new member states:

1) **Condition direct payments and top-ups by compliance with adequate standards and good farming practices that prevent soil degradation and minimise water and air pollution.**
2) **Spend at least 50% of rural development funds on well-designed Agri-Environmental Programmes that will allow participation of a large number of farms.**
3) **Use the rural development measure for meeting EU standards to help farmers improve their practices and management of polluting substances on farms.**
4) **Upgrade training and advisory services for farmers.**
5) **Support a continued boom of environmentally friendly farming systems, especially organic agriculture.**
6) **Properly implement and enforce EU environmental legislation, especially the Water Framework Directive and the Nitrate Directive.**
7) **Press for a strong EU thematic strategy on soil protection with concrete and legally binding targets and timetables to reverse soil degradation in Europe.**

1.6 Extensive farming and semi-natural grasslands

Large areas of extensively managed meadows and pastures with high biodiversity still exist in CEE countries, but many have been lost due to both intensification and abandonment. Implementation of Agri-Environmental Programmes and Less Favoured Area payments in the second pillar of CAP does offer a chance to stop these processes. The new member states can maintain extensive grasslands with the associated social and ecological wealth, as long as these instruments are properly designed, targeted and funded.

Agriculture does not always have a negative impact on biodiversity and landscape, but can even enrich them. By clearing forests and creating open areas, traditional extensive agriculture historically enabled spreading of many species and created living conditions for them. Centuries of coexistence between farmers and nature have thus enhanced biodiversity in Europe. A wide variety of natural conditions and farming traditions created a great diversity of European landscapes inhabited by a richness of wildlife.

Estonian horses of local breed on semi-natural coastal grasslands

Photo: Maret Merisaar, Friends of the Earth Estonia

The grasslands along the Estonian coast, on the Estonian islands Saaremaa and Hiiumaa and small islets surrounding them, are important bird habitats and host rare orchids. Their maintenance depends upon grazing by local horses, sheep and cows. Due to the sharp decline of their numbers and low profitability, many areas have been overgrown with bushes in the past 15 years. Recently, maintenance and restoration of the grasslands have been supported by the agri-environmental programmes (also under the pre-accession fund SAPARD). Unprofitable organisation of livestock grazing on small islets has also been partly renewed. Thanks to the EU accession, agri-environmental programmes will be expanded and selected areas with important bird habitats will be included in the Natura 2000 network, giving a hope that the grasslands and local horse breeds will be maintained [109].

Today, so-called **high nature value (HNV) farmland** – distinguished by richness of present biological species - can mostly be found in areas where **extensive agriculture** persists. Extensive farming is characterised by low stocking densities and low use of chemical inputs. Extensive farming and high nature value farmland today account for 15% - 30% of European farmland [92, 100]. The largest areas are found in eastern and southern Europe. Typical examples of HNV farmland are alpine meadows and pasture, steppic areas in eastern and southern Europe, dehesas and montados in Spain and Portugal and extensively grazed uplands in the United Kingdom. Intensification in these areas has been prevented by natural conditions or socio-economic constraints: they are usually too dry, too wet, too steep, too infertile, too poor or too remote. The majority of high nature value farmland consists of semi-natural grasslands, although extensive mixed farming on arable land may also support high biodiversity [100].

Semi-natural grasslands can be divided into grazed grasslands (pastures) and mowed grasslands (meadows). Both depend for their maintenance on appropriate management by farmers (unlike e.g. some alpine pastures that can be maintained without human intervention). Most of semi-natural grasslands can today be found on highlands, along the seacoast and in floodplain areas along some rivers. Compared to arable land, grasslands have much greater ability to contain water and thus prevent damage from floods and rainstorms. By providing habitats for many threatened species, semi-natural grasslands are a major conservation resource. One extensively managed meadow can be inhabited by over 100 plant species, while an intensive meadow in the same area normally hosts only 15 - 20 species. The difference in diversity of animal species, especially insects, is usually even much greater [101]. Continuation of regular extensive mowing is essential for the survival of many of these species. Extensively grazed pastures also create conditions for the growth of many plant species and provide various shelters and food sources for beetles, bumblebees, butterflies, etc [102].

Because of their dependence on the right extent of mowing or grazing and due to a low profitability of such extensive farming, semi-natural grasslands are particularly vulnerable to **abandonment or intensification**. If a meadow is not regularly mowed, old grass prevents growth of weaker plants in the spring and the meadow can be eventually taken over by a few aggressive plant species. Similarly, abandonment or insufficient grazing of pastures lead to elimination of species-rich habitats by encroaching bush and forest species. On the other hand, excessive fertilisation of grasslands fosters the growth of a few plant species at the expense of the others, which cannot compete with them and disappear. Too early mowing of intensively managed hay meadows removes source of food and shelter for many insects and nesting birds. Similarly, high stocking densities and overgrazing of pastures lead to the elimination of diversity [101].

Extensive farming can play a key role in the development of many, often remote or mountainous, rural areas. By maintaining landscapes with high cultural, aesthetic and natural values, it attracts tourism. Extensive farming can also provide rural employment and help keep economic activities in rural areas, including marketing of local products [103].

Traditional Hungarian grey cattle grazing on the grasslands in the Somogy area

Photo: Szilvi Sándor, Friends of the Earth, Hungary

Despite centuries of widespread grazing, the Somogy area has become desolate and weedy due to a massive fall in the number of cattle in the last two decades. The non-governmental organisation Somogy Provincial Association for Nature Conservation (SPANC) aims to reverse that trend by reviving grazing. SPANC has bought up hundreds of hectares of species-rich grasslands with lakes, on which it practices extensive grassland management, extensive fish farming and ecotourism, with the support of the Hungarian agri-environmental programme. The cattle are kept outdoors all year round and receive no fodder, only grass [110].

Situation in CEE countries

During the communist period, many grasslands in CEE countries were drained, ploughed up or heavily fertilised as a part of the efforts to maximise production. Pastures were often overgrazed and meadows were turned into "hay factories". Nevertheless, large areas of relatively undisturbed semi-natural habitats with high biodiversity remained under extensive management. Today, there are still more than 7 million hectares of semi-natural grasslands in CEE countries, i.e. 12% of farmland (see table 4) [22]. From Baltic coastal areas through the Carpathian mountains to the steppic grasslands in the Hungarian puszta, the region hosts a great variety of semi-natural grasslands.

Table 4. Estimated distribution of semi-natural grasslands in CEE countries in 1998.

Semi-natural grasslands	Slovenia	Romania	Hungary	Czech R	Slovakia	Poland	Bulgaria	Estonia	Lithuania	Latvia	**CEE-10**
Area of s-n.g. (1000 ha)	268	2333	960	550	295	1955	444	73	168	118	7164
Share of farmland area	53.7%	15.8%	15.5%	12.8%	12.1%	10.6%	7.2%	7.4%	4.8%	4.7%	12.0%

Source: [22]

The economic transformation in the 1990s resulted in an extensification of large parts of CEE agriculture as the use of chemical inputs sharply dropped. Numbers of cattle and sheep declined by between 50% and 80% in all CEE countries with the exception of Slovenia (see chapter 1.3) [5]. Ironically, the biggest declines occurred in extensively farmed areas: for instance, sheep numbers

declined by as much as 90% on the Carpathian slopes in Southern Poland, a traditional region of sheep breeding and highlanders culture [104]. Undergrazing and abandonment has thus replaced intensification as the dominant threat for grasslands. In recent years, there has not been enough grazing capacity (cattle, sheep and goats) to manage semi-natural grasslands appropriately and many valuable habitats have been, and continue to be lost [105]. Some abandoned areas have been left fallow, some have been afforested, sometimes with fast-growing monocultures for wood production. Abandonment has been particularly severe in Estonia, where around 30% of farmland is abandoned and 60% of semi-natural grasslands are no longer managed [22].

At the same time, some grassland areas have experienced intensification or even conversion to arable land in recent years, also resulting in biodiversity losses. In Hungary, a return to private ownership and market pressures have provided an incentive to convert puszta areas to the production of cash crops, such as maize and sunflowers. 44,000 ha of puszta grasslands were lost between the mid-1980s and 1998 [22].

Landscape of the White Carpathians

Photo: Zdenek Podesva

The White Carpathian mountains on the Czech-Slovak border contain thousands of hectares of unique orchid meadows that belong to the most species-rich biotopes in Europe. The landscape is shaped by a relatively sparse settlement of the "kopanice" ("croft") type. The species-rich hay meadows traditionally used to be mowed annually and sometimes grazed in autumn by sheep and cattle. Intensive, collectivised agriculture left damage on the White Carpathian landscape. Large plots of arable land are now afflicted with severe water erosion. Today, management of existing meadows, restoration of abandoned meadow plots and conversion of arable land back into grassland are supported by national and EU subsidies (including agri-environmental programmes under SAPARD in the Czech Republic). The mountains are a nature protected zone and a part of the area will be included into Natura 2000. The greatest ecological challenge is how to make extensive grassland management again economically viable. Solutions are being sought e.g. in alternative use of the hay and extensive pasturing. The anticipated base for development is a mixture of organic agriculture, cottage industry and eco-tourism. There are now several organic farms. Also fruit-growing has again become popular among farmers. Local apple juice and plum brandy (slivovice) are produced. However, outflow of people from the mountains to the cities continues [111].

EU policy

Protection of high nature value farmland area under **Natura 2000** is an important but insufficient tool. At best, about one third of the HNV farmland area will be included in Natura 2000 zones. Outside protected areas, conservation of HNV farmland depends mainly on the application of instruments within the CAP [100].

However, the **CAP** has so far not favoured HNV farming. From the first pillar of CAP, HNV farms in the EU-15 receive on average around half of the payments per hectare received by non-HNV farms, mainly because of their lower productivity. At the same time, HNV farms are much more dependent on CAP subsidies – and therefore more vulnerable to any reduction of them. For non-HNV farms the first pillar support corresponds to 26% of the value of the production whereas the same figure is between 54% and 60% for HNV farms [106].

Effects of the 2003 CAP reform on HNV farming are far from clear. In countries that choose to switch to flat-rate area payments, CAP subsidies for HNV farms should increase, as subsidies would be redistributed from more productive to less productive areas [107]. On the other hand, some predict that the decoupling of direct payments from production may accelerate the tendencies towards abandonment or intensification of marginal farmland with high nature value [108]. In most of the new member states, where the simplified area payment system will be implemented, direct payments received from the EU will be distributed equally per hectare of farmland, including managed grasslands. However, the national top-ups do not have to be equal. Their distribution will have important consequences for the continuation of HNV and extensive grassland farming.

Agri-Environmental Programmes and **Less Favoured Area payments** can help to reduce the competitive disadvantages of extensive HNV farming in order to make it economically viable. AEPs must therefore include well-designed and targeted measures supporting extensive management of meadows and pastures. Many existing extensive farms, that use little or no chemical inputs, can also relatively easily convert to organic farms and benefit from the organic payments under AEPs. LFA payments are also important for maintaining the viability of extensive farming, provided they do not lead to intensification and overgrazing. Governments should also support farmers in Natura 2000 zones with the special compensatory payments (Article 16 of the current Rural Development Regulation and special measures in the newly proposed Rural Development Regulation for 2007-13). If all these instruments are properly designed, targeted and funded, their introduction into the new member states can help maintain extensive farming on semi-natural grasslands and slow down the tendencies towards intensification and abandonment.

Photo: Janek Skarzynski, EPA

The countryside of the Tatra Mountains near Zakopane, Poland.

Production limits (e.g. milk quotas) for the CEE countries are based on the very low reference amounts of the last years. The reduced herds of cattle, sheep and goats will therefore never be rebuilt [22]. They may even be reduced further, due to the predicted decline of semi-subsistence farming and increase in milk production per cow. If milk productivity increases, fewer cows will "fit" under the milk quotas. It depends on how production limits are distributed by the governments. Will they support concentration of livestock into a few intensive, specialised animal farms? Or will they ensure such distribution that enables continuation of extensive grazing systems?

Photos: Ewa Hajduk, Friends of the Earth Poland

Cattle grazing in the Kurpie region, Northeast Poland.

Policy priorities for the new member states:

1) **Allocate sufficient funds for well-designed Agri-Environmental Programmes including measures supporting extensive management of meadows and pastures.**
2) **Design and implement the LFA measure with the objective to support extensive farming.**
3) **Designate Natura 2000 protection zones so as to include farmland areas with high nature value. Use the special rural development payments (currently article 16) to support extensive farming in Natura 2000 areas.**
4) **Distribute the available quotas in a fair way in order to maintain extensive grazing of semi-natural grasslands.**
5) **Allocate the top-up direct payments in such a way that will help continuation of extensive management on semi-natural grasslands, rather than their ploughing up.**

1.7 Supermarkets and long-distance transport of food and animals

Changes in agriculture, food processing and distribution have increased the distance food travels from farm to plate. EU enlargement and elimination of trade barriers, accompanied by the expansion of large retail chains, are expected to further prolong the distance between farmers and consumers. CEE countries should take active policies to promote local food economies instead of ever increasing transport.

Food is now travelling further than ever before. Trucks transport German and Dutch pigs across the Alps to Italy where they make ham out of them, which other trucks then transport back again over the mountains to shops in Germany and the Netherlands. Individual ingredients of a common jar of strawberry yoghurt travel as much as 8000 km [112].

Between 1968 and 1998, world food production grew by 85%, while the international food trade shot up by 182% [61]. The EU has moved from the post-war food shortages to surplus production over the years, yet the food imports greatly increased at the same time – and exports even more so. Freight transport in the EU has grown faster than the economy in recent years, despite the official goal to decouple economic growth from the growth of transport [113].


Photo: USDA

Shipping grain around the world.

Food transport has become an increasingly prominent source of pollution and greenhouse gas emissions. Each kilogram of kiwi imported from the New Zealand results in a kilogram of carbon dioxide emissions [114]. The energy consumed when carrots are imported from Italy to Sweden could be halved if substituted by domestic carrots [115]. Products enduring long-distance transport and long-term storage require chemical additives and conservation agents, which add to food safety concerns.

Much of the existing trade is an unnecessary and economically absurd movement to and fro. In 1998, Britain imported 61,400 tonnes of poultry meat from the Netherlands, while exporting 33,100 tonnes of poultry meat to the Netherlands. In 1997, the UK imported 126 million litres of milk and at the same time exported 270 million litres of milk [61]. One of the reasons for such illogical "food swap" is the large-scale, centralised procurement by big supermarkets and food companies.

Live animal transport: joining the horror ride

Long-distance transport of live animals is of great concern in particular, as it causes great suffering to the animals and risks the spreading of diseases. Each year, around 3 million cattle, 11 million pigs, 2.5 million sheep and goats and tens of thousands of horses are transported between the EU member states [116]. The spreading of foot-and-mouth disease in the EU in 2001 was accelerated by this animal trading. The animals, transported for slaughter or further fattening, often suffer from extreme heat in the summer, severe overcrowding, insufficient headroom, water deprivation, poor ventilation, injuries and illness and the sheer length of the journeys. Some journeys can last up to 90 hours. Farm animals are also exported to third countries, especially to Lebanon and Egypt, encouraged by tens of millions of euros in export subsidies a year [117].


Photo: Manfred Karremmann / Ochrana hospodárských zvírat

For the first and last time in their life they see the sun.

The CEE countries have already joined the cruel business of live animal transport: for example, of the 133,000 live horses imported into the EU in 2001 for slaughter, 61,000 were from Romania and 40,000 from Poland. 95% of them went to Italy, which has the EU's biggest slaughterhouses [118]. Expansion of the EU single market to CEE will, in the words of the European Commission, "create new prospects for the transport of animals" [116]. Indeed: exports of live pigs from the Czech Republic, for example, almost doubled after the accession [119].

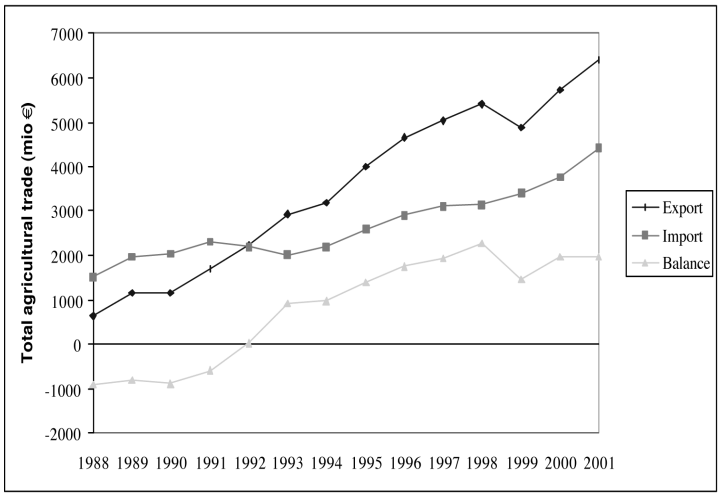
The transport of pigs across Europe overseen by Danish pigmeat companies is a good example of the trend. The tour begins in Romania or another CEE country, where the pigs are born. When they are 3 weeks old, they are put on a truck and sent to a factory farm in Catalonia. Machinery, feed and antibiotics for fast meat growth are provided by the Danish company. When the pigs are 7 months, they are loaded on another truck and sent to a nearby slaughterhouse. The slaughtered pigs are then put into a fridge truck and sent to Denmark, where the original Danish company processes and packs them. The meat products are then finally distributed, by trucks again, across the whole EU or exported with the help of CAP export subsidies to third countries [120].

Proposals to **stop long-distance transport of live animals**, long advocated by animal welfare organisations, have gained ground in the EU after the food scandals of recent years. The European Commission's Scientific Committee on Animal Health and Animal Welfare concluded in 2002 that animal journeys should be as short as possible [121]. The European Parliament repeatedly proposed an overall limit of 8-9 hours on transport of live animals [122, 123]. However, this limit has been opposed by several member states, including France, Spain, Italy and now Poland [124]. The European Commission has come up with a ludicrous "compromise" proposal currently on the table: to make obligatory 12-hour rest periods after every 9 hours of journey. During the breaks, animals would stay closed in the vehicles and the overall journey times would thus only be prolonged [116].

Consequences of the enlargement

Early predictions, after the fall of the Iron Curtain, that the EU markets would be flooded with cheap East European imports, turned out to be entirely incorrect. While agri-food imports from CEE countries doubled throughout the 1990s, exports from the EU to CEE countries increased ten-fold. The trade balance between CEE and EU countries turned negative (see figure 7) [125]. The main reason is that CEE countries began importing higher amounts of processed food from the EU [12]. Many local food products in CEE countries such as yoghurts or soft drinks have been pushed out of the market and substituted by West European products.

Figure 7. Trade balance of EU-15 with CEE-10 countries in agricultural and food products.



Source: Dries and Swinnen (2002)

As recently boasted by the EU Commissioner for Agriculture Franz Fischler, exports of pigmeat from the EU-15 to the accession countries have gone up by over 100,000 tonnes only since 1999, partly funded by CAP export subsidies. In the opposite direction, poultry exports from accession countries to the EU-15 have risen from 78,000 tonnes in 1994 to over 170,000 tonnes in 2003 [126]. In the meantime, the flooding of the Polish market with cheap subsidised EU meat sparked massive protests of Polish farmers and contributed to the rise of an ultra-nationalist political party in Poland.

Unless active policies are taken to promote local food economies, EU enlargement and the elimination of trade barriers, accompanied by eastward expansion of large supermarket chains, will further accelerate long-distance food transport. Food will be transported at increasingly long distances across the whole continent, with negative impacts on the environment, food safety and rural economies. Already in the first two months after the accession, imports of Danish pigmeat to the new member states increased threefold compared to the previous year [127].

Supermarkets

Large retail chains play a central role in the de-localisation of food distribution. Over the past decade, big **multinational retail companies** such as Tesco, Ahold and Carrefour burst into the CEE countries. Having built large shopping centres on the outskirts of towns and cities, they have acquired huge shares of the food market at the expense of smaller shops. In the Czech Republic, for example, the food market share of the ten largest retail chains grew from 8% in 1993 to 53% in 2003 [128]. This radical and rapid change has at least as important consequences for farmers, consumers and the environment, as the EU accession process that it has accompanied.

The retail sector in CEE countries has followed a **U-shaped pattern of concentration** over time. The initial privatisation of former highly concentrated state-directed retail sectors in the early 1990s led to the emergence of a great number of private shops and small retail chains. With the arrival of supermarkets, CEE countries have witnessed a new massive concentration and centralisation - but this time by private and mainly foreign companies [129].

The invasion of large retail chains involves a shift from local store-by-store procurement to nationally **centralised distribution**. For example, Tesco has one huge distribution centre close to Warsaw, into which it brings supplies from all over Poland or from abroad and then again distributes them to its supermarkets all over the country. The next, currently starting phase, facilitated by the EU accession, is a shift from national distribution centres to cross-border sourcing, co-ordinated across several countries. For example, Ahold already merged its operations in Poland, Czech Republic and Slovakia into one co-ordinated whole in order to be able to purchase the cheapest products from various countries and sell them all over the region [129].

The supermarket "revolution" threatens to push many **small farmers** out of the market. Large retail chains with centralised procurement demand large volumes of cheap standardised products. It is cheaper for retailers to deal with a few large suppliers than with many small farmers. Moreover, small farmers are usually not able to comply with the standards or make the necessary investments into standardised production [129].

Large retail chains also increasingly dictate prices to farmers. Suppliers are put under enormous pressure to cut their prices or lose their market. Common supermarket practices include asking suppliers to pay for putting their goods into distribution as well as for food wasted at the store, in-store promotions and market research. Furthermore, the strict requirements of supermarkets on uniformity and cosmetic appearance of fresh food – besides the EU standards – force farmers to use more pesticides.

Policy alternative: localisation

More local production for local consumption would result in safer food, less animal suffering, reduction in transport costs, congestion, packaging and chemical preservatives. Shorter food chains also strengthen local economies and safeguard local jobs by keeping money within the local area rather than adding to profits of large corporations elsewhere.

Photo: Daniel Lesinsky, Friends of the Earth Slovakia

A local market in the town of Zvolen, Slovakia.

The political goal should be to shorten the producer-consumer distance where possible instead of encouraging long-distance transport. International trade will and should continue but should not be sought as an end in itself. Ever increasing trade and transport is untenable in the long term in a world with shrinking resources and in risk of serious climate change. Food from long-distance transport is artificially cheap because its large hidden costs (e.g. effects of smog and greenhouse emissions) are not reflected in the prices of food, while road construction is subsidised from public funds. This is the principal condition of the continuing growth of long-distance food transport. One solution therefore is to correct the prices through internalisation of external costs by means of **environmental taxes on transport**.

Localisation can also be stimulated by supporting local small-scale processing enterprises, regional co-operatives of farmers and retailers and by encouraging direct marketing schemes, such as farm shops, community shops, local delivery schemes, community supported agriculture and farmers' markets [130, 131, 132]. **Farmers' markets** allow customers to get fresh produce and farmers to get a decent price, from which they retain much higher shares than from sales to wholesalers or distributors. Just like other direct marketing schemes, they stimulate links between consumers and farmers as well as local businesses. They keep small farmers and food processors afloat and have a high local multiplier effect - the number of times money circulates in the local economy before leaving. Farmers' markets help revitalise towns, as also other shops report much greater sales on days when there is a farmers' market [133]. Most of supermarkets' revenue, on the contrary, leaves the local area immediately. A supermarkets' organisation in the UK found that there was an average net loss of 273 local jobs for every new out-of-town food supermarket [134].

Several West European countries are now witnessing a rapid renaissance of farmers' markets. In the UK, their number rose from zero in 1997 to 240 in 2000. This was facilitated by a conducive approach of the authorities, who began to recognise their benefits [133]. Most CEE countries still have an advantage in this area and they should not lose it. However, political authorities sometimes put obstacles to farmers' markets rather than stimulating them. Rural development funds offer many opportunities for encouraging local initiatives. The LEADER+ programme in particular supports initiatives of local action groups that develop small-scale innovative projects.

Photo: Daniel Lesinsky, Friends of the Earth Slovakia

Conversations at the local market.

Policy priorities for the new member states:

1) **Support initiatives encouraging local production for local consumption, e.g. by setting up and stimulating farmers markets in towns. Use rural development funds and the LEADER+ programme for this purpose.**
2) **Regulate the expansion of large retail chains and limit their market shares through competition rules.**
3) **Press on the EU to put an overall time limit on the transport of live animals.**
4) **Press on the EU to introduce a carbon tax or other environmental taxes on transport to make food prices reflect the true costs of long-distance transport.**

1.8 Genetically modified crops

Genetic modification of farm crops takes industrialisation of agriculture to the extreme, exacerbating all the negative impacts of intensive monocultures. The new EU member states should take an extremely cautious approach to GMOs and give their citizens full rights to information and participation on GMOs.

GM crops are usually modified by insertion of genes from another species to make them tolerant to a certain herbicide or resistant to an insect. The herbicide-tolerant crops allow farmers to spray their fields with herbicides, which are designed to kill all other plants. The insect-resistant crops produce a toxin in their issues that kills certain insects [135]. However, despite the promises of the biotech industry, GM food has brought no benefits to the consumers in terms of price or quality. Instead, genetically modified organisms (GMOs) created novel risks for the environment, farmers and public health [136].

More pesticides: Despite the promises made by biotech companies that GM crops would reduce the use of pesticides, studies in the US have shown the contrary. After an initial drop, more resistant weeds emerge in GM farm fields and eventually force farmers to spray more herbicides, increasing their costs and damaging the environment. Over the last 8 years, GM crops have caused more than 20,000 additional tonnes of pesticides to be used in the US agriculture [137].

Contamination: Once GMOs are released into the environment, the consequences are unpredictable. Modified genes spread to the surroundings through pollen carried by insects or the wind. Conventional crops on farms as well as wild relatives of the crops can be cross-pollinated by genes from GM fields over 20km away (depending on the variety) [138]. Non-GM farmers would be severely affected by GM contamination of their crops, since European supermarkets refuse to sell GM products. Non-GM farmers are also threatened by the increasingly resistant weeds emerging in GM farm fields.

Corporations vs. farmers: GM crops around the world are engineered and sold by a handful of multinational corporations such as Monsanto, Bayer and Syngenta – which are at the same time the major producers of pesticides. Often, the only "advantage" of their GM crops is that they are tolerant to their own herbicides. These corporations seek to control food production by buying up seed companies, patenting seeds and locking farmers into exclusive agreements. The right of farmers to save and use their own seeds, the foundation of agriculture, is under threat of being eliminated for the first time since the creation of agriculture. Monsanto has been suing hundreds of farmers in the US and Canada to prevent them from saving their seeds – including farmers who never bought GM seeds but whose fields were contaminated by genes from neighbouring farms [136].

Health risks: New substances contained in GM food could cause new allergies. Antibiotic-resistant marker genes engineered into many GM products could reduce the effectiveness of antibiotics in human medicine [139]. There are also concerns about the toxins in plants. The British Medical Association, which represents the majority of UK doctors, has called on more research into the health effects of GM foods [140].

The failure of GMOs in Europe

While the United States has embraced GM in food for more than a decade, the EU has so far stayed largely free of GMOs. A certain amount of GM crops are imported into the EU and these are fed to farm animals. The only country in Europe that commercially grows some GM crops is Spain, where it has already contaminated other farm fields in an atmosphere of secrecy with a total lack of available information [140].

In the 1990s, 18 GM products were approved in the EU. Since 1998, no new GM products have been approved to be commercially grown or imported into the EU. Five EU member states then jointly decided to block new GMO approvals until comprehensive legislation on GMOs has been adopted – resulting in a **de facto moratorium** on new GM products in the EU. In addition, so far five member states have issued **national bans** on eight of the GM products authorised in the EU. Member states can temporarily ban or restrict GM products approved in the EU, on certain conditions.

In recent years, a **new legal framework** on GMOs has come into force in the EU. The new **authorisation** directive (2001/18/EC) requires companies to carry out risk assessments to judge the environmental and health impacts of their GM varieties. The new regulation on **traceability** and **labelling** requires GMOs to be traced "from farm to fork" and foods with accidental GM content above 0.9% to be labelled.

The member states are now developing laws on **co-existence** of GM and non-GM crops to prevent contamination and on **liability** – i.e. who should pay for contamination and damage caused by GM crops. Scientists nevertheless say that for some crops, such as oilseed rape, co-existence is likely to be extremely difficult, even impossible [141]. The only safe way to prevent contamination of farm fields and to guarantee the right to choose for farmers and consumers seems to be the creation of large GMO-free zones in which the cultivation of GMOs is completely banned.

Another piece of the new legal framework will be a directive setting the **limit on accidental GM contamination of seeds.** The limit will decide how much GM content can be present in conventional and organic seeds without being labelled as GM and thus without farmers knowing about it. The European Commission has discussed the issue for three years but failed to agree. Its latest proposals for the seed contamination limits ranged between 0.3% - 0.5%. It will be up to the new European Commission, starting in November 2004, to solve this problem. Environmentalists and farmers have called for setting the seed contamination limit at the lowest detectable level - 0.1% [142]. Without this limit, the spread of GMOs through contaminated seeds could occur on a massive scale.

In May 2004, the European Commission **lifted the moratorium** by approving a new Syngenta GM maize for sale (but not for cultivation) – despite opposition by most member states, public resentment and scientific disagreement over its safety. However, Syngenta is not even going to attempt to market the maize, citing resistance from the food industry.

The lifting of the moratorium does not mean Europe will be flooded with GMOs. Distrust in GM food is so high among European consumers that no major supermarket chain is prepared to put GMOs on their shelves, no matter how many new GMOs are approved. Since the GM animal feeds must now also be labelled, more supermarkets and food processors will probably also reject products such as milk, meat and eggs from animals fed on GM feed. Moreover, farmers are reluctant to grow GM crops because of the liability for contamination and because insurance companies are refusing to insure them [143].

In addition, **GMO-free zones** are now springing up across Europe. A number of regions including Upper Austria, Tuscany and Wales have established a network of GMO-free regions. Some of them passed laws banning the growth of GM crops. More than 1200 towns in France and 500 in Italy (including Rome and Milan) have declared themselves GMO-free or taken a position against the use of GMOs [144].

The USA, Argentina and Canada filed a legal case against the EU at the World Trade Organisation (WTO), attacking the European GMO legislation. The countries argue that EU's measures pose an "illegal trade barrier" – as in the earlier case with hormone-treated meat.

Situation in the CEE countries

There have been **field trials** of GM crops in several of the new member states, including Poland, Hungary and the Czech Republic, but not in Lithuania, Slovakia and Slovenia. In several countries, including Poland and Hungary, field trials took place in the late 1990s in the absence of comprehensive GMO laws and controls and might have led to contamination of other crops by GM pollen [145].

In recent years, all the new member states have transposed most of the EU GMO legislation into the national law, but the problem has been with their **implementation and enforcement**. Until recently, most of these countries did not have the laboratories, border controls and monitoring programmes necessary to check GM imports, detect GM contamination and label GM food. Without these facilities, GMOs could be grown, bought and sold without detection. In Poland, Estonia and Slovenia, random controls have revealed a number of food products containing GMOs without any authorisation or labelling [145]. To avert uncontrolled influx of GMOs from the CEE countries into the EU, the European Commission has been helping the acceding countries to set up the laboratories and establish a harmonised GMO detection system across Europe [146].

Only **Romania and Bulgaria**, scheduled to join the EU in 2007, have been growing GM crops commercially on a large scale and with very little government control – similar to countries further east such as Ukraine. In Romania, over 50% of soya grown in 2002 came from Monsanto and probably caused a contamination of seed in neighbouring Serbia as a result of grain smuggled across the border [145]. In Bulgaria, by 2000, Monsanto's GM maize was allegedly grown on 20,000 hectares [147]. As some of these crops are not authorised in the EU, the two countries will probably have to be de-contaminated before their accession to the EU.

Hungary: restricting GMOs to protect exports

Hungary is the only new member state that has systematically monitored seed purity to avoid GM contamination. After the GM field trials in the late 1990s, Hungary developed a relatively well-controlled and transparent regulatory system. The country has taken a cautious approach to GMOs in order to protect its economic interests. Some 25% of seed produced in Hungary is exported to the EU-15 states, which have been increasingly turning to Hungary as a safe source of GM-free crops and food. Remaining uncontaminated has been key to continuing the trade [145]. Only products meeting the stringent new legal requirements will be able to be sold in the enlarged EU. Previously, countries such as the US and Canada lost huge markets in Europe after they started growing GM crops.

The **legal status of GMOs after accession** is an important issue. Some new member states had authorised certain GMOs that had not been approved in the EU. These GM products became illegal at the moment of accession. In the opposite direction, the 18 GMOs authorised within the EU became implicitly legal in all the new countries on the day of accession. Before accession, some of these GMOs were not permitted in most new member states. Governments should not automatically accept these GMOs now, just because they are authorised in the EU. A temporary ban, using article 23 of Directive 2001/18, is necessary until an adequate risk assessment with public participation is carried out taking into account their distinct local environmental conditions. Furthermore, no GMOs should be permitted before the EU rules on traceability and labelling are fully implemented and until clear rules on liability and co-existence are established [148].

In June 2004, six out of the ten new MS helped **block EU approval of a new GM oilseed rape variety** from Monsanto - together with a majority of old MS. Only the Czech Republic, Slovakia and Latvia have voted for the approval (and Slovenia abstained), despite scientific concerns about safety of the oilseed rape variety for health and the environment. The vote was the first test for the enlarged EU after the end of the moratorium [149].

Rights to information and public participation on GMOs are crucial in order to keep the hazardous technology under control. Citizens should have access to information on the location of GM fields and the right to be involved in decision-making about approvals of GMOs. However, the Czech Republic, for example, has recently adopted a law that severely curbs these civic rights after a lobbying by biotech companies.

Policy priorities for the new member states:

1) **Properly implement and enforce the EU legislation on labelling and traceability of GMOs.**
2) **Develop strict national laws on co-existence and liability to prevent contamination of non-GM crops and to make sure the polluters (the GMO owners) pay for the contamination they make.**
3) **Issue temporary bans on GMOs authorised in the EU, using article 23 of Directive 2001/18. Do not introduce the GMOs permitted in the EU before a proper legal framework is established (the two points above) and before an adequate risk assessment with public participation is carried out taking into account the distinct environmental features of each country.**
4) **Ensure full citizens' rights for information on GMOs and participation in GMO approval procedures.**
5) **Permit regions to set up GMO-free zones.**
6) **Press for stricter EU legislation on GMOs, including EU-wide rules on co-existence and liability and the seed contamination limit of 0.1%.**

1.9 Sustainable alternatives: organic and integrated agriculture

The great thing about alternative farming systems that are friendly to the environment is that they also help solve the social and economic problems of rural areas. Apart from the rather "traditional" extensive farming (see chapter 1.6), environmentally friendly farming systems include highly innovative approaches such as organic farming and some types of integrated farming. The CEE countries should take advantage of their low use of agro-chemical inputs and abundant rural labour force to boost environmentally-friendly agriculture, especially organic farming.

Organic agriculture

Organic farming almost does not use any synthetic substances such as chemical pesticides and fertilisers (with a few limited exceptions), but uses natural methods such as crop rotation. Not surprisingly, organic farms have significantly higher biodiversity, reduce energy consumption and cause less water pollution than intensive farms [93]. Organic farming also bans antibiotics in animal feed, cages for livestock and ensures good animal husbandry. Animals at organic farms have much more space: their average livestock density is only 70% of density at conventional farms [21]. Organic farms also bring a number of social and economic benefits (see box on the next page).

In contrast to the rest of European agriculture, which has been economically stagnant in the last decades, organic farming is a **rapidly growing** sector. Organic food is no longer a marginal niche sector restricted to special shops and a narrow group of customers. Organic food has become common merchandise.

Traditional wheat sort Spelta planted at the Slovak organic farm Ekotrend

Photo: Ekotrend

Located on the Slovak side of the White Carpathians, the 150 ha large organic farm Ekotrend was established by an association of the same name in 2001. The main crop cultivated by Ekotrend is a special traditional wheat sort Spelta with high nutritious value. A part of the enterprise is a small organic manufacture, where Spelta is processed into wholegrain flour and all sorts of wholegrain pasta. All the vitamins and minerals, destroyed by standard industrial processing, are conserved in the pasta. Ekotrend also cultivates herbs, which are processed into tea. Last but not least, the holding includes an extensive apple-tree orchard, mainly with sorts for cider [160].

In comparison with conventional farms, organic farms have lower costs for inputs and higher labour costs, but the total costs are usually lower by 10% - 25% per hectare. Organic farms have usually **lower yields**: e.g. organic cereal yields are typically 60% - 70% of conventional yields, although organic livestock farms have comparable yields as conventional ones [150]. However, the organic yields have been gradually growing. The rapid organic boom is bringing new innovative techniques and methods that reduce the gap between the yields of organic and conventional farms [150]. Notwithstanding the fact that little money is being invested into agronomic research in this prospective area, compared with the hazardous biotechnology. Most importantly, in the age of overproduction that necessitates quotas and other supply-management instruments, lower yields attain better balance between supply and demand and should be seen as an advantage rather than a drawback [151].

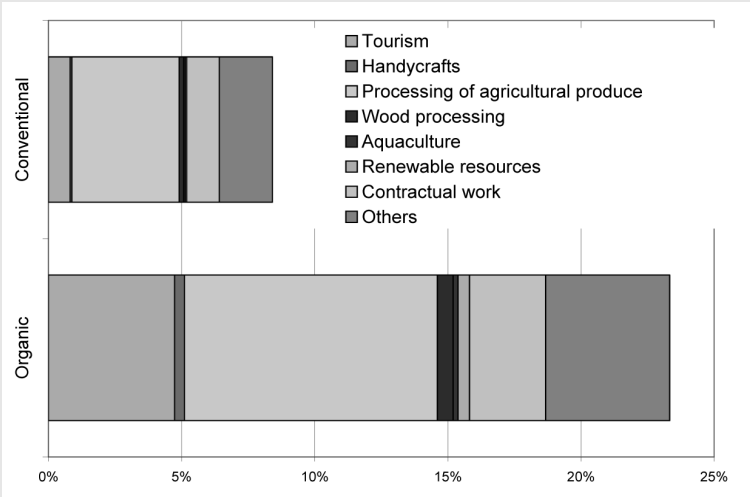
With lower costs and lower yields, organic farmers have on average similar final profits as conventional farmers, higher in some cases, lower in others. The **prices** of organic food in shops are usually somewhat higher than prices of conventional food [150]. This constitutes the main limiting factor on the future growth of organic production. However, the price disadvantage for organic food is only possible because subsidies and taxes do not properly reflect external costs and benefits of organic and intensive farming. If the *polluter pays principle* was properly implemented in CAP and other policies, the price disadvantage would disappear and most EU farms could convert to organic or other environmentally-friendly methods.

How organic farming benefits the society and economy of rural areas

More labour: Organic farming substitutes labour for capital. In other words, it makes better use of human work and knowledge instead of buying agro-chemical inputs. Organic farms in the EU employ on average 10% - 20% more people than conventional ones [150]. In the UK, for example, on average one extra job per farm is created after conversion to organic [33]. More labour is needed for natural pest and weed management methods as well as to provide care for livestock such as bedding. As it creates new jobs, organic agriculture is an important means of rural development [151].

Local multiplier effect: Money raised by organic production circulates in the local economy and does not flow away. Organic farmers pay more for the local labour force and less for agro-chemicals imported from elsewhere. Organic agriculture creates jobs not only on the farm but also in related activities outside the farm: the sector requires certification bodies to monitor compliance with the rules on organic production as well as specialist technicians to provide know-how and advice on conversion. Direct marketing and local processing of organic produce creates further jobs for rural economies afflicted with unemployment. Last but not least, organic farmers are more often involved in other gainful and beneficial local activities such as agro-tourism, handicrafts, renewable energy or contractual work (see figure 8).

Figure 8. Non-agricultural gainful activities of organic and conventional farms in the EU in 2000.



Source: [21]

Lower external costs: Organic farms do not incur the large hidden costs connected to intensive farming that show e.g. in the prices of drinking water and the costs of health care. In other words, organic farming has much lower negative externalities and generates much more positive externalities (public benefits) than conventional farming [152]. A study in the UK has estimated the annual external costs of UK agriculture at £208 per hectare (e.g. costs of pesticides in drinking water, bacterial outbreaks in food, loss of organic matter from soils, costs of air clean-up due to emissions from agriculture). The negative externalities of organic farming are no more than a third, around £60 - £70 per hectare [34].

Integrated farming

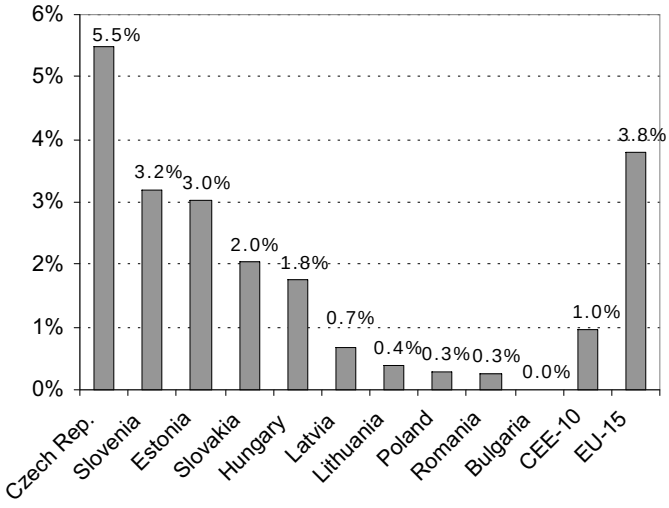
Integrated farming is the closest alternative for farmers who cannot comply with the tight organic standards. It is a concerted attempt to reduce the adverse impacts of farming by optimal integration of crops and farming techniques, without going to the extent of organic farming. Integrated farming in its various forms represents a step or several steps towards sustainability [33]. It is based on the concepts of Integrated Crop Management (ICM) and Integrated Pest Management (IPM) that are worked out in specific definitions and guidelines of various national and European organisations promoting integrated farming. Integrated farming significantly reduces the use of chemical inputs through sophisticated farm management, efficient modern cultivation methods and techniques of plant protection and weed control. As with other environmentally friendly farming systems, integrated farms tend to have lower economic costs, lower yields and similar profitability as conventional farms [153].

Integrated farming accounts for 2.7% of EU farmland, according to figures from late 1990s. It is most widespread in Austria and Denmark, with approximately 20% share of farmland, and in the UK with 10%, but is minimal in most other countries, partly due to differing national definitions [153].

CEE: ready for the organic boom?

Given the relatively low use of agro-chemical inputs and abundance of rural labour force, organic agriculture in CEE countries has a great potential. Conversion to organic farming is a lot easier for most farmers in the region than in the EU-15. However, without favourable national policies the development will be slow and the potential can be wasted. Organic farming is still less developed in the new member states than in the old ones: in 2002, the share of organic farmland in the EU-15 reached 3.8%, while in the new member states it was at 1.35% (0.95% with Romania and Bulgaria). Yet, it has been growing even faster in the new than in the old member states. Over the 10-year period 1993-2002, organic farmland has grown almost 7-fold in the EU-15, but almost 12-fold in the current new member states. The number of organic farms in these countries exceeded 6,500 in 2002 [4].

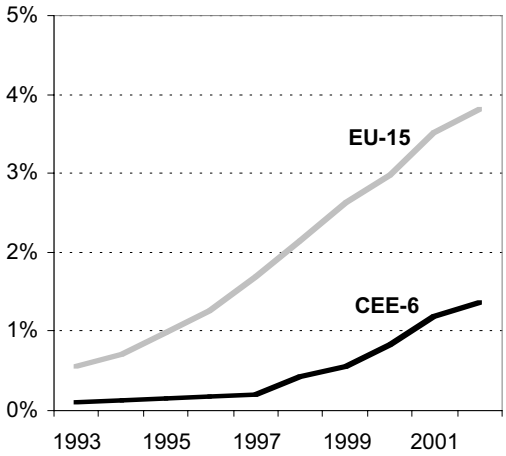
Figure 9. Share of organic farmland in CEE countries and EU-15 (2002).



Source of data: [4]

The Czech Republic with more than 5% share of organic farmland is the leader among the new member states and the 8th most organic country in the world – despite the fact that the rest of its agriculture is one of the most intensive among the new member states [154]. The country plans to use the Agri-Environmental Programme to increase the organic share to 8% by 2006. So far, almost 90% of the Czech organic farmland are extensively farmed meadows and pastures, where relatively little effort is required to fulfil the criteria for organic certification [155]. This demonstrates that conversion to organic management can be a useful strategy for the maintenance of extensive farming. At the same time, more effort is needed to develop organic farming also on arable land. Organic farmland in Slovenia and Estonia has also grown rapidly and reached a 3% share. In Slovakia, once the leader in the region, share of organic farmland has stagnated since 1998 at around 2%, despite an official target of 4% [10]. Poland, Lithuania and Latvia have been the laggards among the 8 CEE new member states, all having less than 1% share of organic farmland (see figures 9 and 10) [4].

Figure 10. Growth of the share of organic farmland in 8 CEE new member states and EU-15.



Source of data: [4]

All new member states established some sort of programme to encourage organic farming prior to the accession, although the degree of support varied significantly. In terms of payments per hectare, Slovenia had by far the most generous scheme, under its Agri-Environmental Programme (see box on p. 63). In Bulgaria and Romania, the institutional framework for supporting organic production is still poorly developed compared with the current new member states [10, 156].

Accession to the EU offers a chance to accelerate the growth of organic agriculture in the new member states. This depends on how each country uses the available opportunities, especially the Agri-Environmental Programmes in the CAP.

Conversion to organic farming has proved an efficient strategy to react to unstable periods of intensified foreign competition in the agrarian sector. Austria experienced a boom of organic farms after its accession to the EU, Britain during

the crisis caused by BSE and a strong pound after 1996 and the former Eastern Germany after the reunification [157]. Therefore, CEE countries should develop organic farming as one of the ways to stay competitive on the international market and to cope with difficulties connected to the EU accession.

Organic production also presents **export opportunities** for farmers and food businesses in the CEE countries. The rapidly increasing global market for organic food and drink reached 23 billion dollars in 2002 and is expected to continue soaring [154]. Consumer demand for organic food, fuelled by scandals of industrial farming, has been growing even more dramatically than supply in some European countries. While the agrarian sector copes with massive overproduction, organic supply does not suffice to satisfy the demand. The key countries dependent on imports are the UK, Sweden, Switzerland, France and Germany and other countries as well, for certain commodities [158]. The organic market in France and the UK grew annually by on average more than 40% in the last three years [154]. This trend brings an extraordinary opportunity for CEE countries, given their natural and social advantages. They can acquire a very favourable position on the EU market. By the beginning of 2004, only some of the accession countries, including the Czech Republic and Hungary, were on the third country list of EU regulation 2092/91, which enabled them to export their organic products without further controls into the EU.

Nevertheless, the main focus needs to be given to developing **domestic markets** with organic products, which are currently the main weakness in most CEE countries. The rural development measure supporting marketing and processing of agricultural products should therefore be specifically targeted to support organic production.

The organic farm of Iwona and Janusz Sliczni in Poland

Photo: Ewa Hajduk, Friends of the Earth Poland

In 1991, the Slicznis converted their 8.6 ha farm in Opolskie region to organic, a decision taken for idealistic rather than economic reasons. The first years were hard and the neighbours looked at them as if they were lunatics. At that time, there was no political support, no laws for organic production, and very little consumer awareness about organic food. But the situation of the Slicznis' farm was improving gradually with every year. After the big food scandals in the EU, Polish consumers learned to appreciate Polish food and organic farming became popular. In 2000-01, a law for organic production was adopted and subsidies for organic farms were introduced. The Slicznis are now well known organic farmers, looked at with admiration rather than doubts. Besides farming, they started a small mill where they process their own wheat, barley and oats into different types of flakes, flour, groats and bran. They are also active in promoting a sustainable lifestyle and organise educational programmes for children at their farm. Their latest idea is to connect the six organic farms, which have in the meantime appeared in their district, with a bicycle path in order to bring farmers and customers closer [161].

By 2002, there were some 2000 organic farmers in Poland cultivating 0.3% of all farmland - still the lowest share among the 8 CEE new member states [4]. Organic products are sold in more than 200 shops in Poland and the few attempts to introduce them to supermarkets have not been successful. The future of organic farming depends mainly on the development of the domestic market with organic food [162].

Organic and other types of environmentally friendly farming, in combination with agro-tourism and renewable energy business, offer the best chance for rural development. They can stop the gradual decline of jobs and rural life that might otherwise proceed rapidly after the accession. Environmentally friendly farming is not a salvation for rural areas and farmers in CEE countries but it can help them by creating new jobs and trade opportunities.

EU rules and support for organic production

The organic sector in the EU is governed by **regulations** 2092/91 (for plants) and 1804/99 (for livestock). The regulations lay down minimum rules for the production, processing, marketing, import, inspections and labelling of organic products. Each EU country is responsible for implementation and for its own inspection system. Countries have their own national regulations, which usually go beyond the minimum EU rules. Since 2000, there is an EU **logo** for organic products, though national logos are still more common.

The most important instruments for the support of organic farming within the CAP are **Agri-Environmental Programmes**, begun in 1992. AEPs include payments for organic farming, which are on average twice as high as the normal agri-environmental payment. Organic farms receive around 15% of all agri-environmental funds in the EU-15. In 2001, the average organic payment under AEPs in the EU-15 amounted to 186 €/ha with a wide spread between member states (from 45 €/ha in the UK to 445 €/ha in Greece). Integrated farming receives nearly as high payments from AEPs as organic farming in most member states [21].

Different member states and regions have also targeted various other rural development measures – LFAs, investment measures, processing and marketing measures and training measures – to support organic farming, processing and marketing [21].

On average, organic farms in the EU receive **20% more CAP payments** per hectare than comparable conventional farms, according to data from 2000. Due to their lower productivity, organic farms receive 18% fewer direct payments per hectare and 20% - 25% lower support from price support instruments under the first pillar. But they are more than compensated by the second pillar, as they receive more than 70% higher AEP and LFA payments per hectare [21].

After implementation of the **2003 CAP reform**, financial benefits for organic farming will undoubtedly increase. Modulation will transfer some more funds from the first pillar to the second pillar. Cross-compliance – easy to follow for organic farmers – should decrease the competitive advantages of destructive industrial farming. National envelopes allow countries to slice off up to 10% of direct payments and target them for environmentally friendly farming. Only the market reform of the milk sector might disadvantage organic dairy farmers [21].

In June 2004, the European Commission published the **European action plan for organic food and farming** [159]. The plan aims to facilitate the expansion of organic farming, e.g. by running EU-wide information campaigns, further harmonising of production standards, strengthening research and encouraging member states to make full use of relevant rural development measures.

Policy priorities for the new member states:

1) **Develop a strong action plan for organic food and farming with a target of 10% of organic farmland by 2010 and financial support to reach the target. Include the following measures related to organic production:**
2) **Set a lower VAT for organic products to appreciate external benefits of organic agriculture for the society.**
3) **Upgrade advisory services for organic farmers.**
4) **Allocate sufficient funds for well-designed Agri-Environmental Programmes, including measures supporting sustainable farming systems.**
5) **Use other rural development measures to support organic farming, processing and marketing, in particular to develop local organic markets directly connecting producers and consumers.**
6) **Ensure that the EU action plan for organic farming gets fully implemented and press for a more ambitious plan to follow up.**
7) **Support integrated farming as a broad alternative for farmers who cannot comply with the tight organic standards.**
8) **Target a portion of direct payments to support environmentally friendly farming systems – using either national top-ups or national envelopes (transfer of 10% of direct payments on the basis of article 69) for this purpose.**
9) **Strengthen the support for scientific research on sustainable farming practices.**

2 COMMON AGRICULTURAL POLICY (CAP)

2.1 CAP: history, reforms, budget and structure

2.1.1 History of CAP

Goal: productivity

The Common Agricultural Policy (CAP) was originally created to expand production and provide secure food supplies for Europe, at a time when memories of food shortages during and after the World War II were still fresh. The general objectives of CAP were set out in the **Rome Treaty of 1957** – the founding treaty of the European Economic Community – and the actual policy was shaped in a series of negotiations in the first half of the 1960s. The creation of CAP was underpinned by the establishment of a single market guaranteeing free trade with agricultural products between the then six member states. The construction of the CAP and elimination of agricultural tariffs between the member states reflected especially the interests of France, which secured financing of its large farming sector via Brussels and gained access to the German market [163].

CAP started as a system of **guaranteed prices**. The Council of Ministers for Agriculture fixed the prices for farm products every year in the so-called "marathon" negotiations. If the market price dropped under the guaranteed minimum level, intervention agencies had to buy production from farmers at the fixed price. The politically fixed prices were generally higher than prices on the world market. Therefore, the system also required **high tariffs** to prevent cheaper imports and **export subsidies** to enable the selling of expensive European products for a lower price on the world market.

Photo: Cedric Deton

Sowing the seeds...

Result: overproduction

The price support system stimulated massive production increases, benefiting especially large-scale farmers in the most fertile and productive areas. The objective to achieve food self-sufficiency was soon accomplished – and by the late 1970s over-accomplished, leading to the infamous mountains of beef and butter and lakes of milk and wine that could not be sold. Whereas the region produced only 80% of its food consumption needs in 1962, by the mid-90s it produced 120% [164]. The surplus production was dumped on external markets – with the help of export subsidies to pay for the difference between the European and world prices. What could not be exported was destroyed (especially fruit and vegetables) also with the help of subsidies.

As the negative impacts of intensive farming on the environment, food safety, and rural employment became more obvious, CAP faced a strong critique from the public.

At the same time, CAP came under increasing **international pressure**. As Europe became a huge food exporter, dumping subsidised food on the world market and thus driving world prices down, it ran into conflict with other countries. In 1986, the **Uruguay Round of GATT** began, committing countries for the first time to liberalisation of agricultural trade through significant cuts of tariffs and subsidies. It became clear that CAP in its old version could not survive. After protracted negotiations, the EU agreed on a major reform of CAP in 1992 and further reforms followed.

Photo: Cedric Deton

… and combining the harvest (France).

2.1.2 CAP Reforms: adjustment to trade liberalisation

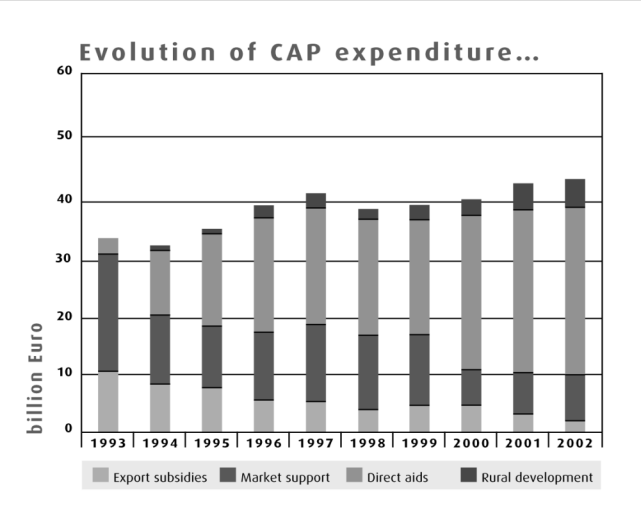
The CAP reforms of 1992, 1999 and 2003 have changed the method of farm support in the EU. The main trend of all the reforms has been to **cut the guaranteed prices and partially compensate farmers with direct payments,** paid to each farmer's bank account every year. In other words, the policy has shifted from supporting the product to directly supporting the producer.

The reforms helped bring the EU in line with the GATT/WTO rules on world agricultural trade. Dropping its internal prices closer to the world level enabled the EU to cut tariffs and reduce the export subsidies. The main objective of the reform process has been to keep European agriculture competitive on the increasingly liberalised world market. Public concerns about over-production, the environment, rural decline and food safety have played a secondary role.

To limit the overproduction, several **supply management** instruments were introduced, such as quotas, maximum guaranteed quantities and areas, and set-asides. While **quotas** can be good instruments, their application in practice has often been marked by problems and political abuse. The milk quotas, for example, introduced already in 1984, were not set at 100% of European consumption but at 120% - institutionalising over-production rather than curbing it [165]. Under **set-asides**, compulsory since 1992, farmers have been obliged to keep a portion of their arable land (normally 10%) out of production.

Replacement of price support with direct payments has been accompanied by progressive introduction of a growing number of incentive payments aimed at protection of the environment, diversification of rural activities and modernisation of the farming sector. Since the 1999 reform, these measures have been jointly called **rural development**, or the **second pillar of CAP.** However, rural development measures make up only a small portion of the CAP expenditure and often merely replaced similar national measures (see figure 11).

Figure 11. Change of CAP expenditure during the reform process between 1993 and 2002



Source: [166]

Since the 1992 CAP reform, price support instruments have been gradually replaced with direct payments for farmers. Rural development measures have been added but remain rather small.

Main elements of the 1992 and 1999 CAP reforms:

1992: McSharry reform

- reduction of guaranteed prices (cereals by 29%, beef by 15%, etc.)
- introduction of compensatory direct payments
- introduction of a compulsory set-aside and other supply management instruments
- introduction of Agri-Environmental Programmes and other accompanying measures

1999: Agenda 2000

- further price cuts (cereals by 15%, beef by 20%, etc.) compensated by more direct payments
- creation of the second pillar (rural development)

Photo: Theo Haslbeck

Harvesting wheat in Bavaria.

The 2003 reform

The latest CAP reform, adopted in June 2003, makes further price cuts (milk, rice, rye), but also brings substantial new changes. In sum, the reform breaks the link between direct payments and production, instead links direct payments to environmental and other obligations and shifts some money from the first pillar to the second pillar. In most of the new member states, CAP will be applied in a simplified manner in the first five years and some elements of the 2003 reform will temporarily not apply to them (see chapter 2.3.1).

Main elements of the 2003 reform [167, 168]

- **Decoupling** of direct payments. Direct payments, introduced in 1993, were paid to farmers per tonne of specific products or per head of cattle. The 2003 reform replaces the variety of crop-specific and production-related payments received by a farmer with a **single farm payment**. Farmers will continue to receive this payment no matter what they produce and how much they produce (except for fruit, vegetables and table potatoes with special regimes). Decoupling thus breaks the link between subsidies and production.

Photo: Tom Govaerts

Unloading maize harvest in Belgium.

- **Cross-compliance:** direct payments will instead be linked to compliance with environmental, food safety and animal welfare standards. The standards include 18 already existing EU directives and "good agricultural and environmental conditions" (GAEC). In order to qualify for direct payments, the farmer will for example have to pay some attention to the protection of soil against erosion or compaction, leave field margins for wild species and bird habitats, etc. If a farmer does not comply with the requirements, her or his direct payments will be reduced. The 18 directives in cross-compliance include five environmental directives, three animal welfare directives, four directives on food safety and animal health and six directives on registration of livestock and notification of animal diseases.
- **Modulation:** 5% of direct payments for bigger farms (with direct payments over 5000 EUR per year) will be cut and shifted to the second pillar.
- Introduction of **new rural development measures** supporting farmers who improve food quality or animal welfare. There is also a new measure for meeting EU standards that helps farmers upgrade their practices to comply with the EU legislation.
- **National envelopes** (voluntary): member states can withdraw up to 10% of decoupled direct payments into a national envelope and use the money to support specific types of farming important for the protection of the environment or for improving the quality and marketing of agricultural products.
- **Farm advisory system** (obligatory from 2007) will provide **farm audits** to help farmers ensure that their holding is in line with environmental, food safety and animal welfare standards. Participation will be voluntary but can be encouraged through the new rural development measure for meeting EU standards. The measure can co-finance the audit costs and the necessary investments into upgrading the farm practices.

The reform leaves a range of **options open to the member states** on how they implement the reform (between 2005 and 2007):

- **Full or partial decoupling**: member states can maintain some direct payments partly coupled to production: e.g. 25% of payments for arable crops, 100% of payments for suckler cows, etc. In total, it is estimated that more than two thirds of direct payments in the EU will be decoupled after the implementation of the reform [169].
- **Historic or area payments**: the single farm payment can be calculated as the average sum of direct payments received by a farmer in a reference period (2000-02). Alternatively, the single farm payment can be set as a flat payment per hectare for a whole region or country. The first option will further conserve the previous distribution of subsidies among farmers, while the second one will lead to a major redistribution.

For example, France will decouple payments as partially as possible and base the new payments on historic payments, while England will decouple fully and gradually switch to area payments. The new member states, which apply the simplified system of payments, do not have to make these choices. Their system will be approximately adequate to a system of fully decoupled area payments. For some time they will also be exempt from compulsory cross-compliance and modulation (see chapter 2.3.1).

One of the aims of the reform was to prepare CAP for the EU enlargement. There were fears that the CAP budget would skyrocket because it would be necessary to subsidise millions of new farmers. What was supposed to be just a mid-term review of the Agenda 2000 thus turned into a major reform. The Commission attempted to strike a compromise between net contributors to the CAP budget such as Germany, which wanted the expenditure to be reduced, and net recipients of the CAP funds such as France, which opposed any reduction in the subsidies [170]. As in the previous two reforms, the member states in the European Council severely weakened the initial proposals of the European Commission. Commissioner Franz Fischler initially proposed a 20% modulation, much stronger cross-compliance (with 38 directives), farm audits compulsory for bigger farms and a ceiling on direct payments for the biggest farms [171].

Further reforms

Several sectors were left out of the 2003 reform, to be reformed later in a similar manner. A follow-up reform of **Mediterranean products** - olives, hops, cotton and tobacco - was adopted in April 2004.

Next up for reform is **sugar.** The Commission published its proposal for a reform of the sugar regime in July 2004. The proposal envisages a similar scenario: a strong drop in the guaranteed price, decoupled payments for sugar beet producers to partially compensate (60%) their income losses, reduction of export subsidies (by 83%), and reduction of quotas (by 16%) [172]. The proposal is half-hearted at best. The quotas will be reduced only by 16%, while ending the sugar overproduction in Europe would require a drop by 33% to 40%, and export subsidies will still be partly maintained [173]. The price reduction will at the same time severely hurt many African and Caribbean countries, which have so far benefited from selling their production for high prices in the EU. The interim WTO panel ruling against the EU sugar policies in July 2004, in a case brought by Brazil, Thailand and Australia, will probably further shift the debate.

Photo: Theo Haslbeck

Harvesting sugar beet in Bavaria.

A **reform of the second pillar** is in preparation, too. The reform will change the rules for the rural development measures for the period 2007-13. The Commission published its proposal in July 2004 (see chapter 2.3.2) [91].

The European Parliament and the Council of Ministers will discuss the Commission proposals on sugar and rural development in the autumn 2004.

2.1.3 CAP budget and structure

CAP budget: not so huge as it seems

The EU currently spends approximately €50 billion (around 45% of its budget) per year on agriculture [174]. The widespread notion that farmer subsidies are absurdly huge is nevertheless false. That the EU spends almost half of its budget on agriculture is only because agricultural policy has been largely delegated to the EU level and has replaced national farm subsidies. Social policy, health, education as well as defence take much larger chunks of public money in the EU than agriculture, but they remain at the national level.

Agricultural spending is fixed for the period 2000-06. Between 2004 and 2006, crucial negotiations will take place that will set the so-called financial perspectives for the enlarged EU-27 for the next period 2007-13. So far, the European Commission has proposed to increase the agricultural expenditure by a mere 2% over this period, despite the enlargement from 15 to 27 member states. The relative share of agricultural expenditure in the EU budget would thus fall from 45% in 2006 to 35% in 2013 (down from more than 70% in the past) [175]. Ten years ago, 0.61% of the EU's GDP went on the CAP. Today, it stands at 0.43%, and in another ten years it will be down to around 0.33% - these are the truly relevant figures about CAP expenditure [175]. No other policy in the EU has witnessed such a sharp relative decline in spending.

Agriculture in the EU is financed mainly via Brussels, but some forms of additional state aid on top of the EU money are also allowed under strict rules. National governments in the EU-15 are spending around €14 billion of state aid for agriculture on top of the CAP expenditure every year.

CAP structure: two funds and two pillars

The EU finances agriculture through the European Agricultural Guarantee and Guidance Fund (EAGGF), which is split into two sections, Guarantee and Guidance, with different financial rules. CAP is at the same time split into two pillars: the first pillar with direct payments and price support and the second pillar with rural development measures. The whole first pillar and most of the second pillar are financed through the Guarantee section. The much smaller Guidance section finances some rural development measures in Objective 1 regions (areas with GDP per capita below 75% of the EU average) and the Leader+ programme throughout the whole EU. The Guidance section is one of the EU's Structural Funds. The Commission proposes to simplify the system as a part of the reform of the second pillar. From 2007 on, all rural development programmes should be regrouped into a new, single European Agricultural Fund for Rural Development (EAFRD).

The first pillar is divided into more than 20 common market organisations (CMOs), which regulate individual sectors such as cereals, pork or sugar. CMOs for new sectors have been added to CAP over time, so that it now covers about 90% of EU agricultural production (compared to about 50% in the beginning). Around three-quarters of the first pillar money is now distributed in the form of direct payments, while the rest goes for export subsidies, storage and other forms of price support intervention.

Unlike the first pillar, the second pillar is not organised along agricultural sectors, but contains a number of horizontal measures for farms and rural areas. Subsidies from the second pillar are targeted on concrete projects. Prior to the enlargement, the EU-15 was spending around €7.5 billion per year for rural development (€4.5 billion from the Guarantee and €3 billion from the Guidance sections) – i.e. around 15% of the EU's total agricultural expenditure.

Unlike the first pillar which is 100% funded by the EU, the second pillar is more decentralised and has to be co-financed to various degrees by member states. EU countries or regions draw up their own Rural Development Plans normally for seven-year periods, choosing from a broad menu of available measures, and submit them to the European Commission for approval. There is a wide variation in the extent and the way countries use the EU rural development funds. While Denmark, the Netherlands and Belgium – countries with the most intensive agriculture in the EU – spend only about 5% of the CAP funds on rural development, Austria and Finland spend more than 40% for this purpose. Austria and Finland use the second pillar largely for environmental purposes and maintaining of farming in less favoured areas; Portugal, Spain and Greece use it rather as a tool for restructuring and enhancing competitiveness of their farming sectors.

The second pillar is governed by the Rural Development Regulation 1257/99, adopted under the Agenda 2000 reform. A new Rural Development Regulation currently under negotiation will reform the rules for the period 2007-13 (see chapter 2.3.2) [91]. Countries are now executing their Rural Development Plans for the period 2000-06 (2004-06 in the new member states). In 2005, they will have to start drafting new RDPs for the period 2007-13, following the new regulation.

2.2 What is wrong with CAP?

Common Agricultural Policy has been rightfully criticised for many years. Despite recent partial reforms, the critique is still valid.

Impacts on the environment, animal welfare and food safety

Since its inception, CAP actively supported intensification of European agriculture, with all its negative impacts on soil, water, air, biodiversity, landscape, animal welfare and food safety, as described in other chapters of this publication. The more farmers produced the more subsidies they received (through guaranteed prices and later also direct payments). They were thus motivated to spray more agro-chemicals on fields to increase yields, plough up green to use every piece of land, cram large stocks of farm animals into a smallest possible space, feed them industrial feed mixtures to accelerate their growth, etc. Will the 2003 CAP reform change this?

Opinions still differ on whether decoupling brings environmental gains. After decoupling, farmers will still receive the same subsidies no matter how much they grow. In theory, decoupling should decrease the intensity of production. On the other hand, there are fears that decoupling will contribute to further abandonment of extensively farmed marginal areas. In fertile areas, more market orientation in CAP and more exposure to international competition due to trade liberalisation may lead farmers to still produce more intensively. In any case, the decoupling will be only partial.

Photo: Cedric Deton

Maximising yield. How will the CAP reform change this?

The idea of cross-compliance is right. It establishes a principle of quid pro quo, where taxpayers' money is entrusted to farmers who in return provide public goods such as protection of habitats and maintenance of landscape. The direct payment, paid to the farmer's bank account every year, would cease to be a blank cheque and become a reward for the farmer's service to the society.

If the principle was implemented correctly, cross-compliance would affect big intensive farmers especially and induce them to improve their practices [176]. However, the actual instrument was constructed in a way that could disproportionately affect smaller farmers who may not be able to pay for the costs of meeting the standards [177]. Six out of the 18 standards in cross-compliance require farmers to register and identify their farm animals and notify their diseases. While responding to the problems caused by intensive farming and long-distance transport of animals, these standards may inflict relatively higher costs on smaller and less intensive farms - rather than addressing the core of the problem.

At the same time, cross-compliance was reduced to a very weak instrument. It is largely based on 18 already existing EU legislation that should be respected anyway. Member states will have to check only at least 1% of farms every year. It should be reminded in this context that organic farmers are subject to incomparably stricter standards and controls. Whether cross-compliance brings any perceptible improvement in reality, depends on how it is implemented by each member state.

Impact on European farmers

CAP subsidies have not prevented a massive loss of agricultural jobs and rural depopulation. By supporting intensification, i.e. replacement of human labour with chemical inputs and mechanisation, CAP actually for a long time accelerated outflow of jobs from agriculture. Between 1975 and 1999, the agricultural sector in the EU-9 lost 49% of its workers – some 3.8 million people [6].

Reforms of CAP have decreased prices of agricultural products in the EU. However, prices of food for EU consumers have not declined. Agri-food businesses have cashed in profits at the expense of both farmers and consumers and have become the final indirect beneficiary of much of the CAP subsidies. Despite the "lavish" subsidies, small farmers especially in many EU countries have suffered income losses in recent years.

Environmentally friendly agriculture requires more human labour than intensive farming. A green shift in European agriculture would be the best way to stop the outflow of jobs from agriculture. At the same time, a better distribution of subsidies is necessary, e.g. by further modulation, i.e. transfer of a portion of direct payments from bigger farms to the second pillar of CAP.

Negative impacts on developing countries

The EU's (as well as US') agricultural and trade policies are inflicting severe damage on poor farmers and food industries in developing countries. The dumping of subsidised food drives them out of their local as well as international markets and depresses world prices for their products. EU export prices are at about two-thirds of the production costs of wheat, at around one-half in the case of skimmed-milk powder and only one-quarter in the case of sugar [178]. The US exports are similarly under-priced. At the same time, EU and the USA are pushing developing countries to open their markets to their subsidised products.

Photo: Samiullah Durrani

Preparing to sow wheat in Pakistan.

Over the last decade, EU food dumping has, for example, undermined the tomato and cattle sectors [179], the dairy sector [180], and the chicken sector [181] in West African countries. In Jamaica, it has ruined dairy farming [178], while in South Africa it has damaged the sugar sector [178], and the fruit and vegetable sectors [179] - all with the help of CAP subsidies, i.e. taxpayers' money. For example, the Jamaican dairy industry switched from buying locally produced fresh milk to buying subsidised European milk powder after trade liberalisation in the 1990s, with devastating consequences for local producers [178]. Similarly, imports of subsidised European tomato concentrate to Senegal, Mali, Burkina Faso and Ghana pushed local fresh tomato producers off the market [179].

A big part of the EU's export subsidies is received by food industry for the agricultural raw-materials content of processed products (e.g. sugar and milk in chocolate). For example, EU confectionary businesses conquered a portion of the South African market in the late 1990s with the help of CAP subsidies and forced local food companies to have massive layoffs [178].

Reforms of CAP have not stopped the food dumping. The reforms were mainly designed to bring the EU in line with the GATT/WTO rules on world agricultural trade. As a result of the price cuts, which brought internal EU prices down to the world level, export subsidies were cut from over €10 billion in 1992 to approximately €3-4 billion today. Export subsidies may soon be abolished completely. Yet direct payments, even the decoupled ones, may still result in artificially low prices of EU farm products and processed food. Unlike export subsidies or price support, decoupled direct payments are allowed by the WTO rules, which the EU helped to lay down. The EU can thus continue exporting food at prices below the production costs, even with little or no export subsidies [182, 183].

CEE countries have learnt their lessons about EU dumping after they liberalised imports in the 1990s. In 1998, for example, Poland, the Czech Republic and Hungary were flooded by European pig meat after the European Commission increased the export subsidies to €400 per tonne in order to get rid of surpluses. Only after strong protests of CEE governments and farmers did the Commission again reduce the subsidies. This could hardly be called consistent with the official EU aim to prepare CEE countries for accession (e.g. through the SAPARD programme) [179].

Once in the EU, the new member states should not simply join the dumping business, but press on the EU to stop it. A shift toward more environmentally friendly agriculture could be the best way to prevent overproduction, which is at the root of dumping. At the same time, developing countries must be allowed to protect themselves against the heavily subsidised competition from the rich countries. Developing countries do not have the capacity to subsidise their agriculture as much as the rich countries. If the rich countries want to keep their subsidies, the only way to ensure a fair playing field in world agricultural trade is to stop pushing the developing countries to further reduce their tariffs. On the contrary, developing countries should be allowed to increase their tariffs at least to commensurate levels with subsidies of rich countries.

The need for a new reform

In sum, the CAP reforms did not bring the necessary shift towards sustainability, food quality and local diversity. A new, comprehensive reform of CAP responding to the concerns of citizens rather than to export interests is necessary [184].

It should be emphasised that the frequently demanded elimination of agricultural subsidies is not a solution to the social and environmental problems of European agriculture. Pigs, poultry and fruit and vegetable sectors are the most market-oriented regimes that receive the lowest subsidies from CAP, yet they are some of the most intensive and environmentally damaging agricultural sectors [185]. In reality, the calls for a reduction of the CAP budget may only lead to re-nationalisation of agricultural subsidies and less financial solidarity between member states, rather than to a real elimination of subsidies.

Farmers should be supported for providing society with sufficiency of healthy food and public goods such as maintenance of rural communities, local diversity, cultural heritage, nature protection and diverse landscape. The problem is that CAP also continues to reward intensive agriculture, which results in "public bads": overproduction of hazardous food, monotonously ploughed up landscape, environmental degradation, disappearance of wildlife, suffering of animals in factory farms, loss of rural jobs and harm to farmers in developing countries. All this comes at the cost of billions of euros to taxpayers.

Photo: Theo Haslbeck

Towards sustainable agriculture?

The essence of the necessary reform is to stop using the public money to reward public bads and start rewarding public goods properly. Such a reform would ensure that environmentally friendly farming becomes more profitable and competitive than intensive, industrial farming.

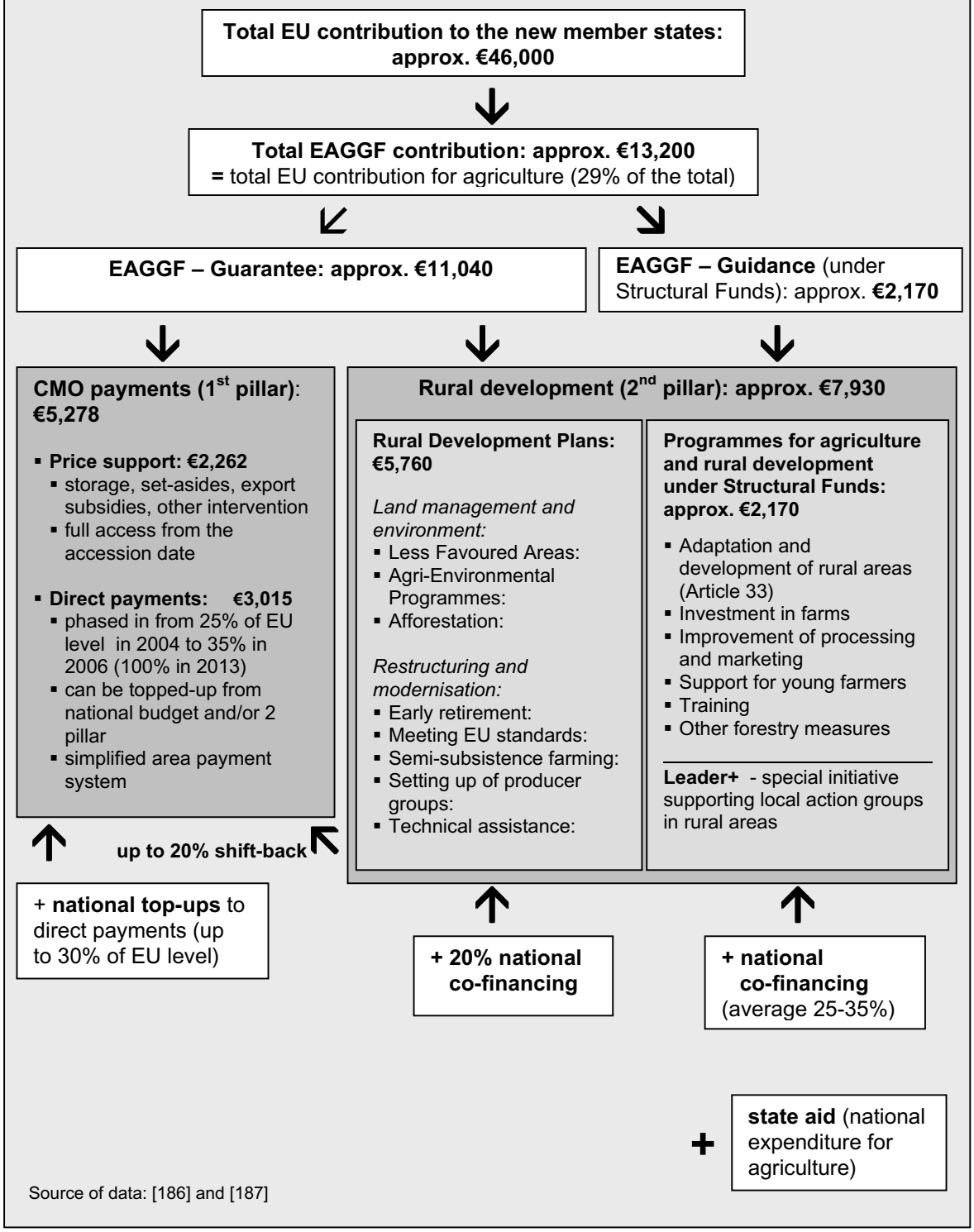
Policy priorities for the new member states:

1) **Press for an improvement and strengthening of cross-compliance so that it goes beyond the existing legislation and brings real environmental, food safety and animal welfare benefits**
2) **Press for more modulation: shift of at least 20% of funds from the first to the second pillar.**
3) **Press for elimination of export subsidies and a stop to EU food dumping.**
4) **During the discussions on the sugar reform in the European Parliament and the Council of Ministers: demand a reduction of sugar production quotas by at least 33% and a complete removal of export subsidies for sugar.**
5) **Press for an overhaul of EU trade policy in order to allow developing countries to protect themselves against subsidised competition from rich countries.**

2.3 CAP in the new member states: how much money and for what?

How is CAP being extended to the new member states? What subsidies will farmers receive there? The political and financial framework of the enlargement was decided at the Copenhagen summit in December 2002 – i.e. before the 2003 CAP reform. The total agriculture budget available from the EU funds to the 10 new member states for the first three years has the following structure (see figure 12):

Figure 12. CAP budget for the 10 new member states as planned for the three-year period 2004-06 (in € million).



Source of data: [186] and [187]

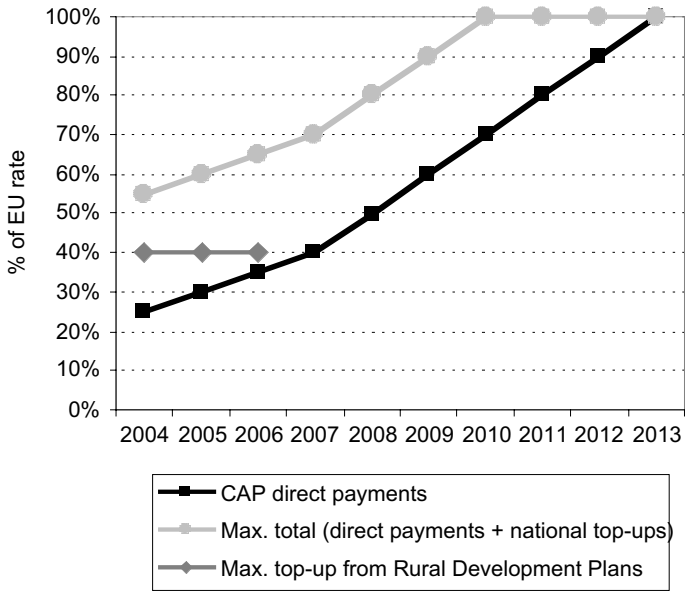
2.3.1 First pillar: less money for the newcomers

Based on the Copenhagen deal and adjustments after the 2003 CAP reform, the components of the first pillar - direct payments, price support instruments and supply management instruments – will be introduced to the new member states in a complicated way [188]. Romania and Bulgaria are supposed to enter in 2007 under the same conditions as the current 10 new member states – their financing has already been proposed for the period 2007-09 [189].

Direct payments: Negotiations about the direct payments, the main subsidies in CAP, have raised a lot of controversy. The 10 new member states will receive only 25% of the EU level of direct payments at the beginning. Application of direct payments in the new countries will also have several other specifics:

- Phasing in: Direct payments will be introduced gradually over a 10-year period. In the beginning, they will be increased by three steps of 5% to reach 40% of the EU level in 2007 and then by steps of 10% to reach the full 100% in 2013.
- Single Area Payment System (SAPS): The new member states can either apply the standard system of direct payments as in the EU-15 or use a simplified, single area payment system in the first five years. All the new member states except Slovenia and Malta have decided for SAPS, under which a flat amount of money will be paid per hectare of farmland in the whole country. Arable land, grasslands, orchards, hop gardens and vineyards are eligible for this flat payment. The Commission allowed the countries applying SAPS to set the minimum size of a parcel eligible for payments between 0.3 and1 ha. All countries except for Cyprus decided to set it at the level of 1 hectare (with the exception for fruit orchards) and thus exclude smallest plots from the system. The administratively simpler and fully decoupled system will allow countries to safely use up all the available EU funds for direct payments and then to easily switch to the reformed EU system of single farm payments in 2009. The two systems differ administratively but not in principle.
- **Top-ups:** The new member states have won the possibility to add up to 30% more direct payments on top of the EU ones. The overall level of direct payments can thus reach 55% of the EU level in 2004, 60% in 2005, etc. The top-ups can be used to support specific agricultural sectors. The top-ups can be funded from **national budgets** and/or, in the first three years, by shifting **up to 20% of rural development funds** to direct payments – up to 40% of the EU level of direct payments (see figure 13). Alternatively, a country can top-up to the level of support that applied in a given sector prior to the accession plus a certain percentage. In no case, however, should the total direct support exceed 100% of the EU level [188].

Figure 13. Phasing-in of CAP into the new member states: direct payments and national top-ups



Source of data: [190]

- **No modulation:** Until their direct payments reach the full level in 2013, all the new member states will be exempt from modulation, i.e. the obligation to shift 5% of direct payments from larger farms to the second pillar. On the contrary, as mentioned, they will be able to **shift up to 20% of the second pillar money back to the first pillar** in the first three years. Most of the countries have indeed chosen to implement this 'reverse modulation' that goes counter to the direction of the CAP reforms.

- **Cross-compliance only voluntary:** Countries which apply SAPS will also be exempt from the other element of the 2003 CAP reform: cross-compliance, i.e. conditionality of direct payments on the respect of 18 environmental, food safety and animal welfare directives plus further conditions. The 18 directives are in force but their respect will not be enforced through this mechanism. The countries will probably be obliged to implement cross-compliance from 2009, as they switch to the normal EU system of direct payments. However, they may voluntarily apply it already earlier.

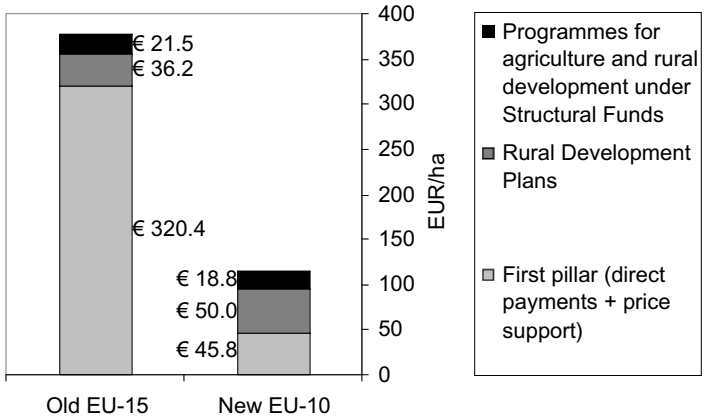
Price support: Farmers in the new member states will have full and immediate access to the first pillar price support mechanisms such as export subsidies and intervention prices. The minimum guaranteed prices will bring significant economic benefits to farmers. However, their profit from these measures will be logically dependent on their production volumes. Due to lower productivity, an average farmer in a new member state will benefit from price support to a lesser extent than an average farmer in the EU-15.

Quotas and set-asides: Farmers in those countries that apply SAPS will be exempt from the obligation to set aside a portion of farmland – but set-asides will be a voluntary option for farmers. Other supply management instruments include maximum base areas (e.g. for cereals), limits to livestock numbers and milk quotas for which member states can receive first pillar support. These production limits were, besides the direct payments, subject to the fiercest disputes during the accession negotiations. Practically all are lower than requested by the accession countries. They were based on the output in the 1990s when production in CEE strongly decreased. Cereal base areas, livestock limits and milk quotas will thus be major limiting factors to future production increases in the new member states. For example, milk quotas for Poland were set almost 20% below the current production levels [22].

Why will farmers in the new member states get less money?

In comparison with farmers in the EU-15, farmers in the new member states will get much less CAP money from the **first pillar** per hectare of farmland in the first three years (see figure 14). The real trick with the direct payments is not in their slow, progressive introduction but in the method of their calculation. If counted per hectare of farmland, even the "100% EU level" to be reached in 2013 will actually amount only to approximately 60% of the average direct payments in the old member states [191]. Despite the decoupling of farm subsidies from production under the latest CAP reform, the payments for the newcomers were still calculated on the basis of recent production volumes, and not farmland area or farm employment. The farm yields in CEE countries are significantly lower than in the West, hence so too are the payments. There are also huge differences between different newcomers: for example, Slovenia will receive seven times more money per hectare from the first pillar than Latvia [186].

Figure 14. CAP subsidies in old and new member states per hectare of farmland in 2004-06 (annual average without national top-ups and co-financing).



Source of data: [191]

In contrast to the first pillar, the new member states will get slightly more money per hectare from the **second pillar** than the old ones. Yet, if national co-financing is counted, which is much higher in the old member states, total rural development spending per hectare will again be higher in the old than the new member states. While the new member states add 1 euro from their budget to 4 euros received from the EU for rural development (i.e. 20% national co-financing), the Netherlands adds about 3 euros to each euro from the EU. Furthermore, public expenditure is complemented by private funding for rural development.

Why will the new member states get lower direct payments, while the previous accession countries to the EU such as Austria or Sweden received 100% right from the beginning? The obvious reason for unequal subsidies is that most **EU member states are reluctant to spend more money** on the enlarging EU. Yet they want to keep their own share of income from CAP at the same time. If

calculation of direct payments was based on a different set of criteria such as farmland and workforce size (as is the case with the second pillar) rather than production volumes, the costs of CAP would rise enormously – or the share allocated to countries such as France and Germany would have to be radically reduced.

The official reason of the European Commission for the unequal deal was that immediate introduction of full subsidies would "ensure viability" (sic!) of the numerous semi-subsistence farmers and thus prevent concentration of the farming sector. In the first three years after accession, the direct payment will rise only by 5% steps in order "to allow intensive restructuring effort" [16, 192].

However, the fact that the EU allowed the new member states to top-up the direct payments by 30% - but not from the EU budget - suggests that the financial reason was the decisive one. Ultimately, the unequal deal is a consequence of the EU's failure to carry out a comprehensive transformation of its agricultural policy prior to the enlargement.

Even so, farmers in the new member states will receive higher subsidies from the EU than they used to get so far from their governments. Farmers are in a way lucky that they will get at least a part of the "European" subsidies, while teachers or doctors will have to stick with their low wages. This is only because the agricultural policy has been delegated to the EU level, while education and health policies remain national. On the other hand, farmers will also become subject to sharper competition with their fully subsidised EU counterparts and agri-businesses on a completely open market.

Environmental impacts of the first pillar in the new member states

Implementation of CAP subsidies will bring environmental risks and opportunities as described in other chapters of this publication. In general, the question is what farmers will do with the newly available **first pillar** money. The danger is that many of them will buy more chemical pesticides and fertilisers and intensify their production, with negative impacts on soil, water, air and biodiversity. The fact that the direct payments are decoupled from production does not prevent this from happening. Moreover, price support instruments are all coupled. On the other hand, the opportunity is that farmers will rather invest e.g. in more efficient spraying equipment or improve management of waste at their farms.

The **lower amounts of direct payments** are hardly a blessing because farmers will be under greater pressure to intensify in order to survive competition on the single market. More small farmers will go out of business and the concentration is likely to have negative impacts on landscape and biodiversity (e.g. ploughing up of field boundaries). The price of land is expected to rise and a considerable share of the subsidies will indirectly end up outside the agricultural sector (landowners, agri-business).

Compulsory **environmental and animal welfare conditions** for the receipt of direct payments and national top-ups should be introduced as soon as possible in the new member states, rather than waiting for cross-compliance till 2008-9. Without well-designed conditions, taxpayers' money will contribute to environmental damage. The conditions can be based on good farming practice or on cross-compliance (adjusted to the situation of CEE countries to prevent the greatest risks). Such conditions would stimulate farmers to invest money into efficient technologies and environmental farm management rather than into old-style intensification.

Unlike the basic direct payments under SAPS, the national **top-ups** can be used to support selected agricultural sectors. If using the top-ups, governments should target them to environmentally friendly farming sectors, such as extensive or organic farming. They should also avoid giving too high top-ups for arable crops that could lead to ploughing up of grasslands.

Low quotas and production limits can have both positive and negative consequences for the environment, depending on the way they are distributed in each country. The concentration of livestock production into a few intensive facilities should be avoided. Limits on livestock numbers could otherwise undermine efforts to revert the abandonment of species-rich grasslands that are dependent on continued extensive grazing by cattle, sheep or goats.

Policy priorities for the new member states with regard to the first pillar:

1) **Subject direct payments as well as national top-ups to compliance with environmental and animal welfare conditions as soon as possible in order to ensure the subsidies do not contribute to environmental damage.**
2) **If using top-ups to direct payments, target them to environmentally friendly farming sectors, such as extensive or organic farming.**
3) **Ensure fair distribution of production limits (quotas) in order to maintain extensive livestock farming.**

2.3.2 Second pillar: rural development in the new member states

Rural development policy in the new member states in 2004-2006 is administratively split into **two separate instruments** funded by the Guarantee and Guidance sections of the EAGGF (see figure 12 above). This is because the GDP per capita of the whole territory of the new member states (except for Prague and Bratislava regions) is below 75% of the EU average and thus falls under Objective 1. (In richer areas, all rural development measures are financed by the Guarantee section. Only the LEADER+ programme is financed by the Guidance section throughout the whole EU.) Therefore each new member state has prepared and is going to use the following two instruments:

- **Rural Development Plan (RDP):** RDPs are co-financed up to 80% by the EU (Guarantee section of EAGGF) and up to 20% by the member states. Between 2004 and 2006, the total of €5.8 billion will be available from the EU for RDPs in the new member states [193]. The funds available to each country were set by the European Commission on the basis of objective criteria - notably the size of farmland and workforce (whereas allocations in the EU-15 are based on historical criteria – use of similar funding in previous periods.) Countries can choose from 9 main measures available, including an additional measure for semi-subsistence farmers introduced specifically for the new member states. These countries are also allowed to shift up to 20% of RDP funds back to the first pillar.
- **A programme for agriculture and rural development under Structural Funds**[2] (Guidance section of EAGGF). These programmes are usually co-financed up to 65% - 75% by the EU. Each country decides what proportion of Structural Funds it allocates for agriculture and rural development from among other priorities. On average it is about 10% in the new member states, giving an overall figure of about €2.2 billion of EU funds over the period 2004-2006 [187]. Countries can use 6 main measures within these programmes plus the special initiative LEADER+ (see figure 12 above).

The SAPARD experience

The currently starting RDPs and programmes for agriculture and rural development under Structural Funds have a predecessor in SAPARD (Special Accession Programme for Agriculture and Rural Development). SAPARD has been one of the EU's three instruments aimed at preparing the CEE countries for accession, alongside PHARE for institution building and investment support and ISPA for infrastructure projects in the fields of transport and the environment. SAPARD ran from 2000 till 2003 in CEE-8 countries and will go on till 2006 in Bulgaria and Romania.

Under SAPARD, countries had to design and co-finance their own national Rural Development Plans, choosing from the similar menu of measures as now in the two new rural development instruments. SAPARD has been mainly used to increase the competitiveness of big farms and processing industry. The three main priorities chosen by countries under SAPARD have been: investment in farms, processing and marketing, and rural infrastructures. Together, these three measures take 70% of planned financial allocations, compared with a **mere 2% planned for agri-environmental measures** that support environmentally friendly farming methods [105, 194]. The European Commission wanted the agri-environmental measures to be limited only to a few pilot areas. However, as these measures were given such a low priority by both the European Commission and the national governments, their approval and implementation was delayed and they still remain largely only on paper. Therefore, they failed to fulfil their stated objective: to prepare the authorities and farmers for bigger agri-environmental programmes after accession [10, 194].

Under SAPARD, approximately €360 million per year was available for the CEE-8 countries until they joined the EU (€600 million per year, if Bulgaria and Romania are included) [195]. Due to long delays and big administrative problems, none of the CEE-8 countries has used all the funds yet [196]. However the unspent SAPARD funds can be drawn on till the end of 2006 [197].

[2] In most new member states, this programme is called Operational Programme for Agriculture and Rural Development 2004-2006 and is one of the operational programmes under the National Development Plan financed by the Structural Funds. Smaller countries (such as Latvia, Estonia and Slovenia) have a Single Programming Document 2004-2006, of which agriculture and rural development is only one of the chapters.

In 2004-2006, around €8 billion will be available for rural development in CEE-8 countries under the two new instruments (RDPs and programmes under Structural Funds). This is more than **7 times more EU funds** per year than was available under SAPARD – on top of the still unused SAPARD funds. Implementation of the new programmes is already also delayed. Some CEE countries seem to have chosen to shift money from the second to the first pillar primarily in order to make sure money is used up and does not get lost. The European Commission plans to actually spend only about 70% of its financial commitments for RDPs in the new member states in the period 2004-06 [186]. The rest of the money will be spent later or remain unused. Moreover, countries should start in 2005 to already draw up new Rural Development Plans for the period 2007-13.

Photo: Daniel Lesinsky, Friends of the Earth Slovakia

Photo: Martin Rosta

Farm machinery in CEE countries is often obsolete. In Poland, for example, there are some 1.2 million tractors with an average age of 20 years. The average EU-15 figure is ten years. Sales of new tractors have recently soared, mainly as a result of the SAPARD funds invested into modernisation of Polish agriculture [200].

Comparison of Rural Development Plans in the new member states, 2004-06

Priorities chosen under the new rural development instruments seem more balanced than under SAPARD, but they are still disappointing. Only about **13%** of all rural development funds (i.e. under both the new instruments) are planned **for spending on Agri-Environmental Programmes** (compared to 27% in the EU-15).

Table 5 shows preliminary financial allocations for individual measures within the RDPs only (without the programmes for agriculture and rural development under Structural Funds).

Table 5. Structure of Rural Development Plans in the 8 CEE new member states for 2004 – 2006.

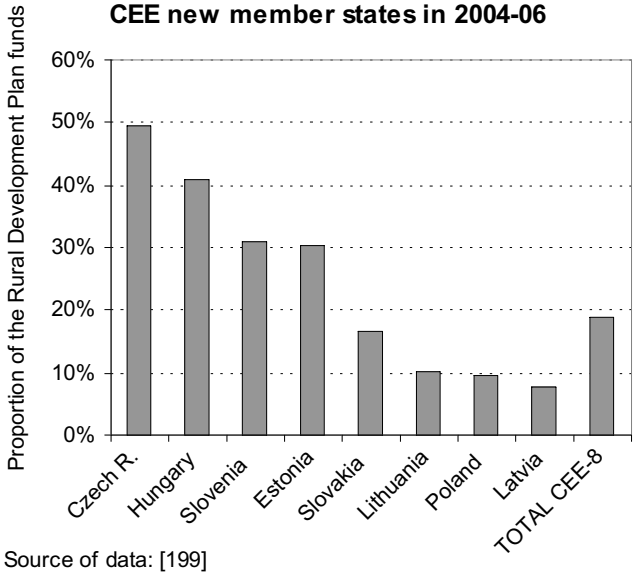
	Estonia	Latvia	Lithuania	Poland	Hungary	Czech	Slovakia	Slovenia	TOTAL (CEE 7)
Shift-back to the 1st pillar	14%	9%	20%	20%	0%	0%	20%	11%	15%
Less Favoured Areas	18%	54%	24%	27%	11%	45%	50%	40%	30%
Agri-Environmental Prog.	30%	8%	10%	10%	41%	49%	16%	31%	18%
Afforestation of farmland	6%	0%	4%	3%	11%	3%	1%	0%	4%
Early retirement of farmers	0%	2%	23%	18%	3%	1%	0%	4%	12%
Meeting EU standards	22%	18%	13%	7%	20%	0%	5%	12%	9%
Semi-subsistence farming	7%	8%	5%	10%	5%	0%	2%	0%	7%
Setting up producer groups	0%	1%	0%	1%	3%	1%	0%	0%	1%
Technical assistance	2%	1%	1%	1%	5%	1%	3%	2%	2%

Source of data: [199][3]

[3] Note: The data are compiled from the Rural Development Plans of the new member states, as of July 2004. RDPs, financed by the Guarantee section of EAGGF include 9 main measures. Besides them, each new member state is also starting a parallel programme for agriculture and rural development with six further measures. These programmes, not included in the table, are financed by the Guidance section of EAGGF under the Structural Funds (see figure 12). The Slovak RDP is an exception, as it will include financing of the six further measures in the Bratislava region, which does not fall into Objective 1. Funds for these measures in the Slovak RDP are not included in the above comparisons with other countries.

Approximately only 18% of all RDP funds in the region are foreseen for agri-environment. There will be, however, big differences between the priorities chosen in various countries. The Czech Republic and Hungary will not shift any money back to the first pillar and seem willing to spend between a third and a half of RDP funds on Agri-Environmental Programmes. On the other end of the spectrum, Poland and Lithuania will shift all possible money (20%) back to the first pillar and use most of the remainder for measures aimed at "restructuring and modernising" of their farming sector. They plan to spend at most 10% of RDP funds on Agri-Environmental Programmes.

Figure 15. Allocations for Agri-Environmental Programmes in the the 8 CEE new member states in 2004-06



Source of data: [199]

However, it is important to underline that rural development is not only about financial quantity but also quality. How well are individual measures designed, implemented, monitored and evaluated? How much civic participation is allowed in these processes? How well are individual measures integrated with one another? How are the available measures presented to farmers? Success of rural development funds in the new member states will mainly depend on answers to these questions.

One of the major concerns about the implementation of RDPs in the new member states is an **inadequate advisory infrastructure,** combined with inadequate funding support and low levels of environmental education [198]. Without well-prepared advisors and trainings for farmers, rural development measures and Agri-Environmental Programmes in particular will not achieve their goals and the funds are less likely to be used up.

Photo: Ekotrend

Working on the organic farm Ekotrend on the Slovak side of the White Carpathians.

Photo: Stanislaw Ciok, EPA

Hay harvest in the Pieniny Mountains in southern Poland.

Agri-Environmental Programmes can support organic farming as well as extensive mowing of meadows.

2.3.3 The rural development menu

Some of the main rural development measures are described below, grouped according to the three "axes" as defined by the European Commission: environment and land management, competitiveness, and diversification of rural economies [201].

Environment and land management

All three measures within this category – Agri-Environmental Programmes, Less Favoured Areas and Afforestation - are part of the Rural Development Plans.

Agri-Environmental Programmes (AEPs)

AEPs compensate farmers who choose to manage their land in an environmentally friendly manner, e.g. by sensitive mowing of grasslands, by protecting wildlife habitats, by improving animal welfare or by farming organically. Under AEPs, farmers are being paid as land managers providing environmental goods and services to the rest of the society [202]. As a baseline, all farmers under various specific AEP measures have to comply with the code of **Good Farming Practice.** In order to receive agri-environmental payments, a farmer must enter into a contract for at least five years. AEP payments are set by member states to cover the costs and income foregone resulting from the choice of sensitive farming practices. As an extra motivation, member states can add an incentive payment (up to 20%).

AEPs are the only **compulsory** rural development measure, which therefore all member states must include into their RDPs. There are nevertheless big differences between how much EU-15 member states spend on AEPs, just as there are between the new member states. While Spain and Greece spend less than 10% of all rural development funds for agri-environment, in Austria, Sweden and Ireland it is around 50% [203]. AEPs cover around 27% of farmland in the EU-15, ranging from less than 10% in Greece, Spain and The Netherlands to more than 75% in Finland, Austria and Sweden [204].

AEPs are the most important CAP instrument for the support of organic agriculture. AEPs include **payments for organic farming**, which are on average twice as high as the other agri-environment premia. Organic farms receive around 15% of all agri-environmental funds in the EU-15 [10, 194].

Agri-Environmental Programmes are clearly the most environmentally benign instrument within the CAP. According to the European Commission, the available evidence on the AEPs, since their introduction in 1992, shows that they lead to reductions in the use of chemical inputs, conservation of valuable farmland habitats and have positive impacts on biodiversity, landscape, water, soil resources and to a lesser extent air quality [52, 94]. AEPs can also create jobs: farmers who have signed agri-environmental contracts often require additional labour [20].

However, no policy is perfect or immune to misuse. Some AEP schemes in some member states have been used to simply receive more money rather than for environmental benefits [205]. This underlines the necessity of proper monitoring and evaluation, as well as participation of a broad range of stakeholders in the whole process. **Monitoring and evaluation** are crucial for continuous improvement of the programmes. **Involvement of stakeholders** is practically very useful for ensuring effective programme design and implementation, resolving conflicts between different interests, and the further development of the programmes. According to one comparison, Estonia stands out among the new member states with its proactive approach to developing a proper monitoring and evaluation system, with a good methodology and a high level of expert knowledge [206].

The key factors to ensure that a large number of farmers will decide to take part in the AEPs are: sufficient funding, proper design, broad scope of measures, flexibility to local conditions and a good advisory system for farmers [206, 207, 208]. It is not enough to apply AEPs on a few environmental "hotspots", while leaving the majority of farmland without any environmental standards.

Except for AEPs, all other rural development measures are optional for the member states and are only indirectly related to the environment. They can but also do not have to benefit the environment.

Agri-Environmental Programmes (AEPs) in Poland, Slovenia and Austria

The promising story of the Slovenian AEP

Slovenia started its own nationally financed Agri-Environmental Programme in 2001. It did not wait for SAPARD, which offered only little funding for agri-environmental measures and has been too slow in approval and implementation. There was a group of committed people at the agriculture ministry, who got inspired in the neighbouring Austria and Italy. The government was willing to support the AEP.

In 2003, the Slovenian AEP contained 14 specific schemes and covered approximately 12,000 farms and 110,000 hectares of farmland. Thanks to the EU accession, the AEP will be broadened to 24 schemes and expanded to cover 40,000 farms and 350,000 hectares, i.e. around 70% of farmland.

During the accession negotiations, the government secured a very well funded Rural Development Plan – much bigger than the first pillar and with almost four times more money per hectare than the average of the new member states. The government plans to spend 31% of its Rural Development Plan on the AEP.

The programme has already brought results: since 2001, the previous decline of mountain pastures in Slovenia has stopped. Furthermore, the number of grape orchards with integrated management and minimised use of chemicals has rapidly increased [10, 209, 210].

The sad story of AEPs in Poland

Agri-environmental schemes were, for the first time, introduced in Poland by a project of Polish and Dutch non-governmental organisations in the mid-1990s. The group developed and for several years carried out agri-environmental schemes in the Biebrza and Narew river valleys with very high nature value – the so-called Green Lungs of Poland.

Under the EU pre-accession programme PHARE, agri-environmental schemes were implemented in two pilot areas for one year and without further continuation. As for SAPARD, the Polish Minister of Agriculture decided to delete the AEP out of it as soon as it started. Polish NGOs working for rural areas unified their efforts and in December 2002, after a series of letters and petitions, fought out a return of the AEP into SAPARD. However, in December 2003, it was deleted again because it was already too late to start with it.

Many hopes were raised by an early draft of the post-accession Rural Development Plan, which contained a good basis for the AEP. In its later versions, however, the scope of the agri-environmental measures was severely reduced. Poland, by far the largest of the new member states, is planning to spend only 10% of the RDP funds on the AEP in 2004 – 2006 [211]. Instead, 20% of the RDP – i.e. all the money allowed - will be used to top up the direct payments. It is not surprising in this context that Poland has the lowest proportion of organic farmland among the new member states: only 0.3% [4].

The AEP in Austria - a positive example from the EU-15

When Austria acceded to the EU in 1995, its agriculture was characterised by a relatively low intensity of production and use of agro-chemicals. During the accession negotiations, Austria secured high funds from the second pillar of CAP rather than the first pillar, partly to offset the impacts of increased competition in the EU. Within one year after the accession, Austria covered most of its farmland with a strong Agri-Environmental Programme and the share of organic farmland jumped from 6% to 10%. Without the strong AEP, the increased competition would have forced many farmers to intensify or abandon their production, with negative consequences for the environment and rural areas. If both national and EU funding is counted, Austria invests 66% of all agricultural funds for rural development and only the rest for the first pillar. The AEP takes 59% of the rural development funds. Therefore, almost 40% of all public support for agriculture in Austria goes for agri-environment!

The AEP now covers approximately 90% of farmers as well as farmland area. The programme contains 31 different measures for various types of land and production. It combines measures for specific environmental requirements in small areas with broad measures supporting a lower intensity of production or organic farming. The programme is thus implemented all over the country, not only in environmentally sensitive areas. Part of the success is in a flexible and participative approach. Measures can be adapted to local conditions and farmers design plans for their farms together with agri-environmental advisors.

Furthermore, the Austrian AEP has an advisory board, which also includes representatives of environmental organisations. The advisory board takes part in the evaluation of the programme and contributes to its continuous improvement [212, 213, 214].

Less Favoured Areas (LFAs)

The second most relevant rural development measure from an environmental point of view are the payments for Less Favoured Areas. Besides the AEPs, LFAs are the only measure, for which participating farmers have to comply with the code of **Good Farming Practice.** LFA subsidies are paid per hectare to farmers who enter into contracts of at least five years.

Farming in hilly areas or regions with climatic handicaps involves higher production costs and produces lower yields. LFA payments compensate farmers in such areas in order to enhance their competitiveness vis-a-vis farmers in intensive areas with fertile soil and better climate. The aim is to ensure the continuation of farming and rural communities in such disadvantaged regions. Extensively managed species-rich farmlands, as well as organic farms, tend to be located in the areas defined as LFAs. Hence, a high share of the LFA payments ends up being paid to these farms [21]. LFA payments therefore play a potentially positive role for supporting such environmentally friendly farming systems, depending on the precise design, eligibility criteria and implementation in each country [22].

More than half of the total farmland area in the EU-15 is defined as LFAs and the average proportion in the new member states may be similar. However, the new member states will use the LFA payments to a larger extent than the EU-15. The old member states spend on average 12% of rural development funds on LFAs, while it is going to be around 22% (out of the two new instruments) in the new ones in 2004-06. LFAs will be most used in Latvia, Slovakia and the Czech Republic and least used in Hungary [199].

The important **Article 16** of the Rural Development Regulation enables member states to provide special LFA payments to farmers in nature protection zones within the **Natura 2000** network. The payments compensate farmers for environmental restrictions on farming practices in these zones. Article 16 can thus facilitate implementation of Natura 2000 in practice [90]. Regrettably, not many of the new member states seem to be planning to use the article 16 [198].

What is Good Farming Practice?

Codes of Good Farming Practice (GFP) are sets of environmental, food safety and animal welfare standards for farming defined by each member state or region. GFP consists of mandatory legislation as well as standards and recommendations going beyond the legal requirements. Codes of GFP must include “verifiable” standards that can be checked without excessive bureaucracy and costs: e.g. maintaining a minimum field margin width, avoidance of overgrazing, maintaining buffer strips with appropriate vegetation, having adequate storage facilities for slurry or appropriate maintenance of pesticide application equipment [39, 215].

Most CEE countries have already published their codes of GFP. A positive example is Latvia, which prepared its code already in 1999 and in co-operation with Danish experts [10].

Compliance with GFP is required as a baseline condition for farmers who receive second pillar subsidies for Less Favoured Areas or Agri-Environmental Programmes (that together cover a majority of EU farmland). The 2003 CAP reform also established cross-compliance for all farms - environmental conditions for the direct payments under the first pillar. Cross-compliance includes existing legislation and a code of Good Agricultural and Environmental Condition (GAEC). Cross-compliance and GFP will partly overlap, partly differ. Compliance with GFP should be checked on at least 5% of farms every year, while cross-compliance should be controlled on at least 1% of farms.

However, the Commission's proposal for the new Rural Development Regulation for the period 2007-13 replaces GFP as a condition for AEP and LFA payments with mere cross-compliance. Farmers will have to respect cross-compliance anyway in order to receive the direct payments from the first pillar. Further conditions for receiving the extra subsidies from the second pillar would thus be lost by the proposal. On the other hand, requiring farmers under LFAs and AEPs to comply with the two separate sets of standards - GFP and cross-compliance - would be too complicated and confusing. Instead of simply abolishing the GFP, the two sets of standards should rather be merged into some kind of 'extended cross-compliance'. Farmers receiving payments from LFAs, AEPs but also other rural development measures should be required to meet this extended set of conditions. Thus, existing standards would be kept while avoiding unnecessary burdens of paperwork and controls.

Afforestation

This measure aims to reduce the area of farmed land by its afforestation. Hungary plans to spend most on afforestation from among the new member states in 2004-06, while Latvia and Slovenia will not use it at all in their RDPs. Afforestation can have both positive and damaging effects on the environment and biodiversity. It is not ecologically beneficial *per se.* This depends on the local conditions and the choice of tree species [165]. In some cases, afforestation subsidies have been used to replace species-rich grasslands with fast-growing monoculture plantations for wood production. Use of this measure should therefore be conditioned by environmental criteria in order to prevent afforestation of high nature value farmland with inappropriate tree species. The other forestry measures paid from Structural Funds should be subject to the same requirements.

Competitiveness

Four measures within this group – semi-subsistence farms, meeting standards, support for producer groups and early retirement – are part of RDPs. Others – support for young farmers, investment in farms and support for processing and marketing – are financed by the rural development programmes under Structural Funds.

Semi-subsistence farms

The existence of a large number of small semi-subsistence farms in some CEE countries, especially Poland, is a major problem in the view of the European Commission. The new member states were thus offered a special new measure to help turn some of these farms into commercial farms producing for the market rather than for own consumption. Farms, which submit a business plan demonstrating the future economic viability of the enterprise, can receive an annual aid of €1000. All CEE new member states except for the Czech Republic and Slovenia are going to use this measure to some extent in 2004-06. The measure can potentially allow more of the small farms to survive the period of ”restructuring“ than otherwise would be possible, thus preserving mosaic landscapes and habitats. On the other hand, the adoption of more commercial practices is likely to lead to specialisation and intensification, and environmental losses. Therefore, environmental conditions should be attached to this measure – but are not [22]. Furthermore, semi-subsistence farmers should be specifically encouraged to convert to organic or integrated farming.

Photo: Mario Dudar, EPA

An elderly local couple of the Kovacs family selects ears of maize at Csanadpaca, Southern-Hungary as the harvest in their one hectare field family farming plot is finished.

Meeting standards

This new measure will help farmers adapt to EU standards in the fields of the environment, health, animal welfare and work safety. Support will be paid to farmers who submit a plan for upgrading standards at their farm, including improvement of environmental management. The measure will also encourage farmers to take part in the new farm advisory system, by co-financing the costs of farm audits. The auditors can help farmers ensure that their farm complies with the EU standards and prepare the new member states for introduction of cross-compliance. If well designed, the measure can have a positive impact on the environment as well as viability of farms [22]. The measure will be most used in Hungary and Estonia, while the Czech Republic will not use it at all.

Training

Similar to the previous measure, support for training (under Structural Funds) can be very beneficial especially if used to raise awareness of environmental impacts and environmental management techniques on farms.

Other measures

The remaining measures aimed at competitiveness of farms under the two rural development instruments can have both positive and negative social and environmental impacts, depending on the design in each country. For example, support for establishment and operation of specialised organisations of producers (under RDPs) can help farmers to cope with increased competition on the EU market and to improve their bargaining position vis-à-vis large retail chains. Support for young farmers (under Structural Funds) is of central importance to keep the upcoming generation in the countryside and prevent rural decline. Support for marketing and processing (under Structural Funds) can help maintain small local slaughterhouses and dairies as well as organic food distribution. Farm investment aids (under Structural Funds) can be used to promote restructuring of holdings towards more sustainable systems [216]. On the other hand, the measures can also be used to support intensification of farming practices as a competition strategy. Therefore, environmental conditions should be attached to these measures. They should also be specifically targeted to support environmentally friendly types of production [21].

Diversification of rural economies

The common aim of these measures, financed by Structural Funds, is to create alternative rural income sources beyond agriculture.

Adaptation and development of rural areas (Article 33)

A very broad measure with many possible uses: renovation of villages, protection of rural heritage, agro-tourism and crafts, basic services for the rural economy, land reparcelling, rural infrastructure, water resources management, marketing of high quality local farm products and protection of environment. Many such projects can directly or indirectly strengthen economic, social and environmental sustainability of rural areas. But the funds can as well be used e.g. to build roads and irrigation projects that cause environmental damage [216]. The outcome again depends on the precise design and implementation.

Leader+

A relatively small but important and successful programme, one of the special Community Initiatives funded by the Guidance section of EAGGF (i.e. Structural Funds). It is notable for its bottom-up, decentralised and participative approach, rooted in the local economy. Leader+ supports sustainable rural development through initiatives of local action groups that develop small-scale innovative projects. Leader+ is now commonly recognised as a model approach that should be mainstreamed into other rural development measures [217].

Conclusion

Well-targeted use of the two rural development instruments under the second pillar can prevent an increase in negative environmental impacts of agriculture after accession to the EU. It can also encourage organic and other environmentally friendly farming systems, local food processing, agro-tourism and a general revitalisation of rural areas. However, the results depend on how the measures are designed and implemented in the member states. Involvement of non-governmental stakeholders in the design, monitoring and evaluation of the measures can contribute to their effectiveness. A good advisory system is key to ensure that many farmers will decide to take part in rural development.

On the other hand, the second pillar instruments can also be used for intensification and concentration of the farm sector, planting of forest monocultures and construction of irrigation infrastructure.

The only two rural development measures that are subject to some baseline environmental conditions (Good Farming Practice) are Agri-Environmental Programmes (which go beyond this baseline) and Less Favoured Areas. The other measures can also benefit the environment but can also be misused and cause damage. Governments should therefore attach environmental conditions to these measures and target them specifically to the support of environmentally friendly types of production.

2.3.4 Preparing for the next period: rural development in 2007-13

In 2005, EU member states have to start drafting new Rural Development Plans for the period 2007-13. The new member states will by then have an initial experience with the currently starting rural development funds for 2004-06. A number of things call for improvement in the next period: especially more funding for Agri-Environmental Programmes in most countries. One positive fact is that after 2007 the current new member states will no longer be allowed to shift money back from the second pillar to the first pillar (as decided in Copenhagen). All the funds will thus be used for targeted rural development measures.

The new RDPs will be based on the new Rural Development Regulation that is being prepared at the EU level. The proposal published by the European Commission includes a number of changes for the second pillar [25, 91].

- Creation of the single European Agricultural Fund for Rural Development with a single administration. This means the rural development policy in the Objective 1 areas would no longer be split into two separate instruments but there would be a single Rural Development Plan.
- The EU funding for the second pillar should increase from around €7.5 billion in 2003 to €13.2 billion in 2013, i.e. to almost 24% of total CAP expenditure. The increase mainly reflects the enlargement from the EU-15 to EU-25 and EU-27.
- Rural development measures are to be regrouped and renamed. The second pillar would be divided into three axes, further sub-categories and 35 individual measures (including nine particular measures focused on forestry).
- Minimum funding for the main axes: each country would have to spend a minimum of 15% of its funds from the second pillar on the axis of competitiveness, 25% on the axis of environment and land management and 15% on the axis of diversification. While minimum funding thresholds are a good idea to ensure that countries pursue common priorities, the currently proposed percentages would not help the axis of environment and land management. All the new member states are planning to spend more than 25% of their total rural funds (both instruments) on the axis of environment and land management already in 2004-06. The Czech Republic would actually be forced to reduce its spending on this axis from the current 72% after 2007.
- A minimum of 7% of the funds would have to be spent on LEADER, i.e. for local development strategies of local action groups. This would be a step towards mainstreaming of the LEADER approach to the second pillar.
- Less Favoured Areas are to be renamed as natural handicap areas and funding for them is to be restricted. Instead of the current Article 16 there will be two measures with payments for farms and forests in Natura 2000.
- Good Farming Practice as a baseline set of conditions for AEPs and LFAs is to be replaced with cross-compliance. This would amount to a narrowing down of environmental standards (see box on p. 65).
- Co-financing of the AEPs is to be reduced (from 85% to 80% in Objective 1 areas) only one year after they were increased by the CAP reform of 2003. The seemingly small change would put AEPs at the level of other measures such as LFAs and thus make them less attractive for countries.
- Networks of organisations involved in rural development are to be established on national as well as European levels. The networks would collect and analyse information and exchange good rural development practice.

In sum, the proposed Rural Development Regulation contains a number of good ideas but also several worrying points that should be changed. In general, the proposal does not attempt to further integrate environmental objectives and conditions into the second pillar but rather limits such "greening of CAP". Representatives of the new member states in the European Council and partly in the European Parliament will have a chance to improve the proposed new regulation during the negotiations in the autumn of 2004.

Policy priorities for the new member states with regard to the second pillar (for preparation of the new Rural Development Plans for 2007-13):

1) **Spend at least 50% of rural development funds on well-designed Agri-Environmental Programmes that should cover a large part of all farmland and provide sufficient incentives for farmers to take part in them.**

2) **Ensure good design and implementation of all rural development measures through proper monitoring and evaluation and through involvement of non-governmental stakeholders at all stages of the process. Follow the bottom-up approach of Leader+ as a model.**

3) **Subject the majority of rural development measures to environmental and animal welfare conditions.**

4) **Target rural development measures to specifically support environmentally friendly types of production such as organic.**

5) **Use the measure for meeting EU standards to improve environmental, food safety and animal welfare conditions of agricultural production.**

Photo: Przemyslaw Pokrycki, EPA

Grain harvest in Honiatyn near Hrubieszow, Eastern Poland...

Photo: Peter Hudec, EPA

... and in Podunajské Biskupice near Bratislava, Slovakia.

6) **Upgrade advisory services for farmers. Use the advisory services and the training measure to raise awareness of environmental impacts and to promote Agri-Environmental Programmes.**

7) **During the discussions on the new Rural Development Regulation in the European Parliament and Council of Ministers:**

   a) **oppose abolition of the Good Farming Practice and reduction of co-financing for Agri-Environmental Programmes**

   b) **increase the minimum funding for the axis of environment and land management**

   c) **demand an extended set of environmental and animal welfare standards as conditions for the majority of rural development measures**

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Friends of the Earth Europe

Friends of the Earth is the largest grassroots environmental network in the world, campaigning to protect the environment and create sustainable societies. Friends of the Earth Europe (FoEE) unites more than 30 national member organisations with thousands of local groups. FoEE coordinates and supports the campaigns and projects of its member groups which deal with a large variety of subjects including food, farming and biotechnology; climate change, energy, eco-taxation and nuclear safety; globalisation, trade, corporate accountability and sustainable development; EU enlargement; and regional programmes in Central, Eastern and South Eastern Europe and the Mediterranean. FoEE's campaign "Food and Farming: Time to Choose" aims to channel the necessary public support for a real green CAP reform. FoEE webpage: www.foeeurope.org

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