



INSTITUTE OF AGRICULTURAL  
DEVELOPMENT STIFTUNG DES  
ÖFFENTLICHEN RECHTS  
IN CENTRAL AND EASTERN EUROPE

# IAMO 2002

## **Publisher's Note**

The IAMO's publications also include the series of *Discussion Papers*, the series '*Studies on the Agricultural and Food Sector in Central and Eastern Europe*', as well as the *IAMO Annual Report*.

### *Photos*

Stefan Bojnec (p. 50), Stephan Brosig (p. 64), Ulrich Fiege (pp. 34, 53), Günter Peter (p. 54), Jaroslav Prazan (pp. 14, 26, 42), Klaus Reinsberg (pp. 5, 55, 60), Eberhard Schulze (p. 59).

### *Published by*

#### **Institut für Agrarentwicklung in Mittel- und Osteuropa (IAMO)**

Theodor-Lieser-Straße 2  
06120 Halle (Saale)  
Tel.: 49 (345) 29 28 0  
Fax: 49 (345) 29 28 199  
Email: [iamo@iamo.de](mailto:iamo@iamo.de)

### *Web site*

<http://www.iamo.de>

### *Editor*

Margot Heimlich

### *Production*

Monika Hartmann, Stephan Brosig, Ludger Hinners-Tobrägel, Peter Voigt

### *Typesetting*

Margot Heimlich

### *Printed by*

Druck-Zuck GmbH, Seebener Straße 4, 06114 Halle (Saale)

© Institut für Agrarentwicklung in Mittel- und Osteuropa

Reproduction of the material contained within, even of extracts, may only be carried out with the prior permission of the publishers and acknowledgement of the source.

**ISSN 1617-6456**

## Introduction

As a foreign member of the IAMO's scientific advisory board I would like to offer my warmest congratulations to the Institute for its achievements since its foundation. Reform in the agricultural sector is one of the most problematic areas of the whole process of transition. In contrast to the expectations and confident predictions articulated well over a decade ago, this huge transition is not yet complete. Scientific analyses of the experiences of transition and selective comparisons of development in different countries are very useful in helping overcome the often difficult and painful task of reforming the Socialist agricultural system.

Looking at the IAMO's work in this perspective, I am delighted that the Institute has not only fulfilled its original expectations, but has managed to surpass them. First, the Institute has succeeded in becoming a 'Centre of Excellence' with regard to its high-quality research into the process of transition in Central and Eastern Europe. Its fast-growing corpus of publications has in a short period of time become an important source of reference for those who are connected with these countries. The first-rate research is complemented by an excellent education program, which includes a sizeable proportion of students from countries in transition. I was pleased to have had an academic role in the first thesis completed at the IAMO and I hope that this will be the first of many. The exchange of doctoral students between the Institute and many universities in Central and Eastern Europe is a very good example of the mutual benefits that collaboration can bring. These programs are crucial for helping further graduate study in the region. Finally, one must emphasise the importance of the IAMO as a place where academics can exchange information and experiences relating to agricultural transition in Central and Eastern Europe. The workshops, seminars and conferences organised by the IAMO have offered an excellent forum for discussion, and also provided the opportunity to make contacts, leading to new initiatives.

We can conclude that, under the leadership of Professor Klaus Froberg, the IAMO has already enjoyed some very successful years. Not only have they produced important research findings but they have also laid an excellent foundation for the future. It is to be hoped that EU enlargement will allow some of the states of Central Europe - including my own native country Hungary - to regain their traditional place at the heart of Europe. With enlargement the IAMO should shift its attentions further eastwards and concentrate on the agricultural problems of the CIS countries. At the same time, the Institute should continue to engage with Central Europe and the problems of EU accession.

I am convinced that this is only the beginning of a long and important period of work for the Institute and I wish the IAMO the very best for the future.



*Prof. Dr Csaba Csáki  
is a member of the  
Scientific Advisory Board*

# CONTENTS

<b>Foreword</b>	<b>5</b>
<b>Effects of Eastern Enlargement on the Russian Food Industry</b>	<b>9</b>
No serious change in agricultural trade patterns is expected for Russia. EU quality standards will induce a trend towards the reduction of Russian imports and exports.	
<b>The Adjustment of EU Structural Policy in the Course of Eastern Enlargement: A Perspective</b>	<b>15</b>
The redistribution of Structural Funds after eastern enlargement. Is SAPARD working? Further reforms of the support programme are necessary.	
<b>The Adoption of the EU Environmental Acquis: An Opportunity to Protect the Natural Environment and Biodiversity?</b>	<b>23</b>
Eastern Europe: a refuge for biodiversity. Species diversity threatened by the closure of farms brought about by transition. Eastern enlargement puts emphasis on environmental protection. Environmental and business policy must be better integrated.	
<b>The Transition of Agricultural Enterprises in Eastern Germany: A Model for the EU Accession of Poland and Hungary?</b>	<b>27</b>
Successful transition of the agricultural sector in the new states of Germany. The recipe for success: no discrimination against size or status of business. No adoption of successful measures without consideration of conditions specific to a country.	
<b>After Nice: The Future Participation of the Accession Countries in the Design of the Common Agricultural Policy</b>	<b>35</b>
Institutional reforms in the EU. Decision-making powers at EU level. Integration of the CEAC after accession. The difficulty of attaining working majorities. The need for further reform.	
<b>Competitiveness of the Dairy Industry in the Central European Candidate Countries and EU Accession</b>	<b>43</b>
New patterns of ownership and fragmentation of enterprises restricts competitiveness. Quality standards not yet achieved in many areas.	
<b>The IAMO – a Brief Portrait</b>	<b>51</b>
Joint projects. Visiting academics. Doctoral students. Conferences and Seminars. Selected externally-funded projects. Publications. Institutional structure. Co-ordination in the IAMO. Research program. Support services.	

## Foreword

The fourth edition of our annual 'IAMO' publication is concerned with issues relating to EU eastern enlargement. We selected this topic, as the timetable for the process of accession is becoming increasingly transparent. At present, a date in the first half of 2004 looks highly probable as the start of formal membership for ten of the 13 candidate countries. Romania and Bulgaria will probably accede a couple of years later. In view of this future enlargement it is pertinent for us to engage with decisive questions that have not yet been resolved.

We should first note the enormous efforts that all the parties involved in negotiations, i.e. those countries seeking accession (Turkey has not yet been included in discussions over accession) and the EU-15 member states as well as the Commission, have made to drive the process forward. Due to the scope of the social, legal and economic issues under discussion, they were divided into 31 chapters. The majority of these have since been resolved with the agreement of all sides. The supposedly problematic chapters, including agriculture and structural policies, remain largely unresolved, however. In the second half of 2002 these issues are to be negotiated to a conclusion.

We cannot deal with the entire spectrum of questions relating to EU eastern enlargement in this edition of our annual publication. Only the ten Central European Accession Countries (CEAC) are considered in the articles here. Although Romania and Bulgaria will probably not be admitted in the first round, the essays deal with these countries as well. Topics have been selected which have not yet received due attention in the public arena, particularly matters concerning the continued adjustment of structural policies. Without a change in their current design, the EU budget will be far harder hit by structural policies than by agricultural policy. Estimates of these outlays vary, but centre around 25 billion Euro annually. The article by ABELE and FROHBERG also considers the distribution of these funds, both amongst the ten candidates for accession and the current member states. Being the largest accession states territorially, Poland and Romania would receive the highest share of structural funds.

The steps towards integrating Central and Eastern European Countries into the EU are being carefully observed by third countries where effects of the enlargement are expected to become noticeable. One area in this context concerns trade of such countries with the accession candidates as well as with the present EU. Eugenia SEROVA, member of the IAMO's Scientific Advisory Board (SAB), points out in her contribution, why she expects only small effects of EU enlargement on Russia's agri-food sector. She emphasises, however, that agricultural policy changes in CEAC towards higher protectionism might trigger similar movements by Russia.

Agriculture in the future member states is often seen as suited to organic farming. The reasoning behind this is the relatively low quantities of chemicals used and the high amounts of available labour. The argument overlooks the fact that many enterprises have not yet undergone testing to certify that they farm according to organic principles. Although both the factors outlined above facilitate the transition to such a method of farming, they are not in themselves sufficient.



*Prof. Dr Klaus Frohberg  
is the executive director  
of the IAMO*

The piece by PIRSCHER shows that, since the collapse of Communism, a large reduction in environmentally-damaging emissions has been achieved, primarily due to the fall in industrial production. After accession to the EU this process could change completely, meaning that eastern enlargement might lead to a deterioration in the environmental situation. Due to low population density and low intensity of farming, many regions in Central and Eastern Europe are less spoiled than in Western Europe. PIRSCHER demonstrates in her article, however, that the provision of institutions for the preservation of biodiversity is insufficient. Biodiversity would also be negatively affected if agricultural production largely stopped in areas that were previously farmed on an extensive basis, as many people fear.

With the reunification of Germany, the economy of the former East, including the agricultural and food sector, had to be transformed. Are there lessons to be learned from the experiences of restructuring, and can they be applied to other countries in transition? This is the question tackled by FIEGE and HINNERS-TOBRÄGEL in their essay on Poland and Hungary. They highlight the fact that, unlike Hungarian farmers, Polish ones have little liking for co-operation. Together with a high capacity to adapt in general, this is a prerequisite for the success of agricultural enterprises in the enlarged EU, however. This is demonstrated by the development of agriculture in the new *Länder* of Germany. The authors stress, though, that agricultural policy is called for. It must be consistent and open to all types of businesses. Only in such conditions can enterprises best develop.

WEINGARTEN'S article deals with a completely different topic: political institutions. Following the resolutions taken at Nice in 2000 concerning institutional reform of the EU, the latter sees itself as well equipped for the integration of new members. As WEINGARTEN shows, however, this positive assessment is difficult to understand. For instance, the thresholds for a qualified majority in committees (e.g. the Council of Agriculture Ministers) have been raised. In future, obtaining working majorities will be even more difficult, particularly when one considers the increasing heterogeneity of the EU caused by eastern enlargement. The scope for the accession states to shape the Common Agricultural Policy depends on how well they are integrated into the informal networks and associations that already exist in Brussels, in addition to the institutional regulations of the EU.

The Treaty of Nice provides for a continuation of the process of institutional reform. In particular, the competencies of the community and the member states will be demarcated -according to the principle of subsidiarity; the status of the Charter of Fundamental Rights announced at Nice will be clarified; the system of EU regulations will be simplified; and the role of national parliaments will be considered. A convention, which will include representatives of the European Parliament, national parliaments, member states, the Commission and also representatives of the accession states as 'permanent observers', will begin working on a reform proposal in 2002. This can then serve as a basis at the 2004 governmental conference for a European Union constitution, which would be adopted by the European Council. Such a constitution would be very welcome if it clarified the areas of competence and facilitated decision-making in the Union. This is already necessary for the proper functioning of the EU-15, so it will be indispensable for the Union of 28 countries, and for a possible larger one that includes the states of south-eastern Europe.

HARTMANN analyses the economic performance of the milk industry in the accession countries. She highlights the significant differences in competitiveness within this group of countries. They are also still a long way off the performance of the EU-15. It is clear that the dairy industries in the CEAC are not able to exploit the price advantage they have over their competitors in the EU with regard to the purchase of raw milk. The main reasons for the relatively weak performance of the milk industry are the small capacity utilisation of the dairies, the poor quality of raw milk, and low hygiene and quality standards in the processing factories. Because of the latter, there are still companies in some accession countries which are banned from exporting their products to the EU.

Just how strong the pressure is for agriculture and the food industry to adapt in this pre-accession phase can be seen by the effects of eliminating tariffs and export subsidies for a number of agricultural products between the CEAC and the EU-15. This started in the middle of 2000 as a result of the so-called Double-Zero Agreement. This treaty affects agricultural goods amounting to about 80 % of the value the EU imported from the accession countries in 1999 and 40 % it exported into these countries in that year. However, quotas have been negotiated for which the zero tariff rate applies. This prevents unrestricted quantities of goods from being imported duty-free. These quotas will be raised annually by mutual agreement. Nevertheless, these agreements represent an important step towards further market integration of agriculture and the food industry in the EU and CEAC. A new liberalisation agreement is likely to come into force in the middle of 2002.

While more restrictions were being removed from agricultural trade between the EU and the CEAC, the WTO agreements with third countries were having a noticeable impact for the first time in 2001. The levels of subsidised exports of certain products such as cheese and pork are reaching the ceiling established in the Uruguay round. With the admission of the ten accession countries, the limits set by the WTO can have an even greater effect as far as certain products are concerned. This happens if, on the one hand, exportable surplus in these countries increases due to production expansion and/or a drop in demand, and also if they have no, or only very low, upper limits for subsidised export which can be used also in the enlarged EU. Such is the case with cheese. It is anticipated that the admission of the ten accession countries will greatly increase the export surplus of this commodity in the enlarged EU. Though, the limit of subsidised exports is only increasing by 5%.

As far as pork is concerned the situation is completely different. It is estimated that enlargement will reduce the surplus, while WTO-Limits for subsidised exports aimed at third markets will increase by more than 30%. The example regarding cheese highlights the urgent need to adapt the Common Agricultural Policy of the EU (CAP) to these changes in the run-up to the admission of new members, to avoid increasing distortions at EU markets after enlargement. This also applies to other areas of policy. In this context direct payments such as area compensation and premiums for milk deliveries and beef production are to be mentioned, as the agricultural policy debate with regard to enlargement is primarily dominated by this support mechanism.

These subsidies were originally introduced as a compensation for the reduction in prices as a result of the McSharry reform. The reasons for providing financial transfers per area of 'grandes cultures', for other crops or in livestock production have radically changed, however. Initially seen as a means to compensate for price reductions, today they function - from the agricultural perspective - as a reward for the provision of public goods, such as the preservation of the countryside. With regard to the impact of these area payments on income, it must be noted that farmers only reap the full benefit from these subsidies if they are also the owners of the land. If not, the amount the farmer pays for the lease will be affected by the compensation he receives, i.e. the landlord will demand at least a share of the subsidies. Considering the large share of leased land cultivated by farms in most of the accession countries, this indicates that the direct payments are predominantly a means of supporting the landowners. For this reason, too, a re-examination of the CAP is urgently needed before the admission of new member states.

A substantial portion of the IAMO's research focuses currently on issues of the EU eastern enlargement. The countries that make up the Commonwealth of Independent States (CIS) are also of importance for our research agenda, and will be increasingly so in the future. The same is true of the countries having signed the stability Pact for South-Eastern Europe.

Finally I'd like to take the opportunity to thank everybody who helped make 2001 a good year for the Institute. Special thanks to the Board of Trustees and the Scientific Advisory Board, both of which continued to support and promote the work of the Institute in many ways over the last twelve months. This year, members of these committees were of particular help with their advice regarding the evaluation and implementation of the recommendations that the Science Council had made in its positive assessment of the IAMO in the previous year.



## Effects of Eastern Enlargement on the Russian Food Industry

EUGENIA SEROVA

(MEMBER OF THE SCIENTIFIC ADVISORY BOARD)

Currently the list of candidates for EU accession numbers ten Central European countries. They are: Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Romania, Bulgaria and Slovenia. For these countries, accession requires significant changes in their agricultural policy. It is not yet clear which policy instruments will be affected by this and to what extent, particularly as further alterations to the Common Agricultural Policy (CAP) are expected before the admission of the first countries. But to what extent will countries that are not accession states be affected by enlargement? This question is of particular relevance to the Russian Federation, as it has close trade links with the EU accession countries. This article will survey the most important consequences of EU enlargement for the Russian agrifood sector, beginning with some observations on the development of agricultural trade between Russia and the accession countries of Central Europe.

**Prime source of influence: Adoption of EU trade policy**

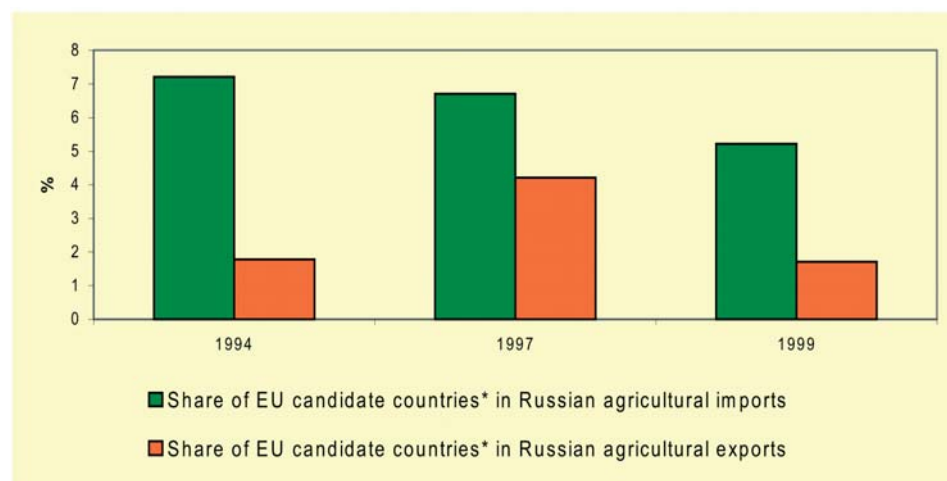


Diagram 1:

Share of trade with EU candidate countries\* in Russia's total agricultural trade

Note: \*Here: Poland, Czech Republic and Hungary.

Source: Russian customs statistics.

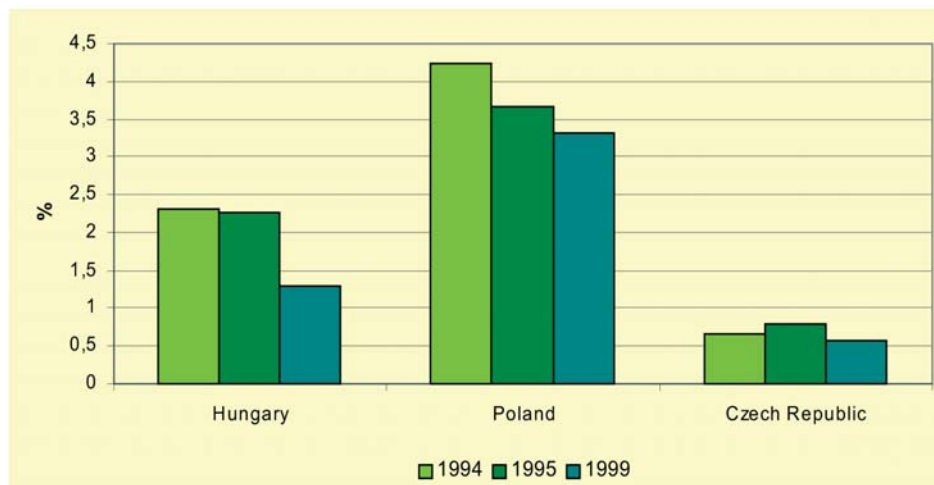
As diagram 1 shows, Russian agrifood trade with the Central European Accession Candidates (CEAC) in comparison with other countries, e.g. those of the Commonwealth of Independent States or the EU, is relatively insignificant. For example, prior to 1998, imports from Poland, the Czech Republic and Hungary together amounted to only 7% of Russian agricultural imports, while exports to these countries made up less than 5% of Russian agrifood exports. The 1998 financial crisis in Russia led to a further drop. Of the CEAC, Poland provides the largest share

**Agrifood trade relations with CEAC small from Russian perspective**

of Russian agrifood imports (see diagram 2). Internationally traded goods amounted to only a small proportion of the products that were traded on the Russian agrifood market: about 8% of Russian produce was exported, while about 26% of Russian agrifood demand was met by imports. The adoption by the CEAC of EU trade policies will therefore affect the Russian market for foodstuffs only slightly. Diagram 3 shows for eight types of produce the proportion imported from the CEAC by Russia. These product groups make up around 50-60% of Russian agrifood imports from these countries. It is clear that the smallest fluctuations occurred with fresh fruit, vegetables and processed foods. The majority of vegetables and fruit is imported, or re-exported (e.g. bananas, tropical fruits, coffee) from Poland. Imports of tinned meat, fish, sugar and grain dropped noticeably following the crisis of 1998. In the period after the 1998 crisis, Russia was able to increase its level of self-sufficiency as far as these products were concerned. It is unlikely that it will significantly extend imports of them in the near future.

Diagram 2:

Share of Hungary, Poland, and the Czech Republic in total Russian agrifood imports



Source: Russian customs statistics.

For those regions of Russia which border the CEAC, however, or are nearby, trade with them remains very important. A good example is the range of agrifood on offer in the St. Petersburg region, which is fairly dependent on the extent of imports from the Baltic states. Diagram 3 shows that the proportion of Russian food imports from the CEAC is particularly high where vegetables are concerned. This is a reflection of trade between border regions, as many types of fresh vegetables are normally only transported across short distances.

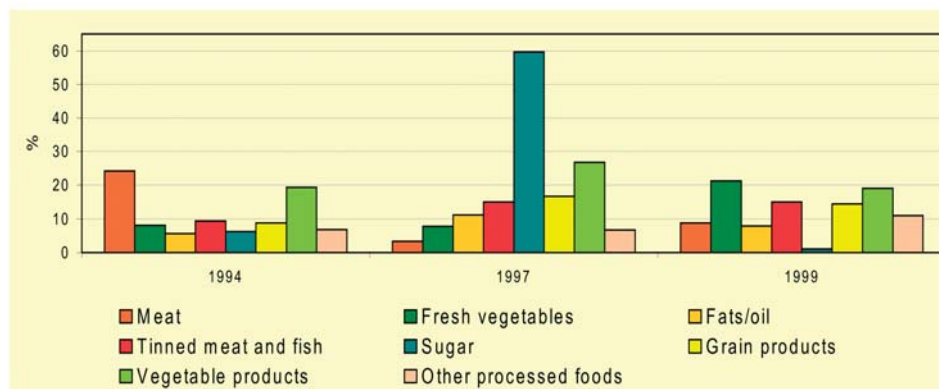


Diagram 3:

Proportion in Russian agrifood imports of accession countries (Poland, Czech Republic, Hungary) by product

Source: Russian customs statistics.

For the accession countries, eastern enlargement means that they have to adopt and apply the Community's regulations concerning agricultural, structural and trade policies. The agricultural markets will hence be influenced by import restrictions, export subsidies and measures of internal support. So to what extent can one expect the changes to have knock-on effects on Russia? From the Russian perspective, four main possible consequences have been discussed:

1. A rise in agricultural protection to the support level of the Community creates incentives to extend production and thereby increase exports to Russia (amongst other destinations). **Four potential effects**
2. Unrestricted access to the internal EU market diverts exports from their previous destination - Russia - to Western European countries.
3. Rising duties and other import regulations lead to additional barriers for Russian exports to the accession countries.
4. The adoption of EU agricultural protection by the accession countries could cause Russia to react by introducing similar support measures.

As far as the first point is concerned, it is necessary to ascertain whether the adjustment of agricultural market policy in the CEAC to the current CAP provides additional incentives for production. Table 1 shows the overall level of agricultural producers' protection expressed in Producers Support Estimates (PSE) for the EU as well as the Czech Republic, Hungary and Poland in percent of the value of production. One can see that there is still room for increase of support of agriculture in the three selected candidate countries. Inasmuch as additional support would be through higher producer (and consumer) prices this could result in additional production (and lower domestic consumption) at least for some products. However, at current level of EU-export support (subsidised export prices) no extra quantities will be

**No flood of exports from the accession states**

absorbed by Russian markets. Additional produce from CEAC could hence at most replace export flows that are currently shipped from current EU-countries to Russia.

Table 1:  
PSEs for CEAC and the EU

	1991	1992	1993	1994	1995	1996	1997	1998	1999p	2000e
Czech Republic	51	30	27	19	17	16	4	20	20	18
Hungary	13	18	22	24	14	10	5	19	23	18
Poland	-1	1	12	17	11	15	14	21	21	20
European Union	50	44	42	40	38	34	34	39	43	38

Notes: p-provisional, e-estimated.

Source: *Agricultural Policies in Emerging and Transition Economies*. OECD, 2001, pp.76-77.

Besides producer prices, other factors are important for the development of CEACs' export supply. The introduction of EU product and processing standards will lead to a decrease in the production capacity of the food industry. This will slow down production development. For example, the strict food hygiene regulations mean that old production plants, which currently make many cheap products for eastern markets and do not meet the required targets, will have to be shut down. In view of the reverse effects listed above, the development of agricultural exports cannot be predicted with any certainty. In view of the relatively small quantities involved, however, there will hardly be a considerable effect on the Russian food market.

### **Compensation for the redirection of trade**

After becoming EU members accession countries will direct their surpluses of agricultural products, as well as exports that are currently shipped to Russia, towards Western Europe. This means that the redirection of trade, mentioned in point 2, is a realistic prospect. Products removed from the Russian markets will, in all probability, be quickly replaced by other EU exports, as the (subsidised) supply of EU exports reacts quickly to internal surpluses, although this will only occur as long as the existing WTO arrangements permit it.

### **EU quality standards slow Russian exports**

The third point listed above refers to access of Russian exporters to agricultural markets in the accession countries. Both the adoption of EU external trade measures and the introduction of quality regulations for food imports are relevant here. After admission, EU duties and in some cases import quotas will be applied to Russian agricultural exports to the CEAC. In addition, the EU's technical regulations - in particular strict quality requirements - will have to be applied by the accession countries after enlargement. A proportion of current Russian agricultural exports to Central Europe will probably not satisfy these conditions and therefore lose their markets. However, as already mentioned, these current exports are of little significance to Russia as far as volume is concerned. The legitimacy of technical obstacles to importation is often disputed; occasionally these measures have been interpreted as a barrier to unwelcome foreign competition, i.e. agricultural protectionism in disguise. Such conflicts have occurred many times in agricultural trade between the EU and the accession countries. It is possible that they will recur in trade negotiations between an enlarged EU and Russia.

The fourth point concerns the political economy of Russian agricultural policy. Will Russia, in reaction to the adoption of the CAP by the CEAC, be inclined to introduce a similar policy of protection? In the past few years (since 1992) Russia has frequently adopted fundamental elements of agricultural policy in Central and Eastern Europe. This was the case, for example, when state agencies were established for market regulation, and when agricultural credit programs were introduced. It is quite possible that Russia will react in a similar way when the CAP is introduced in the CEAC. Support policies in the accession countries might provoke a similar series of measures in Russia, particularly import restrictions and duties that do not burden the Russian budget. Due to the strained state of the Russian budget, it is unlikely that measures would be adopted that squeeze the state finances, such as intervention purchases.

The conclusion that one draws is that the effect of EU enlargement on Russian agricultural markets will be small; for many products it will hardly be noticeable. One can only hope that the EU's agricultural trade policy and its adoption by the accession countries will be fashioned in such a way that it prevents the risk of escalating protectionism.

***An increase in  
protectionism is not out  
of question***



## The Adjustment of EU Structural Policy in the Course of Eastern Enlargement: A Perspective

STEFFEN ABELE, KLAUS FROHBERG

EU eastern enlargement means a number of political, social and economic changes for the old and new member states. Not only will this be the largest expansion since the birth of the Union, but the economic differences between member states and candidates for admission are greater this time than ever before. Policy has the difficult task of reducing these differences as quickly as possible, distributing disposable funds efficiently and achieving the highest possible level of acceptance amongst those concerned. Of great interest is how the two large policy areas that affect the EU budget - the Common Agricultural Policy (CAP) and structural policy - will be shaped after enlargement. Whereas direct payments and quotas are the main contentious points of the CAP, in structural policy it is mainly the redistribution of Objective 1 funds which is causing problems for the politicians. These two policy areas differ from each other on one important point. The size of direct payments is likely to be determined at a political level, although here, too, criteria such as the income of farmers in accession countries before and after admission play a role. For structural policy, objective criteria predominate. Regions with a per capita income of less than 75% of the EU average qualify as Objective 1 regions, and can claim aid from EU structural funds, such as the European Fund for Regional Development (EFRD).

***Eastern enlargement: a challenge to structural policy as well***

The current economic situation of the accession countries will have a considerable influence on determining which regions qualify for Objective 1 status. First, the average per capita GDP of an EU which includes the accession countries would be drastically reduced, to 86% of its current level. This would mean that many Objective 1 regions in today's EU would fall out of this category, because their per capita income would then be higher than 75 % of the EU average. Secondly, enlargement would add many new Objective 1 regions. With the exception of some capital cities in the accession countries, the whole area would qualify as an Objective 1 region. There are, however, exceptions on both sides. In the EU it is mainly overseas territories such as islands belonging to France, Spain and Portugal, but also parts of Greece, which would still qualify. Within the accession countries, regions that now have a per capita income of more than 75% of the average would not qualify. These include Slovenia, whose per capita income in all parts of the country exceeds the threshold, and the Prague, Budapest and Bratislava regions in the Czech Republic, Hungary and Slovakia.

***Old and new recipients of aid: a flow of funds to the east***

Map 1 gives an overview of existing and - by current calculations - future Objective 1 regions. The amounts of aid allocation from the Objective 1 funds are given in Table 1. The table also shows the change in Objective 1 resources for the old and new member states after eastern enlargement. Currently, Objective 1 areas receive just over 18 billion Euro each year. After enlargement, Objective 1 areas in the present member states would only get around 5.5 billion



Euro. The new EU members would receive about 21 billion Euro. This would increase the total Objective 1 funds to 27 billion Euro, an increase of about 9 billion per year. The increase is frequently discussed in the context of whether the EU's budget limit of 1.27 % of the GNP can be maintained. It must be taken into account, however, that more than 10 billion Euro per year, in addition to the funds that already exist, have been earmarked for structural development after enlargement, so that the above mentioned budget limit will not be broken.

The amount the accession countries will receive from the redistribution of funds will depend on the size of population living in the Objective 1 areas. For this reason, Poland will obtain the largest share of financial aid, followed by Romania. The distribution of funds is shown in Diagram 1.

And yet the scenario outlined above is only one of many possible ones. For example, it is uncertain what will happen to the German Objective 1 areas, the five new *Länder*. Here eligibility for aid will depend primarily on how the per capita income evolves in relation to the other regions of Europe. If, as is predicted, income increases in eastern Germany less rapidly than in the rest of Europe, the region will perhaps still qualify for aid.

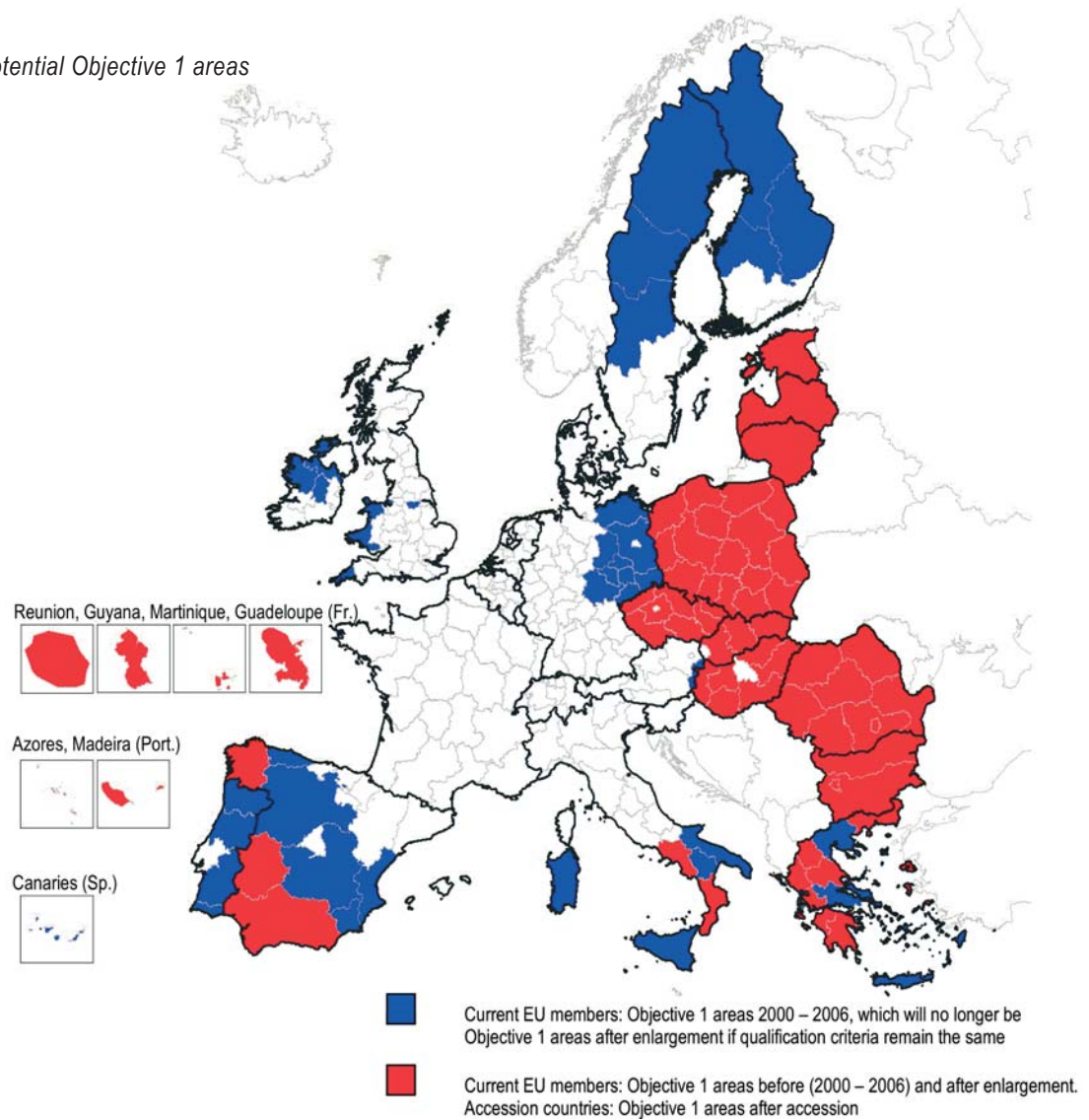
***Reform instead of  
Cassandra calls***

Reaction to eastern enlargement of the EU should not just involve speculative calculations and - something that always happens - invoke the ghost of high costs and redistribution towards Central and Eastern Europe. It should also be seen as an opportunity for another critical examination of EU structural policy, and the chance to introduce necessary reforms. The adoption of Agenda 2000 has already reformed the structural funds. By reducing the number of aims and tasks of the Community, it is hoped that a more efficient deployment of funds will result, just as it did when the interim evaluation was introduced.

And yet EU structural policy can still offer something in the way of improvement: the criteria for eligibility are under the microscope. Currently, per capita income is used for determining Objective 1 areas. But this figure only reveals something about average income, not income distribution. Looking at other data that take these sorts of factors into account, such as unemployment levels, might be a way of targeting the aid more efficiently. Another possibility would be to concentrate on social indicators and reduce the emphasis on regional ones. This would mean more prominence for the European Social Fund, which currently plays only a minor role in structural policy.



Map 1:  
Current and potential Objective 1 areas



Source: The authors' own calculations according to: EUROPEAN COMMISSION (2001): 2<sup>nd</sup> Cohesion Report.

Table 1:  
Amount of Objective 1  
money before and after  
enlargement

	Annual spending in €m <sup>1</sup>	
	Objective 1 aid 2000-2006	Objective 1 aid from 2007 <sup>2</sup>
<b>Current member states</b>		
<b>Germany</b>	2.746	0
Finland	130	0
France	465	372
Greece	2.996	831
Ireland	188	0
Italy	3.127	1.730
Austria	37	0
Portugal	2.302	111
Spain	5.387	2.417
Sweden	47	0
Great Britain	726	0
<b>Total for EU 15</b>	<b>18.151</b>	<b>5.461</b>
<b>Central and Eastern European accession countries</b>		
Bulgaria	0	1.522
Estonia	0	319
Latvia	0	536
Lithuania	0	814
Poland	0	8.506
Romania	0	4.915
Slovakia	0	1.050
Czech Republic	0	2.001
Hungary	0	1.595
<b>Total for CEAC</b>	<b>0</b>	<b>21.258</b>
<b>Total aid for Objective 1 areas</b>	<b>18.151</b>	<b>26.719</b>
<b>Additional annual expenditure following enlargement</b>		8.568
By comparison:		
<b>Funds set aside for structural measures of the 2005 enlargement</b>		10.000
<b>Additional leeway for unplanned expenditure 2005</b>		16.737

Notes: <sup>1</sup> Calculations based on 220 € per head, per year of aid in eligible regions, the 4 % clause according to article 7, § 8 of (EC) directive 1260/1999 applies.

<sup>2</sup> Based on the admission of all Central and Eastern European candidate countries by this time.

Source: The Institute's own calculations, 2<sup>nd</sup> Cohesion Report of the EU, conclusions reached by the chairmanship of the European Council 1999.

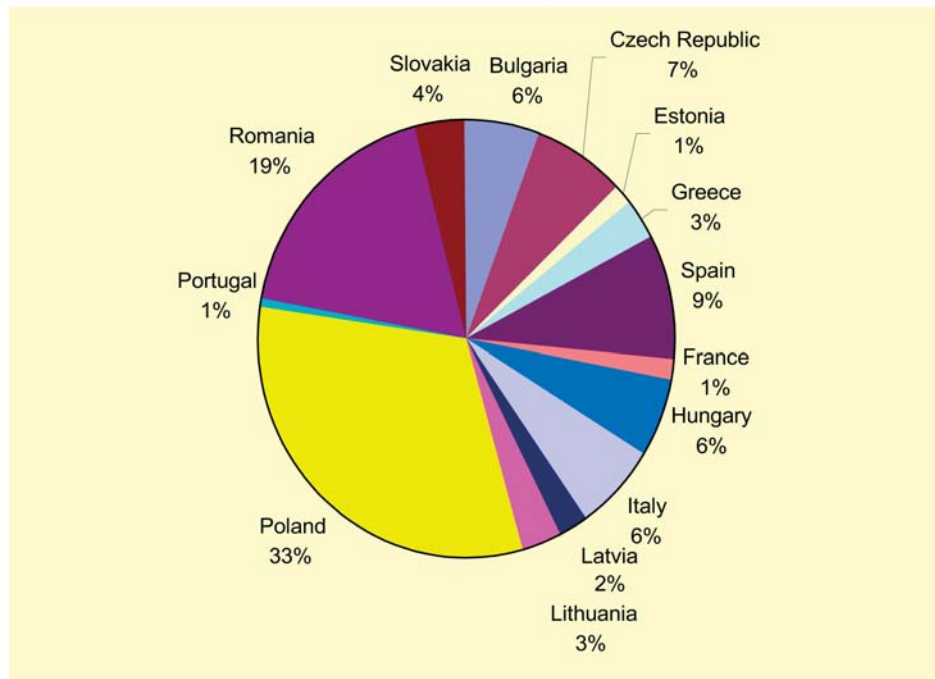


Diagram 1  
Who gets which share of the cake?

Source: The authors' own calculations.

When discussing how to distribute the funds, it is also necessary to consider the effect of money that has already been spent. After all, the end of the present budget period will conclude 12 years of economic development policy. Successful countries like Ireland, which has achieved an economic boom by consistently improving its human capital and promoting information technology, can be contrasted with regions in which aid seems to have created only a minor economic improvement. These are areas afflicted by the 'Mezzogiorno problem' first coined to refer to the south of Italy: the waste of structural funds on uncompetitive industries. This is true of southern Europe and some regions of eastern Germany. It must be investigated whether further aid for these areas will lead to an actual improvement in the situation, or whether they will be on the EU's structural development drip for the indeterminate future.

**Structural funds must not be a bottomless pit**

While discussions concerning an efficient structural development policy for the new member states are still in progress, some pre-accession support packages are already being introduced. In particular one might cite the implementation of the PHARE program, which is designed to support the adoption of the *acquis communautaire* and the establishment of the necessary institutional structure. In addition there is ISPA, which, like the EU Cohesion Fund, aims to improve infrastructure and environmental protection. ISPA is an example of how EU development policy is being adjusted. Instead

**Structural policy for the accession countries**

of allocating money *ex ante*, funds will be within a margin determined for each particular country. How much a country receives depends on the quality of its application. This is a further indication of the increasing competition for EU money.

***What makes good structural policy?***

The SAPARD program, too, is of particular consequence for the Central and Eastern European accession countries because it supports rural areas and agriculture, which constitute a much larger part of the economy than in Western Europe. SAPARD is also important for the accession candidates as they are chiefly responsible for its planning and execution. As part of the program they are given help in setting up administrative structures which are a precondition of admission to the EU. Decentralisation and subsidiarity in political decision-making are promoted. There are still areas of friction in the execution of the SAPARD program, relating both to its content and application. First it is debatable how much these measures correspond to the criteria of an efficient structural policy. An effective structural policy must ensure that markets, in particular labour, land and capital markets, are functioning smoothly. Only then can structural change take place. And yet the proper functioning of factor- and other markets is frequently dependent on the availability of public goods such as legal systems, education opportunities or a good physical infrastructure. Direct subsidy of individual branches of the economy, on the other hand, is viewed critically, as this runs the greatest risk of moneys being misdirected.

***SAPARD: an efficient structural policy for rural areas?***

If one examines the goals of SAPARD, and looks at how its funds are shared out, doubts emerge as to whether this program satisfies the requirements of an efficient structural policy as laid out above. SAPARD primarily promotes investment in agricultural enterprises. This should be encouraged if the measures lead to structures that can support themselves in the foreseeable future. From an economic perspective, investment aid only makes sense if interest payments correspond to the market rate, and if the necessary funds do not exist privately due to market failure. Proof of this is yet to be provided, however. One must also ask to what extent this program is based on an 'equal shares for all' distribution of aid which sets up competitive structures and also subsidises businesses that have a poor chance of long-term survival. A study of the distribution of SAPARD funds shows the following (Table 2): 22% of aid is invested in businesses. The areas that receive the largest and third-largest share of all aid represent bright spots. 26% of funding is spent on improving processing and marketing structures. The rural infrastructure, which can be seen as a public good, is supported with 21% of total aid. On the other hand there are weaknesses in other areas. Only 11% of the funds go towards creating income opportunities outside of agriculture. This seems a low figure when one considers that the intended increase in competitiveness of agriculture will certainly mean a loss of jobs that will have to be created in other sectors to prevent even greater problems developing in the rural areas of Central and Eastern Europe. Education and training are only given 3% of the budget. This is a small share, given the fact that the above-mentioned structural adjustment needs a flexible labour force which will have to migrate to other sectors, if necessary. It would be welcome if greater emphasis were placed on further training of those working in agriculture. The rural regions of Central and Eastern Europe suffer from a lower standard of education than urban areas. This can partly be explained by the low level of education of those employed in agriculture.

***Subsidy instead of the promotion of institutions***

Project	Share of the total SAPARD budget in %
Investment in agricultural holdings	22
Processing and marketing of agricultural and fishery products	26
Establishment of structures for quality and veterinary controls	1
Environmentally friendly agricultural practices	2
Diversification of activities, providing alternative income	11
Setting up producer groups	1
Renovation of villages, protection of rural heritage	2
Land improvement and reparcelling	1
Vocational training	3
Improvement of rural infrastructure	21
Water resources management	1
Forestry, afforestation, investment, processing/marketing	5
Technical assistance	3

Source: European Commission (2001): SAPARD Annual Report.

The functioning of the land market presents another obstacle. In addition to the fragmentation of ownership of agricultural holdings in many accession countries there are a number of other obstacles that prevent 'land going to the better farmer'. The political will to remove these hindrances appears to be weak, as only 1 % of the budget is set aside for this.

Other 'poor relations' of the SAPARD program are the improvement of quality and veterinary controls. The increasing demands on quality and the sophistication of consumer preferences within the EU make these indispensable. In view of the frequent predominance of smallholdings, the setting up of buying and selling co-operatives should be supported, to exploit the economies of scale in these markets.

As well as scrutinising SAPARD's contents, one can look increasingly critically at the creation of an institutional framework for the program's implementation. By the end of 2001, EU accreditation of payment agencies, which is a precondition for payment of SAPARD funds, had occurred in only five countries: Bulgaria, Estonia, Latvia, Lithuania and Slovenia. Given that it will be another few months before the program is in operation and the first transfers can take place, it is not hard to conclude that, even with a generous accreditation of payment agencies in the remaining countries, the program will not be able to start in these before the middle of 2002. This is problematic for several reasons. The late start means a delay in structural adjustments, which will be prolonged by the fact that, for the first wave of accession countries (who will probably join in 2004), preparation for entry is seriously affected. A further stumbling

Table 2:

*The different projects of the SAPARD program and their share of the total budget*

### ***Delay in implementation***



***Conclusion: reform  
instead of arguments  
about subsidies***

block is the interim evaluation of the program, which is due to take place in 2003. A late start will surely distort the findings. Or it will create pressure on the countries, possibly resulting in rapidly applicable, but not very effective, measures being preferred to a lasting development policy.

It can be concluded that many of the individual measures of EU development policy, including those relating to enlargement, are pointing in the right direction, but that there is still much room for the improvement of content, goals and institutional structure. This is especially true of the SAPARD program. Such a revision should involve more than just checking the payments and their regional distribution. It ought to consider the welfare of all disadvantaged regions in Europe.



## The Adoption of the EU Environmental Acquis: An Opportunity to Protect the Natural Environment and Biodiversity?

FRAUKE PIRSCHER

Central and Eastern Europe harbours a significant proportion of the world's existing biodiversity. Species such as brown bears or wolves, long extinct in Western Europe, are still native here. Furthermore a large number of rare and, for Central and Eastern Europe, unique species and ecosystems exists. For example, the Bieszczady region, situated at the border between Poland, Slovakia and Ukraine, is Europe's largest natural beech forest. It offers a habitat to species such as the black stork, the white-backed woodpecker and the lesser-spotted eagle.

***Eastern Europe has  
unique natural treasures***

Although the former socialist governments of the Central and Eastern European Countries (CEEC) paid little attention to environmental protection when formulating policy, they supported it indirectly in that large untouched areas and extensively farmed areas were preserved. The latter, in particular, contributed significantly to the protection of a large variety of species and traditional landscapes. The preservation of untouched areas was favoured by a low mobility amongst the population and a state-imposed restriction on private economic activity. As a deliberate environmental measure, socialist governments also designated nature reserves to preserve certain flora, fauna or entire landscape formations. Thus nature reserves or national parks existed in all CEEC. Individual species were also given protected status.

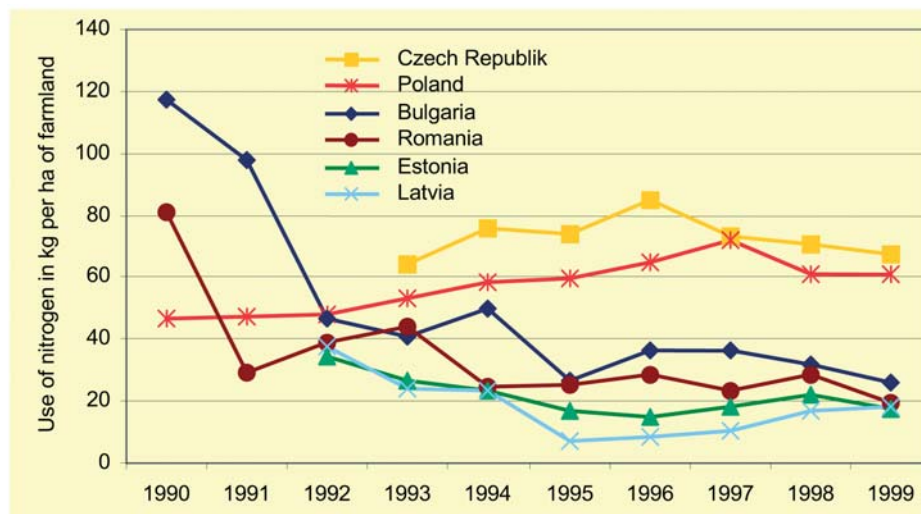
***Extensively farmed  
areas:  
important habitats***

Outside designated zones or remote habitats, however, species, nature and landscape were subject to considerable degradation due to human influence. The establishment of large agricultural enterprises destroyed traditional landscapes, thereby disrupted the habitat of many different species. The intensive use of agrochemicals further harmed biodiversity. Moreover air and water pollution caused by industrial plants posed an environmental threat to large areas.

The process of transition and its associated reforms have considerably changed the economic and legal systems, as well as the political decision-making process. This has also affected the environmental quality. With the change to a market economy, air and water pollution caused by industry decreased significantly. This was partly due to the fact that many factories had to reduce their level of production drastically, or stop altogether, and partly because raw materials were used more efficiently. Measurements of NO<sub>x</sub> and SO<sub>x</sub> levels in the air and analysis of water quality have shown a distinct tendency towards a reduction in pollution during the last few years. According to OECD figures, the Czech Republic was able to reduce its SO<sub>2</sub> emissions by 68% and NO<sub>x</sub> output by 50% between 1987 and 1997. The use of fertilisers and pesticides fell significantly (see table 1 showing nitrogen) as the relationship between input and output prices for agriculture developed unfavourably.

***Transition has reduced  
air and water pollution***

Diagram 1:  
Use of nitrogen in selected  
CEEC



Source: FAOSTAT.

It can also be observed that the introduction of a system based on the rule of law in the CEEC has improved the maintenance and control of restriction on land use in nature reserves.

**Legal uncertainty over  
land ownership leads to  
loss of habitats**

These development tendencies have often prompted the assumption that the change from a centrally planned economy to a market economy has led in general to a reduction of the environmental burden. However, this conclusion ignores some crucial factors tied up with transition that have had a negative influence on regional biodiversity. For instance, the long delay in land privatisation led to land abandonment of many areas previously cultivated extensively. On fallow land, however, habitats develop with poorer species diversity than on extensively farmed areas. The legal uncertainty with regard to land ownership thereby contributed to the loss of crucial habitats for many flora and fauna. The transfer of land back to people not involved in agriculture also increased the proportion of fallow land. In addition, economic difficulties forced farmers to give up traditional farming in favour of monocultures or a very short crop rotation. This change in cultivation also considerably reduced the habitats of individual species. Similar legal uncertainties with regard to the status of national parks and other designated nature reserves impeded an appropriate management of species diversity. ZYLICZ shows for the case of Poland that some enclaves of private and communal property exist whose legal status has hitherto been completely fuzzy. This has hindered the implementation of management-restrictions or prohibitions.

**Reduction in fertilisers  
only temporary**

Although the closure of many industrial enterprises has led to a general reduction in air and water pollution, abandoned warehouses and production plants can still damage the quality of the local soil and water. Concerning the use of fertilisers and pesticides of the past few years, it is feared from an ecological perspective that this reduction will only last so long as the



unfavourable relation between production and product prices exists. As the development of extensive farming did not occur as a result of increased ecological awareness, another increase in chemical pollution can be expected after the economic situation of agriculture has improved. Diagram 1 clearly shows that this development has already begun in some countries.

In view of these diverse factors that have had positive and negative effects on biodiversity, it is difficult to determine whether, since the beginning of transition, the threat to species diversity, ecosystems and traditional landscapes has increased or decreased. Besides, in all CEEC, as in all other countries, there is uncertainty over the exact composition of biodiversity. Normally it is not until a species is threatened that it is systematically registered. Yet new figures from the International Union for Conservation of Nature and Natural Resources (IUCN) reveal that many species are currently under threat in these countries, as diagram 2 shows for fauna.

**Species and ecosystems are endangered further**

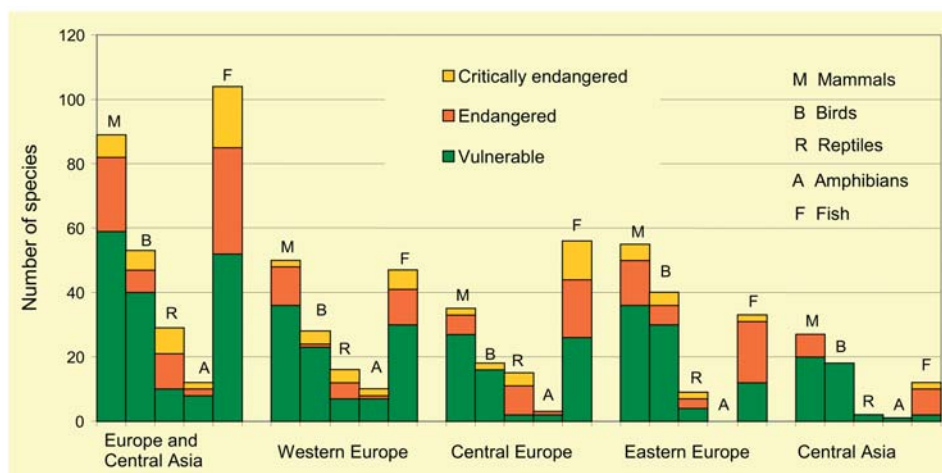


Diagram 2:

*Endangered fauna in Europe and Central Asia*

Source: WCMC/IUCN 1998. WCMC Species Database, Data can be found at <http://wcmc.org/uk>, assessment based on IUCN Red List of Endangered Species 1996.

One must therefore ask whether the adoption of the environmental *acquis* as part of the forthcoming enlargement can contribute to a greater protection of the natural environment and species diversity. It must first be noted that more prominence has been given to environmental issues in the current eastern enlargement than in any previous. All accession candidates are obliged to adopt their national legislation according to EU environmental law. This is a complicated process, as the environmental part of the *acquis* consists of almost one hundred directives and regulations. This legal adjustment can lead to a quicker and greater consideration of environmental protection in the CEEC than would have been the case without accession. On the other hand, the EU guidelines reduce the scope for national priority setting and the consideration of regional particularities in the formulation of environmental law.

**Eastern enlargement emphasises environmental protection**

***Too few institutions for the implementation of the acquis***

The complete implementation of the *acquis* will be a very lengthy process. Frequently there is a lack of necessary regional and local institutions to guarantee a *de facto* implementation of the law. According to an OECD estimate it will take between 10 and 20 years, a time span which seems too long in view of the urgency of protective measures.

It is also important to note that some of the support programs which help to prepare for accession counteract possible successes in environmental and species protection. ZELLEI fears that an implementation of the SAPARD program before the NATURA 2000 criteria are fully satisfied runs the risk that agriculture might proceed more quickly than the necessary protection of species. Similarly, programs to support infrastructure hamper the goal of preserving biodiversity, and vice-versa. The fragmentation of habitats, caused by the expansion of the road network, can be a great threat to the survivability of species.



One can conclude that the adoption of the environmental *acquis*, as part of accession, is a fundamental driving force for environmental improvement, including the protection of species diversity and nature. Greater consideration, however, must be given to the mutual influence of environmental and sector policy, a problem that currently exists within the whole EU. The designation of nature reserves alone is not a sufficient conservation policy, as only a fraction of species in need of protection live in natural habitats. Even after an EU enlargement, such kind of farms should remain viable, that preserve natural habitats by their structure and farming methods.

## The Transition of Agricultural Enterprises in Eastern Germany: A Model for the EU Accession of Poland and Hungary?

ULRICH FIEGE, LUDGER HINNERS-TOBRÄGEL

The breakdown of the socialistic system in the countries concerned meant, that land and other agricultural assets were to be privatised and transferred to legal bodies, some of which yet had to be created. Furthermore, it was important to set up a suitable general framework according to the principle of equal opportunity to ensure the development of competitive enterprises. Finally, the agricultural enterprises had to develop strategies for adjusting to the new situation. Thereby, the diversity of the initial conditions required different approaches to the organisation of the transformation process. Despite all the national peculiarities, there is a number of conditions and adaptation strategies generally true for all countries. In Central and Eastern Europe the restructuring of the agricultural enterprises in eastern Germany was watched with particular interest, since the pressure on adaptation to market-economy conditions was here at its strongest and the reformation process had to be implemented in a relatively short period of time.

After the political transformation, the development of agricultural enterprises in the newly-formed German states was dominated by the legal successors of the collective farms. They assumed the stock of machines, which was tailored for large enterprises and of little resale value. Therefore it was profitable to continue with large-scale cultivation. This business-aim coincided with the employment-interests of the members, most of whom leased their land to the enterprise and worked there for wages at the same time. In progress of the transformation process, the majority of the large enterprises abolished non-core business segments to improve management-efficiency. On the other hand, spreading of the commercial risk on various product markets sporadically resulted in business-models new to agriculture. Legally independent business-units united under the umbrella of a holding company, which would take on the strategic leadership and the co-ordination as well as specific services for the association. Other enterprises tried to reduce their expenses by specialisation or, in contrast, by introducing non-agricultural business segments as a mean of diversification for risk reduction.

***New organisational forms***

Beside the large enterprises in the form of legal entities, mainly re-established farms were founded in the newly-formed German states. Those were either individual farms, according to the agricultural policy model of the former Federal Republic of Germany, or civil law partnerships. Until 1997, the latter form did not only offer advantages as far as subsidies were concerned, it was also of help when acquiring loan capital and exploiting economies of scale. By this way, many of such companies were able to combine the advantages of large enterprises with those of individual farms. Similar to previous years, for the financial year 1999/2000 in Germany partnerships showed highest pre-tax profits plus personnel expenditure (51.200 DM / employee), compared to legal entities (43.800 DM / employee) or individual farms (40.200 DM / employee). This was mainly due to the intensive cultivation of market-crops. The index 'profit or annual net profit plus personnel expenditure' also used in the agricultural report of the Federal Government, facilitates the comparability of the income of various legal forms.

***Cost reduction by economies of scale and improved management***

Apart from windfall gains caused by agro-politically wanted preferences, the choice of the legal form in combination with the development of the enterprise-size also influences the operating costs of an enterprise. Due to the development of scale-effects, an increase of enterprise size generally causes digressing production costs, while transaction costs rise progressively. On same conditions, the total sum amount of production and transaction costs is mainly influenced by the aptitude of the management. The falling producer prices are, in the long term, detrimental to those enterprises, which have no potentials to reduce costs by size, and whose production and organisation are not adapted optimally. As a rule, large agricultural enterprises have a higher potential for reduction in costs than small or medium-sized farms. The exploitation of this potential requires internal adaptation within the enterprise.

***Peculiar enterprise structure***

The structure of the agricultural enterprises in the newly-formed German states is fundamentally different from that in other regions of the European Union. With regard to size, the proportion of leased land, and the share of enterprises formed as legal entities, enterprises in eastern Germany are far above the average of the other member states. Shaped by the process of transition, the system of land tenure in the newly-formed German states is historically unique, as in most of the other Central and Eastern European Countries. The main part of the cultivated land is owned by a big number of smallholders, but farmed by a comparatively small number of large enterprises. Merely in Poland and in Yugoslavia the ownership and holding structure is comparable to that of Western Europe.

In eastern Germany, a large proportion of the family- and full time farms, which have emerged during the transformation process of agriculture, provide a reasonable income for those involved. In a national, European and global context, these enterprises are competitive. When compared with the enterprises in the former West Germany, the expenditure of human labour as well as business costs per area unit are considerably lower in the newly-formed German states. This can not just be explained by the lower level of animal production, as it is also true for enterprises with solely market-crop production. Irrespective of the legal form and despite lower yields, the labour-linked profits in the newly-formed German states are considerably higher. This advantage in agricultural productivity in eastern Germany has been verified shortly after the transformation during the financial year 1992/93. It is found to be lasting till present day, as confirmed by the business results and comparative calculations published in the Government's agricultural report.

***Unexpected path of the transformation process***

There are two main reasons for the good competitive position, so rapidly asserted and maintained by the agricultural sector in the newly-formed German states. First of all, the existing experience in large-size, employment-oriented production was not thoughtlessly abandoned. Secondly, the agro-political model of a peasant family farm, still important after the transformation but questioned since, increasingly lost influence on agricultural policy. This facilitated the advancement of large enterprise structures. Furthermore, the process of restructuring was supported by considerable support-measures from the German Government and the European Union. Subsidies, such as investment grants and reduced interest rates

primarily aimed at increasing capital input. Therefore, on the part of the enterprise, the transformation process was to be judged positively. For the national economy the verdict is less clear. The subsidies burdened the public purse directly as well as indirectly because of the increased unemployment in rural areas. The cause of this unwanted side-effect is, that subsidisation of the capital factor results into higher expenses for the labour factor and, with saturated markets for agricultural products, reduces its employment. When investment is made for the purpose of rationalisation, this effect is obvious. Therefore, subsidised interest rates for investment loans in the CEEC cannot be recommended without qualification. In view of the limited availability of capital, state support for investments in agriculture must be weighed up very carefully, to avoid these negative effects on the labour market.

An undoubtedly positive influence on the reformation of agriculture in eastern Germany had the fast enforcement of essential new legal mechanisms (e.g. the law for agricultural adjustment), as it was possible to revert to a proven legal structure. This was also a reason, why the relative relevance of the legal forms showed hardly any changes after 1994 (Diagram 1).

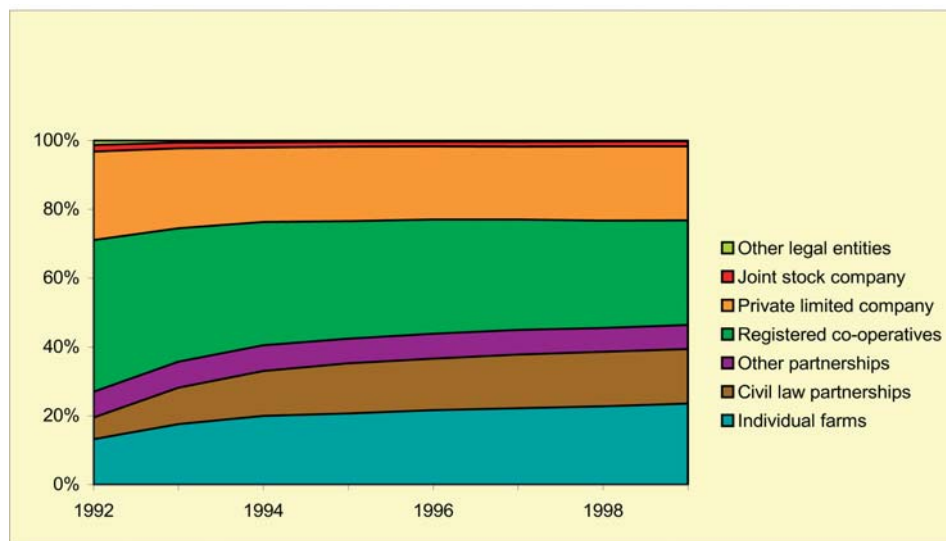


Diagram 1:

*Share of agricultural land by legal form of enterprise in the new German states, 1992-1999*

The present question of substance is, which lessons can be learned from these insights and how to apply them for the restructuring of the agricultural enterprises in the accession countries. According to research in agricultural economics, the following strategies can facilitate enterprise development for successfully coping with the structural changes: utilisation of the economies of scale and the effects of synergy by specialisation and co-operation or by diversification respectively; flexible adaptation to changing market conditions; creation of manageable

**Benchmarks for a successful transformation**

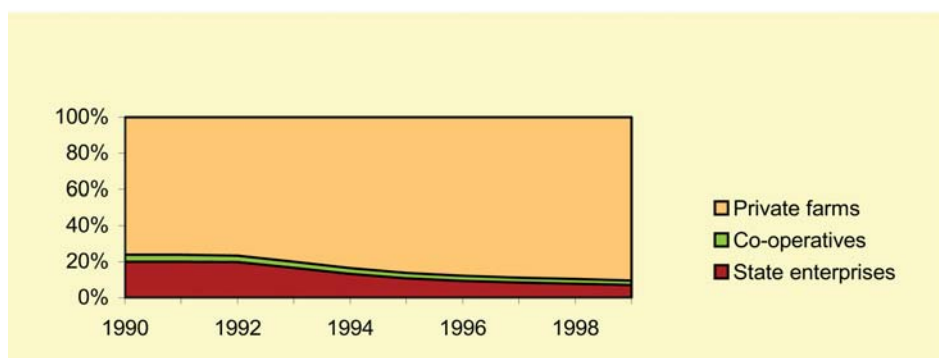
### ***Starting position in Poland and Hungary***

production units; savings or financial credits to balance seasonal liquidity bottlenecks; increased equity capital; targeted investment; and appropriate dividends for the shareholders.

The general nature of the experiences gained from the restructuring of the agricultural enterprises in the newly-formed German states and their applicability to enterprise development in Central and Eastern Europe can be demonstrated on the example of two countries with different starting conditions: Poland and Hungary. In Poland small farm structure was predominant and agricultural policy aimed at supporting the concentration process. In contrast, the Hungarian policy was confronted with the important task to transform excessively large enterprises into smaller, more efficient ones.

*Diagram 2:*

*Share of agricultural land by legal form of enterprises in Poland, 1990-1999*



In Poland, even before the transformation process, the agricultural enterprises were mostly in private hands (diagram 2). Here, too, collectivisation was started after World War II, but discontinued and widely reversed after the Hungarian uprising. Therefore, in 1990, only 4 % of the agricultural area was farmed by co-operatives while peasant holdings with an average size of 6,3 ha worked 76 % of the land. The remaining land (20 %) belonged to rather inefficient large state enterprises, which had mainly evolved during the nationalisation process. With the privatisation of the state enterprises – a process not yet completed – a certain polarisation in the size of the private farms has developed. While the number of farms with holding-sizes lower than 5 ha or above 15 ha increased, the number of those with areas between 5 and 15 ha has declined.

At the beginning of the 1990s the distribution of agricultural land between the enterprises of different legal types in Hungary corresponded with the one in the newly-formed German states of that time. Furthermore, already since the 1980s, the Hungarian farmers had a greater leeway for entrepreneurial decisions and could gather experience in market-oriented production. Until the middle of the nineties the proportion of the agricultural area occupied by co-operatives constantly fell in favour of individual enterprises (Diagram 3). Despite the high fragmentation of land ownership, the cultivation of land is less fragmented than in Poland



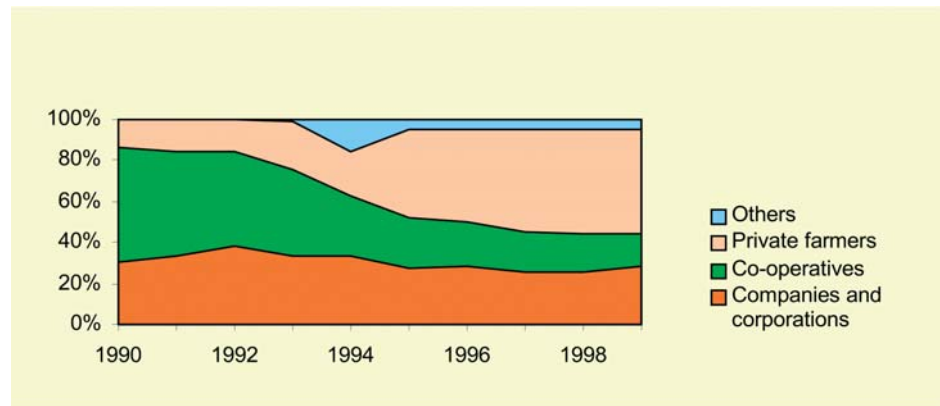


Diagram 3:

Share of agricultural land  
by legal form of  
enterprises in Hungary,  
1990-1999

due to the well-developed system of landleasing. Today in both countries the individual enterprises prevail in their number as well as in the usable agricultural area.

As in most of the countries in Central and Eastern Europe, the price liberalisation in Poland and Hungary resulted into massive losses of income for the farmers. The gap between input costs and producer prices became so wide that measurements for backing the agricultural commodity markets had to be taken. At the same time, the enterprise structure was changing as a result of decollectivisation and privatisation of agriculture. As enterprises scarcely have the opportunity to increase equity capital or to acquire loan capital, their potential for adjustment and development remains limited. A more realistic move is to exploit economies of scale by specialisation and co-operation and to improve the internal organisation by choosing an appropriate legal form to reduce transaction costs. Here, the experience of the newly-formed German states can be of help. Thereby, it is of relevance to access the existing approved potentials of Poland and Hungary, as commercial decisions are usually embedded in a specific historically conditioned cultural and social framework (path dependence).

In Poland, attempts to introduce horizontal and vertical integration for collectivising agriculture remained sporadic and largely unsuccessful. Already in the seventies, politically favoured 'communities of individual peasants', formed by the farmers on their own initiative, met little acceptance. Solely 'agricultural circles', voluntary unions similar to service-providing co-operatives that mainly organised sharing of machinery, were ubiquitous. However, after the political turn, most of them went bankrupt. They were primarily replaced by private service providers, who carried out contracted work with their own machinery and maintained the farmers' owned machines; and machine co-operatives, which had taken over the machinery of the liquidated agricultural circles. From 1992 until 1997, 14 machine circles were established according to the German model. Despite this low number, two of them have already ceased to exist. None of the recognised institutional forms of machine sharing has yet proved enduring. Informal

**Poland: Lacking  
co-operation intentions**

***Desirable: Improvement of the land market***

help between neighbours is still prevailing. Recently, there have been positive developments in the sales organisation of milk producers in north-eastern Poland. At the beginning of the nineties, a producer community was established with the aid of Dutch advisors. The joint action improved their position against the dairies and led to higher milk prices. Furthermore, the efficiency of milk production was considerably enhanced by systematic advice. Beside the support of co-operation and integration, improvements in the Polish land market could lead to a rapid growing of an efficiently operating segment of medium-sized and large enterprises.

***Hungary: versatile adaptation strategies***

In Hungary, the organisation of production, procurement of inputs, and sales is facilitated by various forms of co-operation and integration with regard to exploitation of economies of scale. Contract farming in conjunction with pre-financing of inputs improves the liquidity of enterprises that have little or no chance of acquiring loan capital as, lacking securities, they are not deemed creditworthy. A particular example of the successful restructuring of agricultural enterprises in southern Hungary is the transformation of a co-operative, with over 1000 members and about 6000 ha land, into a joint stock company with largely independent, manageable profit centres (vegetable production and trade, cultivation of market crops, various branches of animal production, feed production, and baking industry). Here, parallels with the previously described developments in eastern Germany become obvious.

***What should be done?***

To establish and sustain competitiveness, the agricultural enterprise structures in Poland and Hungary need to be changed. This conversion is mainly dependent on the state of the process of integration into the EU and can accordingly be differentiated into phases: In the short term, i.e. until accession to the EU, commercial strategies should aim at the realisation of economies of scale, where factor and product markets are functioning poorly. This can be realised by extending the practice of inter-farm co-operation and integration as well as by specialisation. Therefore, as the Hungarian SAPARD plan shows, Hungary has concentrated attention on supporting producer societies. As far as the distribution of different enterprise sizes and legal forms are concerned, there will be little change in this phase if political circumstances remain the same. In Hungary however, a recently tabled bill aims at selective support measures for establishing family farms with max. 300 ha arable farm land as the future agro-political model. In the medium-term, given a constant political framework, for Poland and Hungary relieves on the labour market, improved legal security on the land market, and new possibilities for raising capital will increase the relevance of medium-sized and large enterprises, particularly that of individual farms, partnerships and corporations. This is partly an immediate consequence of the accession to the EU. Co-operatives, in contrast, will only survive in case they fundamentally change their organisation towards reducing transaction costs during the process of decision making, avoidance of free-riding, and effective incentive mechanisms for the employees of all operational areas. During this phase an enterprise structure will evolve, which, however, will need a long-term process for consolidation, as values and attitudes will have to change. As experience has shown, people need more time than assumed initially to get used to the principles of a market-economy and the day-to-day



running of businesses and to develop patterns of behaviour, which were considered to be useless or even damaging before the social and economic transformation.

As measured by the experiences from the transformation of the agricultural enterprises in the newly-formed German states, the production facilities and the management of the Hungarian enterprises imply a successful coping with the accession to the EU. Despite the ideological obstacles present at the political level, the majority of the farmers is striving for achieving economies of scale or reducing transaction costs, and is generally open minded about all forms of co-operative activities. The dynamics in the choice of legal forms in the past few years have shown that large enterprises have a high adaptability too. However, in Poland the accession to the EU will cause great difficulties for the farmers, due to the lack of experience in co-operation and the reluctance to try new practices. With functioning factor markets however, a considerable number of efficient medium-sized and large enterprises should evolve within a short period of time. Alike the ones in the newly-formed German states they should be able to secure a good market position. In both countries agricultural policy would be well advised to overcome political and ideological reservations and to abstain from the discrimination of certain legal forms or enterprise sizes. As the experience of the newly-formed German states show, a steady and open agricultural policy is a prerequisite for the development and maintenance of a competitive agriculture.

### **Summary**



## After Nice: The Future Participation of the Accession Countries in the Design of the Common Agricultural Policy

PETER WEINGARTEN

In Copenhagen in 1993, the European Council laid out the conditions for the admission of new member states. The latter have to fulfil certain economic and political criteria, and adopt the *acquis communautaire*, i.e. the body of common rights and obligations which bind all the member states together within the EU. At the same time, however, the Union must also be ready for the admission of new members. Originally, the necessary institutional reforms for enlargement were supposed to have been completed with the signing of the 1996 Amsterdam Treaty. This was only partially successful, however. In December 2000, therefore, the European Council decided on further reforms. These mainly concern the weighting of votes in the Council, the distribution of seats in the European Parliament, the decision-making procedure at EU level and the composition of the European Commission. They therefore have a decisive bearing on the chances the CEAC will have to participate in the design of the Common Agricultural Policy after being successfully admitted. The Treaty of Nice will come into force after ratification by all fifteen member states. It is thought that this will be at the end of 2002, even though Ireland has (until now) rejected the Treaty in a referendum held in June 2001. The EU sees itself then as sufficiently prepared to admit the ten Central and Eastern European accession countries plus Malta and Cyprus. The reform resolutions of Nice represented the last major opportunity for the current member states to shape the institutional framework without the say of the candidate countries. This is partially reflected in the results of reform.

***The Treaty of Nice:  
EU is ready to admit  
new member states***

As the European Economic Community has developed over the last few decades into the European Union, more and more power in different policy domains has been transferred from the member states to Brussels. Agricultural policy still remains the sphere which is most jointly administered. This is reflected in the high proportion of the EU budget, almost 50%, which is spent on agriculture. Accession to the EU always means, therefore, that a large amount of the national right to make decisions is transferred to the level of the Union. At the same time, however, this allows for the possibility of influencing the shaping of the Common Agricultural Policy. How large this influence is depends essentially on the formal regulations for decision-making, important aspects of which were changed by the Treaty of Nice. There are also other factors which play a part, such as the agents or interest groups in question.

***Agriculture remains  
the most jointly-  
administered policy  
domain***

Agricultural policy decisions are often made as part of a whole package, Agenda 2000 being an example of this. Such packages of resolutions often facilitate compromise, as mutual concessions can be made in different policy domains. This makes it easier for politicians to explain their decisions to voters at home. The ability of the CEAC to shape the Common Agricultural Policy in the future cannot be properly gauged, therefore, without considering the general rules for decision-making and distribution of power within the EU. This is even more important when one considers that accession to the EU under current legislation is not a reversible process, as the European treaties do not allow for the possibility of leaving the Union.

***Decision-making powers at EU level***

The European Council, Council of the European Union, European Parliament and European Commission are the most important bodies at EU level. The European Council, which meets at least twice a year, is made up of the heads of state and government of the member states and the President of the European Commission. These 'summit meetings' often provide a strong stimulus for the further development of the European Union. The Council of the European Union, also known as the Council of Ministers, represents together with the Parliament the legislative branch of power. It is composed of ministers with portfolio of the member states. For example, ministers responsible for agriculture make up the Council of Agriculture Ministers. The EU treaties determine which resolutions require unanimity, a qualified majority, or just a simple majority.

***Weighting of votes in the Council favours smaller countries***

In most cases a qualified majority is necessary. Currently, the number of votes the individual countries have ranges from ten for the four large states (Germany, United Kingdom, France, Italy) to two for Luxembourg. A qualified majority needs 62 of the 87 votes. The new distribution of votes decided in Nice, which will come into force for member states in 2005, has already fixed the votes each accession country will have. The distribution of votes will then reflect more closely the population sizes although, as before, small countries will be over-represented relative to their population. Thus Germany, which has 17.0% of the population of the future EU 27, will get 8.4% of the votes. Estonia, on the other hand, with only 0.3% of the population, will obtain 1.2% of the votes. For all accession countries except the two biggest, Poland and Romania, the share of the votes will be higher than their share of the EU population (see Table 1). These figures, and the number of seats the accession countries will have in the European Parliament, still have to be confirmed in the individual accession treaties, however.

To ensure that decision-making in the EU between 27 or even more member states is possible, the reforms ought to have simplified the decision-making process. This has only partially happened, however. On the one hand, the number of policy domains in which unanimity is needed to pass resolutions was reduced. On the other hand, though, the requirements for a qualified majority were enhanced in three regards. Firstly, the proportion of votes which will constitute a qualified majority is rising from 71.3% to 73.9% in the EU 27 (255 out of 345 votes). Secondly, an absolute majority of member states must also be in favour. Thirdly, on request of an EU member state, a qualified majority presupposes that the countries agreeing represent at least 62% of the EU population. To estimate the distribution of power within committees purely on the basis of the voting regulations, so without considering the preferences of those involved, the Shapley-Shubik power index (SSI) is often used. This calculates how many possible coalitions exist which any one country could help attain a (qualified) majority, i.e. be the deciding factor. This number of winning coalitions is then put in relation to the total number of possible coalitions. The SSI is represented in table 1 as a percentage of the sum of the SSIs of all countries. Together, the Central and Eastern European accession countries have a value of 28.9%. This almost corresponds to their total share of votes. Had the EU decided to opt for the distribution of votes discussed in the run-up to Nice, one which was based on the previous model, and to keep with the present quorum of 71.3% of all votes for a qualified majority, the decision-making power of the CEAC, measured by the SSI, would have been greater, at 31.8%.

Member state	Population		European Council			Europ. Parliament	
	in m.	in %	weights of votes total	in %	SSI <sup>1)</sup> in %	distribution of seats total	in %
Germany (D)	82,0	17,0	29	8,4	8,7	99	13,5
France (F)	59,2	12,3	29	8,4	8,7	72	9,8
United Kingdom (UK)	59,0	12,3	29	8,4	8,7	72	9,8
Italy (I)	57,6	11,9	29	8,4	8,7	72	9,8
Spain (E)	39,4	8,2	27	7,8	8,0	50	6,8
Poland (PL)	38,7	8,0	27	7,8	8,0	50	6,8
Romania (ROM)	22,5	4,7	14	4,1	4,0	33	4,5
Netherlands (NL)	15,8	3,3	13	3,8	3,7	25	3,4
Greece (GR)	10,5	2,2	12	3,5	3,4	22	3,0
Czech Republic. (CZ)	10,3	2,1	12	3,5	3,4	20	2,7
Belgium (B)	10,2	2,1	12	3,5	3,4	22	3,0
Hungary (HU)	10,1	2,1	12	3,5	3,4	20	2,7
Portugal (P)	10,0	2,1	12	3,5	3,4	22	3,0
Sweden (S)	8,9	1,8	10	2,9	2,8	18	2,5
Bulgaria (BG)	8,2	1,7	10	2,9	2,8	17	2,3
Austria (A)	8,1	1,7	10	2,9	2,8	17	2,3
Slovakia (SK)	5,7	1,1	7	2,0	2,0	13	1,8
Denmark (DK)	5,3	1,1	7	2,0	2,0	13	1,8
Finland (SU)	5,2	1,1	7	2,0	2,0	13	1,8
Ireland (IRL)	3,7	0,8	7	2,0	2,0	12	1,6
Lithuania (LI)	3,7	0,8	7	2,0	2,0	12	1,6
Latvia (LA)	2,4	0,5	4	1,2	1,1	8	1,1
Slovenia (SLO)	2,0	0,4	4	1,2	1,1	7	1,0
Estonia (EST)	1,4	0,3	4	1,2	1,1	6	0,8
Cyprus (CY)	0,8	0,2	4	1,2	1,1	6	0,8
Luxembourg (LUX)	0,4	0,1	4	1,2	1,1	6	0,8
Malta (M)	0,4	0,1	3	0,9	0,8	5	0,7
Total EU-15	375,3	78,0	237	68,7	69,2	535	73,1
Total CEAC	104,7	21,8	101	29,3	28,9	186	25,4
Total EU-27	481,2	100,0	345	100,0	1090	732	100,0

Table 1:

Population sizes, votes in the Council and seats in the European Parliament

Notes: Countries ordered according to population size. <sup>1)</sup>SSI = Shapley-Shubik-power index.

Source: HEINEMANN, F. (2001): The political economy of EU enlargement and the Treaty of Nice, paper presented at the 5<sup>th</sup> International Conference 'Institutions in Transition', Otocec, Slovenia, 13.-14.07.01, the author's own calculations.

### ***Blocking minority for the CEEC 10***

The calculation of the SSI power index is based on the assumption that the individual countries are equally open to coalitions with all other member states, i.e. that there are no preferences for particular countries. The accession of the Central and Eastern European Countries, together with that of Cyprus and Malta, will make the EU far more heterogeneous on a socio-economic and political level than it is today. Table 2 shows this using some indicators. EU enlargement will increase the divergence - using the variation coefficients - of per capita income by 62%, and that of the proportion of gross domestic product produced by agriculture by 71%. All of the indicators considered show that both the EU-15 and the CEAC are in themselves more homogenous than the EU 27. Their mean values differ noticeably.

To estimate the opportunities for individual countries to influence the design and formation of policy, it is useful, in addition to the SSI power index, to look at coalitions that one can assume are based on a certain congruence of interests on particular issues. Figure 1 shows that the CEAC have 101 votes. This means that together they can block any resolution in a Council of the EU 27 that requires a qualified majority. If Bulgaria and Romania join the EU later than the other countries, however, then the eight remaining CEAC will have no blocking minority in an EU 25. It is interesting from an agricultural policy perspective that neither the net receivers from, nor net contributors to the agricultural budget (EAGGF) constitute a qualified majority. The same is true of the net agricultural exporters and importers. All of these four groups, however, have a blocking minority. Apart from the Czech Republic, all the CEAC have a large agricultural sector. This group has a clear blocking minority. This is particularly true of the group labelled in Figure 1 as cohesion countries. The term refers to those member states who are currently receiving aid from the cohesion fund, as well as all the accession states, whose per capita income in 2000 was lower than 90% of the EU 27 average.

Both the Baltic countries and the Mediterranean states have more in common with each other in certain areas (e.g. agricultural structure, historical connections) than with the other member states. Both regional groups can only block resolutions if they manage to get Germany and France respectively on their side. The 14 smallest states in the EU 27 will also have a blocking minority. Although they will only have 88 votes between them, they will form a majority of the 27 member states. All CEAC apart from Poland, Romania and Hungary fall into this category. Three of the four most populated countries can together prevent a qualified majority if Germany is amongst them and they make use of the population clause.



		Size		Economic strength		Importance of agriculture		Productivity		Intensity
		Population (m)	Agricultural land (m ha)	Gross domestic product (billion PPP <sup>1)</sup> )	GDP per capita (PPP <sup>1)</sup> )	Agricultural quota <sup>2)</sup> (%)	Agricultural share of GDP (%)	Wheat yield (dt/ha)	Milk yield (kg/cow)	Use of fertiliser (kg/ha)
		1999	1999	2000	2000	1999	1999	1999	1999	1999
Column		a	b	c	d	e	f	g	h	i
EU-15	Total	375,3	143,2	8.510						
	Mean value <sup>3)</sup>	25,0	9,5	567	22.507	4,5	2,0	53,0	5.657	121
	Smallest value	LUX	LUX	LUX	GR	UK	LUX	SU	IRL	GR
		0,4	0,1	19	15.300	1,6	0,7	25,2	4.012	52
	Largest value	D	E	D	LUX	GR	GR	LUX	S	NL
		82,0	30,0	1940	42.800	17,0	7,1	82,7	7.347	241
Variation coefficient <sup>4)</sup>		1,03	1,03	1,06	0,28	0,98	0,85	0,38	0,17	0,50
CEAC	Total	105,0	60,4	921						
	Mean value <sup>3)</sup>	10,5	6,0	92	8.723	21,4	5,9	32,0	3.860	49
	Smallest value	EST	SLO	EST	BG	CZ	SLO	EST	ROM	ROM
		1,4	0,8	12	5.400	5,2	3,2	11,4	2.781	16
	Largest value	PL	PL	PL	SLO	ROM	BG	SLO	HU	SLO
		38,7	18,4	338	16.100	41,7	17,6	51,1	5.491	98
Variation coefficient <sup>4)</sup>		1,06	0,92	1,02	0,39	0,56	0,82	0,38	0,22	0,56
EU-27	Total	481,5	203,8	9.448						
	Mean value <sup>3)</sup>	17,8	7,5	961	19.485	8,2	2,8	45,8	5.372	100
	Smallest value	M	M	M	BG	UK	LUX	EST	ROM	ROM
		0,4	0,01	5	5.400	1,6	0,7	11,4	2.781	16
	Largest value	D	E	D	LUX	ROM	BG	LUX	S	NL
		82,0	30,0	1940	42.800	41,7	17,6	82,7	7.347	241
Variation coefficient <sup>4)</sup>		1,24	1,12	1,46	0,45	1,09	1,46	0,45	0,24	0,61
VC <sup>4)</sup> of the EU 27 in relation to the VC of the EU 15		+ 20 %	+ 10 %	+ 39 %	+ 62 %	+ 12 %	+ 71 %	+18 %	+ 41 %	+ 22 %

Notes: <sup>1)</sup> Purchasing power parity (PPP) represents an artificial currency that takes into account differences in price levels between the individual countries. <sup>2)</sup> The proportion of the civil workforce employed in agriculture. <sup>3)</sup> In columns c to i the weighted mean value is given. <sup>4)</sup> The variation coefficient was calculated by dividing the standard deviation of the indicator in question by its mean value indicated in the table and therefore has no unit of measurement.

Source: The author's own calculations based on data for individual countries from HEINEMANN, F. (2001, see table 1) (column a); FAOSTAT (columns b, g to i); STAPEL, S. (2001): Das BIP der Kandidatenländer, Statistik kurz gefasst Wirtschaft und Finanzen Thema 2, H. 28/2001 (columns c, d); EUROPEAN COMMISSION, DIRECTORATE-GENERAL FOR AGRICULTURE (2001): Agriculture in the European Commission - Statistical and economic information 2000, [http://europa.eu.int/comm/agriculture/agrista/2000/table\\_en/tab.pdf](http://europa.eu.int/comm/agriculture/agrista/2000/table_en/tab.pdf).

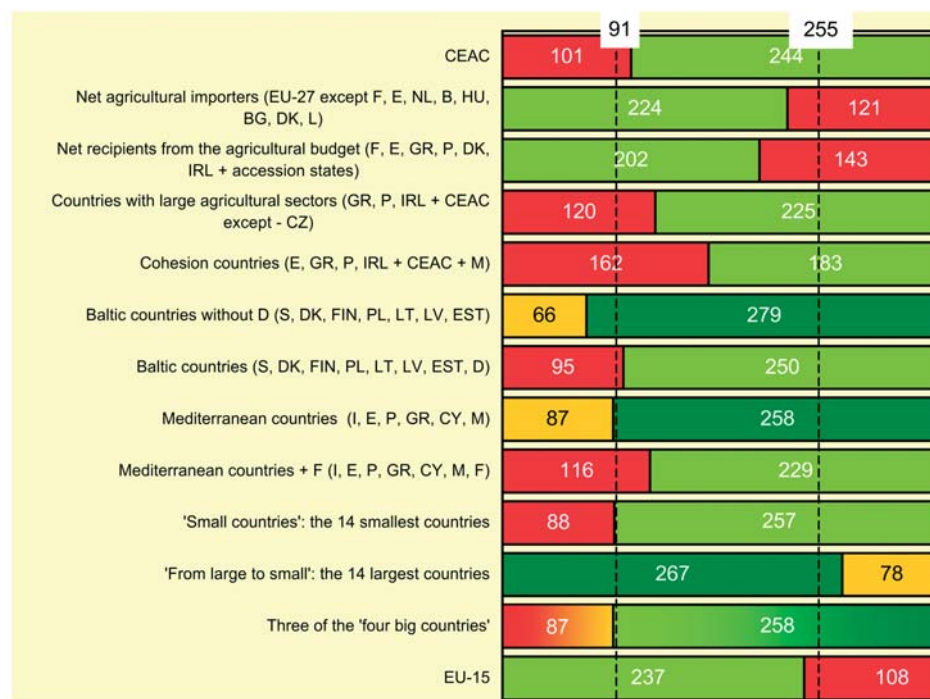
Table 2:  
Greater heterogeneity in  
the enlarged union

### Difficult to obtain working majorities

This numerical analysis of selected possible coalitions highlights that it is easy to find a blocking minority, and much harder to obtain a working majority for many issues. The greater number of member states in an enlarged Union and the institutional reform agreed at Nice will make finding a qualified majority even more difficult than it is today.

Figure 1:

Qualified majorities and blocking minorities in the EU 27



Notes: The first figure in each row denotes the number of votes of the countries in question, the second those of the other member states. Dark red (dark green): blocking minority (qualified majority) obtained, light red (light green): blocking minority (qualified majority) not obtained.

Source: Modified and extended, based on WESSELS, W., (2001): Nice Results: The Millennium IGC in the EU's Evolution, *Journal of Common Market Studies* 39, pp. 197-219.

In its work the Council is supported by a number of committees, including the Committee of Permanent Representatives of Member States and the Special Committee for Agriculture. In the administrative and regulation committees in the agricultural sphere member states are each represented by one person, who in most cases represents the ministry responsible for agriculture in that country. There is the same weighting of votes as in the Council. The large



amount of regulations in the agricultural sphere is also reflected by the fact that the relevant committees have to deal with around 2000 legal texts each year.

As is the case with the weighting of votes in the Council, the distribution of seats in the European Parliament will, from 2004, be based more closely on the population sizes of the individual states. For those countries with relatively small populations, which includes most of the accession candidates, this will lead to a slight weakening of their position. In total, the CEAC will have a quarter of the seats: 186 out of 732 (see Table 1). But changes can be expected here during the accession negotiations, as the Czech Republic and Hungary have clearly been disadvantaged. Ranked according to decreasing population size, the order is Czech Republic, Belgium, Hungary, and Portugal. The number of Parliament seats allocated to each country, however, is 20, 22, 20, and 22. By expanding the scope of the co-decision procedure, the Treaty of Nice has increased the significance of the European Parliament.

Even though the commissioners are independent and no subject of anyone's order, the composition of the Commission will be important for the future ability of the accession countries to influence the Common Agricultural Policy. Because of its right of initiative the Commission is often called the 'engine of the EU'. For the accession countries it is a positive sign that the proposed introduction of a rotation principle for seats on the Commission has been postponed until the Union is enlarged to 27 states. The Council will then determine the final maximum number of commissioners and how the rotation principle is to work. As a collegiate organ, the Commission makes decisions by a simple majority of its members. The same is true for agricultural policy.

From the perspective of the accession countries it is advantageous that some important decisions, e.g. regarding the Commission, have been postponed to a date by which the majority of CEAC ought to have joined the EU. This will allow them, as member states with full voting rights, to participate in the decision-making. It is already expected that, from 2004, further treaty changes will be drafted by an inter-governmental conference. Amongst other things this will look at the demarcation of responsibilities between the EU and the member states, and the role of national parliaments. Prior to accession to the EU, the CEAC will not have an opportunity to participate in decision-making over the Common Agricultural Policy. The same is true of the 2002/3 mid-term review of the Agenda 2000.

After successful accession the CEAC will, on paper, have the same opportunities to influence policy as all other member states within the framework of the institutional regulations. In practice, however, the fact that many agents relevant for agricultural policy decision-making in Central and Eastern Europe have less experience with the day-to-day running of the EU, and are less well integrated into interest groups and (other) informal networks, might disadvantage the CEAC, at least for the first few years. It is also problematic for the CEAC that their citizens cannot be employed by the EU organs until after accession, meaning that they cannot gain valuable experience in advance. For the smaller accession countries, there is the additional problem that the number of people acquainted with the EU agricultural policy is more limited than in countries with larger populations. The CEAC do, however, have

***EU Parliament: Czech Republic and Hungary disadvantaged***

***From 2005: one commissioner for each member state***

***Further need for reform: next inter-governmental conference 2004***

***Less experience at EU level, poorer integration into networks***

***Increasing  
renationalisation of the  
CAP?***

experience of the administrative and decision-making process at EU level from their accession negotiations and introducing strategy, and also from the SAPARD program ('Special Accession Program for Agriculture and Regional Development').

What effects could greater heterogeneity within an enlarged EU have on the future distribution of competencies within the Union? It is possible that the principle of subsidiarity will be strengthened. The EU could further limit itself to introducing broad regulations whose concrete application would then be the responsibility of the member states. This could lead to a certain renationalisation of agricultural policy, at least regarding the financing of agricultural policy. The promotion to the second pillar of the Common Agricultural Policy of agro-environmental political programs and measures to develop rural areas already points in this direction, as measures in this area generally contain a national co-financing of between 25% and 50%. The opportunities introduced by Agenda 2000 for member states to transfer 20% of direct payments into this second pillar (modulation), and to tie the direct payments to the preservation of the environment (cross compliance), also represent a decentralisation of the Common Agricultural Policy. For the current member states, a strengthening of national authority, including authority over financing, is becoming increasingly attractive for many reasons. It would defuse the controversy between the EU and the CEAC, which has developed during accession negotiations, over the question of transferring area and livestock aids. This is because the distribution effects of the CAP would be weakened both between the current member states and the accession countries, and within the accession countries themselves. In addition, better account could then be taken of different regional preferences, of local environmental goods or of strongly diverging agricultural structures.



## Competitiveness of the Dairy Industry in the Central European Candidate Countries and EU Accession

MONIKA HARTMANN

The collapse of the socialist system in the Central European Accession Countries (CEAC) in 1989 brought considerable changes in the production and consumption of dairy products. The elimination of producer and consumer price subsidies, the drop in real purchasing power of the population, privatisation and restructuring in the primary, processing and distribution sector as well as the liberalisation of trade led to enormous problems in the dairy industry which lasted well into the second half of the nineties. Not until recently could a certain stability be detected in this sector. Yet the industry now seems to be faced with even greater challenges, as the entry into the EU requires the implementation and enforcement of the *acquis communautaire*. Moreover, the dairy sector in the accession countries must be in a position to compete with producers from the current member states.

The dairy industry plays an important role in most of the accession countries. In 1999 gross output of this sector in the CEAC came to 5.5 billion Euro, which corresponds to a share of 14.9% of total food industry output. It is not surprising that the dairy sector reaches the highest shares in output of the food industry in the Baltic countries and Slovenia; ranging from 31% to 18%. In these countries a large proportion of agricultural land is permanent pastureland. Both before and after the Second World War the Baltic countries were already net exporters of milk and dairy products. During the Soviet era, large amounts of these products were exported to other Soviet republics. With regard to the dairy industry's relevance in the total value of food production Romania and Bulgaria find themselves at the other end of the scale of accession countries with a share of 5% and 8%, respectively.

In all CEACs considerable progress has been made in the privatisation of state-owned enterprises in the dairy sector. In most of the countries the process is now complete. Only in Lithuania and Romania about 7% and 20% of the capital, respectively, is still owned by the state. Although the methods of privatisation differed from country to country, certain common features are discernible. In general, small enterprises were offered to the highest bidder, either directly or by auction. Large businesses were as a rule first turned into joint-stock companies, with a subsequent transfer of shares to various owners.

One result of the privatisation process is that agricultural producers and/or employees and managers of the enterprises have become the largest group of proprietors in the dairy industry, particularly in the Baltic region, Poland and Romania, but also in Slovenia and Hungary. The aim of giving agricultural producers preferential treatment was to weaken presumed market power in the downstream sector and also to guarantee the delivery of raw milk to the processing industry. Considerable problems can develop, however, in businesses owned by farmers or employees. One reason for this is that these groups lack capital, and thus urgently needed investments do not always occur. Particularly in the initial years of transition, these owners also excluded outside investors, including foreign interests. Yet these are the very people

***Dairy sector in the CEACs is important***

***Privatisation complete***

***New patterns of ownership delay restructuring***

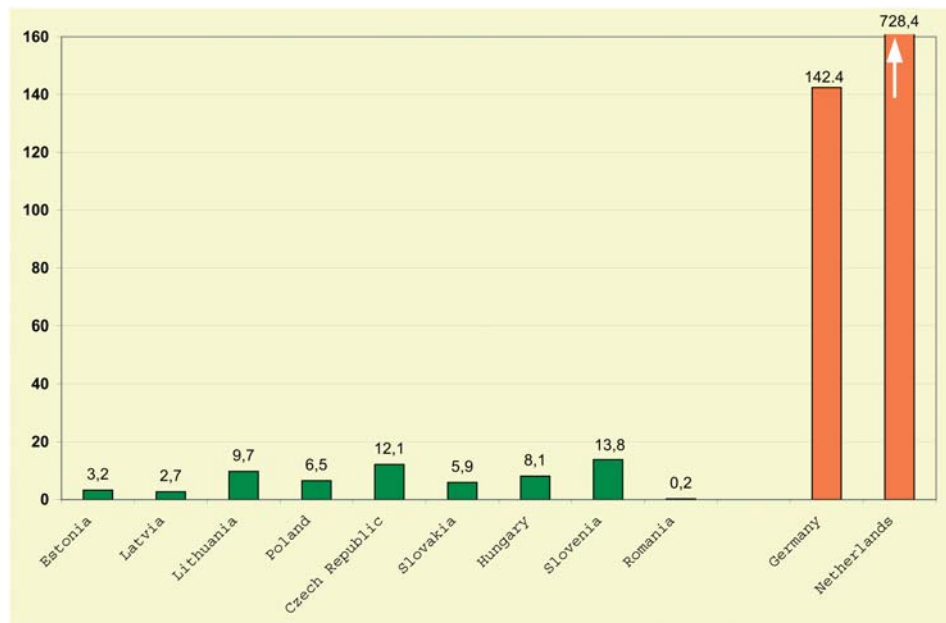
who could have brought in the necessary investment capital as well as management and marketing expertise. Furthermore, there are conflicts of interest over the price of milk wherever farmers own the lion's share of the milk-processing industry. In businesses run by employees, which are particularly found in Romania, there is the danger that restructuring measures will be hampered. In these cases, the welfare of the employees is often paramount, meaning wages and salaries are awarded that bear no relation to productivity. In addition, job security may be a preferred goal. Finally, this form of privatisation runs the risk that the management and decision-making structures of the enterprises will remain unchanged.

***Fragmentation of the dairy industry impedes competitiveness***

With the beginning of privatisation and decentralisation of the dairy sector the number of enterprises initially increased considerably in all CEACs. Since the middle of the nineties all accession countries with the exception of Estonia, Romania and Slovenia experienced a decline in the total number of dairy firms. Also gross output per enterprise and concentration in general showed an upward trend. Nevertheless, the number of enterprises in these mostly relatively small countries can still be considered as too high. In comparison to their western competitors, especially average output per enterprise is extremely low (see Figure 1). Thus, at present the advantages of larger business units in the dairy industry can only be utilised to a limited extent in the CEACs. These are: exploiting economies of scale in processing, procurement and sale; lower transaction costs; and size advantages in the areas of acquisition and processing of information, and in research and development. For the dairy industry in these countries to be able to compete on EU markets, further processes of concentration are necessary in the future. This development has actually been predicted by experts in the respective countries.

***Following liberalisation, a renewed rise in protection***

In the socialist era, production and consumption of dairy products were strongly subsidised by policies in most of the CEACs. This support was drastically reduced or eliminated altogether at the end of the eighties, beginning of the nineties. At the same time trade with dairy products was liberalised. These developments led to a considerable drop in real agricultural producer prices and a sharp increase in consumer prices for milk and milk products. The reduction in demand that followed was more pronounced than the drop in production, resulting in surpluses that could no longer be exhausted on the domestic market. To limit the burden on agriculture and the dairy industry, protectionist measures were either increased or reintroduced during the nineties. At the start of 2000, therefore, the dairy markets in most accession countries were again strongly influenced by the state. With the exception of Slovenia, Hungary and Romania, however, support for the dairy sector is far lower in central Europe than in the EU.



*Diagram 1:  
Gross output per  
enterprise in the dairy  
sector of the CEACs,  
Germany and the  
Netherlands in 1999,  
in million Euro*

Developments in the agricultural sector significantly affect the food processing industry. This also holds for milk processing. Over the period 1989 to 1999 production sharply declined from 38.9 million tons to 28.3 million tons, a drop of 27%. The decline in milk production has considerably reduced raw material availability for dairy plants and has thus been a main reason for this sector's low capacity utilisation. The situation has worsened due to the falling delivery quotas to the processing firms. In 1999 on average only 57% of milk production was delivered to dairies. In the EU this figure is 95%. In addition, the low quality of raw milk is a big problem for the processing sector, as this determines to a large extent the quality of the final dairy commodity. Other important competitive disadvantages for the dairy industry result from the high seasonality of production in the whole region, and also from the small herds in Latvia, Lithuania, Poland, Slovenia, Romania and Bulgaria. For this reason expenditure for collecting the milk from agricultural producers is very high. It represents a significant cost factor for dairy plants in these countries.

A result of the reduction or removal of generous state consumer subsidies for milk was a considerable price rise for these products in the CEAC. Between 1989 and 1999 this development, in conjunction with the decrease in consumer purchasing power, led to a drop in per-capita milk and dairy consumption, by about 19%. Currently this consumption is much lower in the CEAC than in the EU-15: in 1999 the average per capita figures were 247 kg for

***Low quantity and quality  
of input supply***

***Sharp drop  
in consumption***

the EU-15 and 184 kg for the countries of Central and Eastern Europe. This pronounced difference can be seen as an indication of a future increase in the consumption of milk and dairy products in the CEAC. The expected increase in purchasing power in these countries and the probable convergence of preferences between the EU and the CEAC support this prediction.

To be able to estimate the success of the transition process and the competitiveness of the milk industry in the CEAC, it is necessary to analyse the economic performance of the sector with the help of indicators.

***High costs due to low capacity utilisation***

One factor that strongly influences the success of a business or sector is the extent of its capacity utilisation. Due to the much reduced milk deliveries to dairies in the CEAC, capacity utilisation in the processing industry sank considerably. The situation is particularly dramatic in Bulgaria and Romania, where in 2000 only 20% to 30% of production capacity was used. In Poland this figure varies between 30% and 60% depending on the kind of the dairy product manufactured and the season. A medium level of between 50% and 70% is achieved in the Baltic states, the Czech Republic, Slovakia and Hungary. Overcapacity at the levels noted above leads to high fixed costs per unit of production and hampers the competitiveness of dairies in the CEAC, both on domestic and international markets.

***Low milk prices – an advantage for dairies in the CEACs***

Expenditure on raw milk is by far the most important cost component in the production of dairy products. The price for milk paid by the dairies is therefore a crucial factor for the competitiveness of this sector. A comparison of agricultural producers' prices for milk in the countries of Central and Eastern Europe with those of the EU-15 shows that in 1999 the former lay far below those of the EU level. They varied from between 48% of the EU level in Latvia, and 94% of the EU level in Slovenia. Even after considering the 15% decline in EU intervention prices for milk products due to the Agenda 2000 and assuming that it would lead to an equal reduction in market prices for the raw product, a substantial price gap would still remain for all CEACs but Slovenia and Hungary. The low producers' prices for the milk industry in the CEAC compared to those of their competitors in the EU thus represents a competitive advantage. With EU accession, however, these price differentials will level off, resulting in a considerable rise in costs for the milk-processing enterprises in the CEAC.

***Insufficient quality of milk raise processing costs***

Besides price, the product quality determines the ability of a sector or industry to compete on domestic and international markets. The quality of dairy products crucially depends on the quality of the milk. Poor raw material quality increases the costs of heat treatment in the processing, leads to a rise in the input-output ratio and thus to higher input costs and reduces the variety of dairy products that can be produced. Particularly, in Bulgaria and Romania the quality of the raw material is low. In addition considerable quality and hygienic deficiencies exist in the dairy enterprises. Because of these conditions, in summer 1997 the EU imposed an import ban on all dairy products from Bulgaria. Since then four dairies have obtained an export licence for the EU. In addition to these two Balkan countries, Poland, Latvia and Lithuania must also make great efforts to ensure that their milk satisfies EU standards. Currently in Poland only about 40% of milk delivered to dairies meets the highest Polish quality standard,



and thus the EU norms. The Polish government has assessed the cost of upgrading this country's dairy sector to EU norms at about 4 billion Euro. For the necessary adaptation in the milk-processing sector alone the cost would be 625 million Euro. It is suspected that only about 40% of enterprises that exist at present will be in a position to satisfy EU standards in the future, and probably only half of those will be able to stand up to competition in the Union. In Estonia, the Czech and Slovak Republics, Hungary, and Slovenia, 82%, 95%, 84%, 84% and 85% of raw milk corresponds to EU hygiene standards. These countries are thus taking a leading role in fulfilling EU norms in this area, although they also all need considerable investment to adapt the dairy industry to EU quality, hygiene and environmental regulations.

Labour productivity in the dairy industry, calculated here as approximate by gross output per employee, shows a significant heterogeneity amongst the CEACs. In 1999 the figures ranged from 8000 Euro in Romania to 169000 Euro in Slovenia, with a weighted average of 45000 Euro for the whole region. Productivity in the accession countries was only 9% of that in Germany. This does not mean, however, that the dairy sector in the CEAC is marked by poor efficiency. Labour productivity should be at different levels if the structure of factor prices and/or input-output price relations differ from each other. This is certainly true for the countries in consideration. Whereas, for example, the producers' price in 1999 for milk in Hungary reached 84% of the German level, wages in the Hungarian food industry were 12% of the corresponding figure in Germany. Nevertheless, differences in productivity between the CEAC and the EU states suggest the need for adaptation and adjustment after EU accession. One expected result of EU membership, and therefore the adoption of the Common Agricultural Policy by the accession countries, will be a balancing out of agricultural producers' prices. Wage differences between the CEAC and the EU will also diminish, albeit to a lesser extent. These new economic conditions require a restructuring of the entire economy, including the dairy sector.

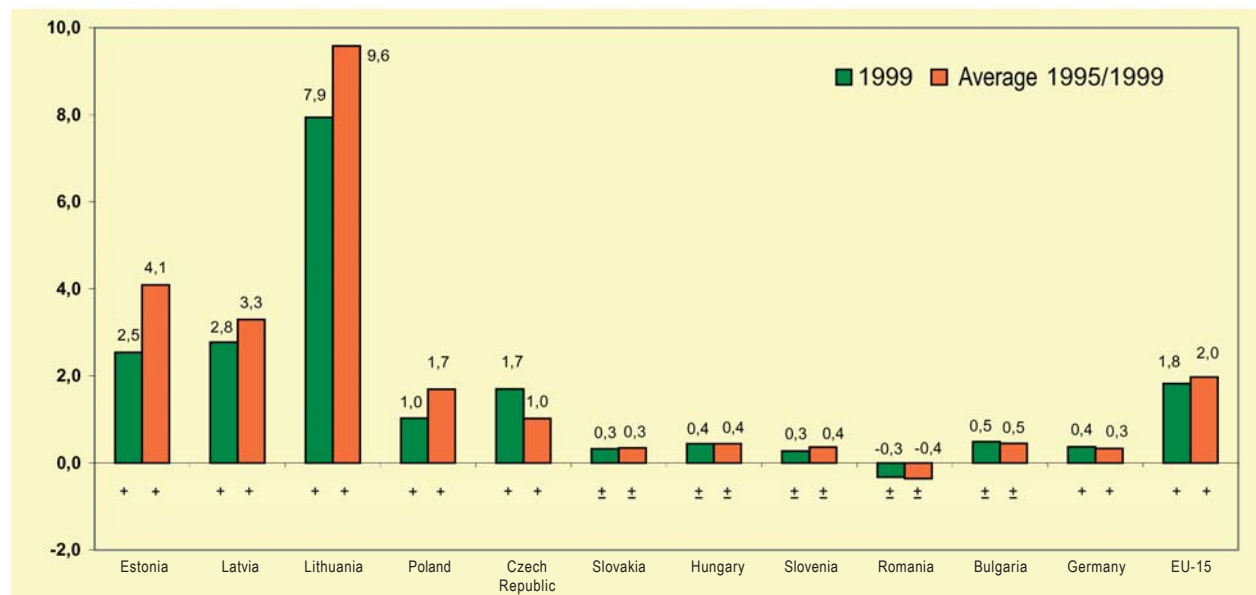
The calculation of market indicators, such as that of the Relative Export Advantage (RXA) Index, the Relative Import Penetration (RMP) Index, and the Relative Trade Advantage (RTA) Index offers another way of finding out about the performance and efficiency of a sector (see diagram 2). These indicators show a clear competitive advantage for the dairy industry in all three Baltic states, Poland, the Czech Republic, Germany and the EU-15. The Baltic countries and the EU-15 show particularly high RTA values, albeit with a downward trend. In the Baltic countries this development was triggered by the 1998 financial crisis in Russia, which severely disrupted export flows of these countries to the East and thus to their traditional export markets. For Slovakia, Hungary, Slovenia, Romania and Bulgaria no clear indication can be found with respect to the existence or lack of competitiveness. However, especially for Romania the results hint at a competitive disadvantage with no signs of improvement.

***Low labour productivity suggests the need for adjustment after EU entry***

***Competitive analysis based on market indicators reveals a heterogeneous picture***

Diagram 2:

Competitiveness of the dairy sector in the CEACs, Germany and the EU member states, value of the Relative Trade Advantage (RTA) Index in 1999, and for the period 1995-1999 <sup>1)</sup>



$$1) \quad RTA_{ij} = RXA_{ij} - RMP_{ij} \text{ mit } RXA_{ij} = (X_{ij} / \sum_{l, l \neq j} X_{il}) / (\sum_{k, k \neq i} X_{kj} / \sum_{k, k \neq i} \sum_{l, l \neq j} X_{kl}), \quad RMP_{ij} = (M_{ij} / \sum_{l, l \neq j} M_{il}) / (\sum_{k, k \neq i} M_{kj} / \sum_{k, k \neq i} \sum_{l, l \neq j} M_{kl})$$

X(M) stands for exports (imports), the index i and k (j and l) refers to the product (country) in question. Values for RXA (RMP) greater than 1 indicate a relative export advantage (a high level of dependence on import) of the particular product. Positive (negative) RTA values indicate comparative trade advantages (disadvantages). It can be presumed that the country in question is competitive on the world market for dairy products if the RTA is greater than 0 and the RXA greater than 1. This is shown by a (+) under the corresponding RTA column. A country is uncompetitive if the RTA is less than 0 and the RMP greater than 1. This is indicated by a (-) under the corresponding RTA column. In all other cases no clear conclusion can be reached for the country in question regarding the international competitiveness of its dairy industry. This is indicated by a (+-).

## Conclusions

In the 1990s the dairy sector in the CEACs was exposed to an enormous pressure to adapt. As a result of privatisation and liberalisation in most CEACs deliveries to dairies sharply declined, imports increased and a de-monopolisation of the dairy industry took place. This helped bring about intensive competition on the domestic milk markets in the CEACs. In general, the process of de-monopolisation resulted in a fragmented structure. This is one of the main problems of the milk processing industry in these countries, as the businesses, due to their small size, can rarely make use of economies of scale. Nevertheless, in most CEAC

a trend towards greater concentration in the dairy industry has recently been discernible. As the enterprises increasingly need financial means to meet EU requirements over product quality, standardisation, and hygiene, it is expected that business mergers and/or liquidations in the milk processing industry will continue to rise.

The economic performance of the dairy industry in the accession countries shows a very heterogeneous picture. On the one hand the milk processing industry in these countries benefits from low producers' prices for milk, low wages, and from the availability of a qualified workforce. A further advantage for this sector is the expected future increase in the consumption of milk and dairy products. On the other hand the businesses suffer from overcapacity, leading to high fixed costs and thereby reducing their competitiveness on domestic and international markets. What is more, in most dairies there are serious deficiencies in meeting EU standards for hygiene, food safety, quality and environmental protection.

EU entry will have significant consequences for the dairy industry in the CEAC. With the removal of all trade barriers, businesses in these countries will see a considerable expansion of their potential market. However, they will also be directly in competition with the EU dairy industry on EU markets. That largely comes from big Western European enterprises that can afford to spend considerable sums on sophisticated marketing strategies and product innovations. These sorts of investment are crucial in a discriminating consumer market, in which consumers demand high standards with respect to product quality and safety, as well as product differentiation and other services. With the opening up of the markets, the milk processing companies in the CEAC will also have to face increasing competition in the domestic market. Considering their current situation it will not be an easy task for the dairy industry in the accession countries to withstand such competition. An improvement of the technical and economic efficiency in the processing sector, as well as the search for strategic alliances, are urgently needed for the dairy industry to be able to overcome the challenges that lie ahead.



## The IAMO – a Brief Portrait

The IAMO was founded in 1994 to monitor the transition process of the agricultural and food economy in the countries of Central and Eastern Europe. A non-university research centre, it is a member of the 'Gottfried Wilhelm Leibniz' academic network (WGL), perhaps better known by its former name, the 'Blue List'. The IAMO also maintains a close relationship with the Martin Luther University Halle-Wittenberg. The aim of the Institute is to establish how a thorough and socially balanced transition in the agricultural and food sector can take place. The great complexity of a simultaneous transition of the former planned economies and centrally governed social systems places a high demand on research, particularly as this transformation has no historical precedent.

The main tasks of the Institute are research into agricultural development in Central and Eastern European Countries in transition, and the education and development of German and foreign scholars. The IAMO also sees itself as a forum for debate and for the dissemination of information on issues relating to the agricultural and food sector in this region. For this reason the Institute promotes the development of networks within the academic community. Like all the WGL institutes, the IAMO has to undergo regular appraisal by an independent commission, which inspects the Institute's work in the context of its aims. The evaluation carried out in 2000 concluded that the IAMO achieves 'good to very good academic research', thereby confirming the success of our work.

Even after more than a decade of transition in Central and Eastern Europe, the agricultural and food sector has not lost its central economic and social importance. This can be seen by the comparatively high proportion of the population working in agriculture, or by its contribution to GDP. In many ways agriculture acts as a catch-all for those out of work as a result of restructuring in other sectors. This trend, apparent in many countries in transition, the lack of alternative job opportunities, and a poorly-developed social welfare system, has forced the changeover to an extensive subsistence economy. This has helped to cushion social hardship in the transition process but it has also meant that the agricultural and food sector still has a long path of reform and restructuring ahead of it. In all areas of the economy and society transition must therefore be advanced rapidly. Out of consideration for the special importance of the agricultural and food sector - particularly with regard to the development of the countryside - this sphere must be supported, targeting the elements of greatest importance. A primary goal of the reform efforts must therefore be to stabilise the agricultural and food sector of the CEEC. This is of particular importance in relation to the growing disparity between rural and urban areas, the threat of urbanisation or growing poverty in some countries, and domestic political stability which is critical for the progress of reform. Furthermore, the efficiency or competitiveness of the agricultural and food sectors in the reforming countries is essential for their inclusion in world markets, particularly as many CEEC were traditionally net exporters of agricultural products, or will be again in the future. To ensure the international competitiveness of the agricultural and food industries of those countries wanting to join the EU in the next few years, it is critical that EU quality standards are met.

### ***Aims and core tasks of the IAMO***

### ***The agricultural and food sector in transition***



***The Research Centre at Halle (Saale)***

Halle has a long tradition of research into agriculture. Besides the IAMO, an agricultural faculty has its home here, which in the agro-economic sphere concentrates particularly on the process of transition in the new *Länder* of Germany. The links between the IAMO and the agricultural faculty are many and varied. In addition to joint research projects, there is collaboration in the education of students. As members of the agricultural faculty of the Martin Luther University Halle-Wittenberg (MLU), the heads of department of the IAMO are included in the teaching and committee work of the faculty. The *research student seminar* and the *agro-economic colloquium* are also organised jointly by the agricultural faculty and the IAMO. The following have agreed to speak at the colloquium during the winter semester of 2001-2002: Prof. Dr E. Serova, Institute for Transition Economics in Moscow, Russia; Dr W. Milch, Saxony-Anhalt Ministry of Regional Planning, Agriculture and Environment; R. Thiel, Institute for Agriculture in Brandenburg; Prof. Dr P. Wissing, Association of Co-operatives in Central Germany, Halle (Saale); Dr Thomas Heckeley, Institute for Agricultural Politics at Bonn University; Dr T. Lange, AMG Saxony-Anhalt mbH; and B. Forstner, Federal Research Institute for Agriculture, Brunswick-Völkenrode. Academics from the IAMO regularly participate in the annual *university conference* on agricultural science, held by the faculty.

The Institute also has close relations with the Institute for Co-operatives, Halle, which was founded in 1998. Together with the Halle Institute of Economic Research, the IAMO organises the *Central and Eastern European Seminar*, which discusses the work of both institutes. The seminar provides new stimulus for further co-operation. The variety of joint projects at the research centre in Halle makes it possible to use previous findings concerning the process of transition in Eastern German agriculture for research work on the development of the agricultural and food sector in Central and Eastern Europe.

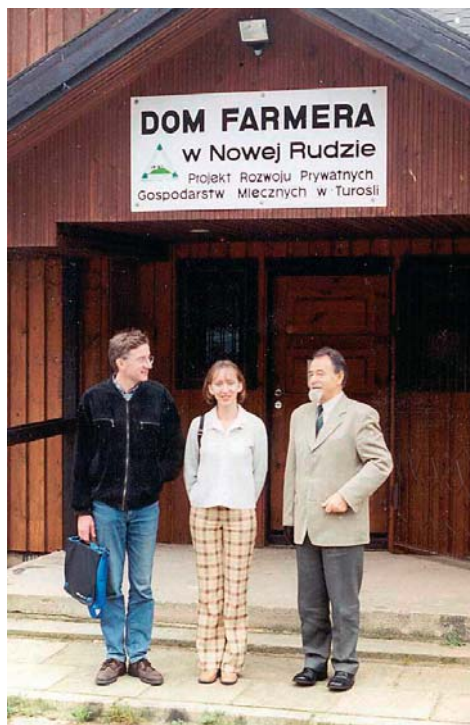
***Joint projects with other university institutions***

The IAMO works closely with faculties of agriculture and economic sciences from other universities, particularly those in Berlin, Bonn, Hohenheim and Göttingen. The IAMO and the Institute for Agro-economics at the Catholic University in Leuven, Belgium, maintain a varied exchange of scientific information. There is also a large number of links to agro-economic chairs and institutes at agricultural colleges and universities in Central and Eastern Europe. These include the University of Szczecin, the Agricultural University of Warsaw, and the Technical-Agricultural University of Olsztyn in Poland; the Timiryazev Academy in Moscow and the State Agricultural University of Kostroma in Russia; the Agricultural University in Nitra, Slovakia; the University for Economic Sciences in Budapest, Hungary; the Thracian University of Stara Zagora; the University for the National and Global Economy and the College for Economics in Sofia, Bulgaria; the State Agricultural University in Sumy, Ukraine; and the University of Ljubljana in Slovenia.

***Joint projects with non-university institutions***

The numerous contacts with non-university institutions are also very important for the IAMO's work. There are joint projects with the Institute for Business Economy, and the Institute for Market Analysis and Agricultural Trade Policy at the Federal Research Institution for Agriculture (FAL) in Brunswick-Völkenrode, the ASA Institute for Sector Analysis and Policy Advice GmbH in Bonn, the Institute for Agricultural Technology Bornim e.V. in Potsdam-Bornim, and the





Institute for Regional Geography in Leipzig. In Northern and Western Europe the IAMO's partners are: the Agro-economic Research Institute (LEI-DLO) in the Hague, Netherlands; the Agro-economic Research Institute in Helsinki, Finland; and the Austrian Federal Institute of Agro-economics in Vienna. Relationships with non-university institutions in Central and Eastern Europe enrich the IAMO's research. Of note here are the Pan-Russian Institute for Agricultural Problems and Computer Science, the Research Institute for Agro-economics at the Russian Academy of Agricultural Sciences and the Institute for Economy in Transition in Moscow, and the Northwest Institute for Agro-economics in St.Petersburg-Pushkin, Russia; the Research Institute for Agricultural and Food Economics in Bratislava, Slovakia; the Research Institute for Agro-economics in Prague, Czech Republic; the Institute for Agro-economics at the Academy of Agricultural Sciences in Kiev, Ukraine; the Research and Information Institute for Agro-economics in Budapest, Hungary; and the Institute for Agro-economics at Minsk in Belarus.

In September 2001, the fifth and final year completed the two-year postgraduate course 'Local and Environmental Agriculture in the Transition Countries' which leads to a 'Master of Agricultural Science' degree (M.Agr.Sc.). This postgraduate degree had been run jointly by the Martin Luther University and the IAMO since 1995. Following recommendations made by the Scientific Advisory Board, this degree is to be replaced by a socio-economic postgraduate course focusing on 'Agricultural Sciences in Central and Eastern Europe'. The course will appeal to both German and foreign students. The new orientation towards the promotion of talented young scholars takes into account the fact that degrees in the countries of Central and Eastern Europe have adjusted to Western European standards in the last few years. For this reason, higher demands for opportunities in further education for the high-flyers of the future can now be realised.

From 2002 the IAMO and the agricultural faculty will run agro-economic courses for graduates in certain countries of Eastern Europe. During a four-week summer course which will take place alternatively in an Eastern European country or Germany, the students will benefit from the latest information about agricultural policy, market studies and business studies. The first course is planned for July 2002 in Ukraine.

### ***Postgraduate study in agricultural sciences***

### **Doctoral students**

Promoting the next generation of academics is one of the core tasks of the IAMO. The Institute supports research projects both for doctorates and *Habilitation*, the qualification leading to tenure. At present twelve theses are being supervised at the IAMO, nine internal and three external ones.

Together with the Institute for Agricultural Economics and Regional Planning at the Martin Luther University Halle-Wittenberg, the IAMO holds a regular seminar for doctoral students. This gives students from both institutes the opportunity to present their framework, methodology and (provisional) conclusions at least once a year.



### **Visiting Scholars at the IAMO**

Co-operation with other research institutes was also supported in 2001 by many study visits of foreign colleagues. The IAMO's new home provides a perfect place to receive these visitors, as they can both work and stay in the building. In 2001 we were host to the following guests at the IAMO. Due to the limited amount of work space, their number cannot really increase.

Prof. Dr O. **Patlassov**, Omsk State University, Institute for Further Education and Agricultural Commerce, Omsk, Russia, 25/01 - 23/02

Dr D. **Saktina**, Latvian Institute for Agricultural Economics, Riga, Latvia, 01/02 - 07/02

Prof. Dr N. V. **Chepurnykh**, Timiryazev Academy, Institute for the Sustainable Development of Rural Areas, Moscow, Russia, 19/03 - 30/03

T. **Matveicheva**, Timiryazev Academy, Institute for the Sustainable Development of Rural Areas, Moscow, Russia, 19/03- 30/03

P. **Kiss**, Ministry of Agriculture, Budapest, Hungary, 01/04 - 30/09

Prof. Dr O. **Strokova**, Pan-Russian Institute for Agricultural Problems and Computer Science, Russian Academy of Agricultural Sciences, Moscow, Russia, 05/04 - 09/05

R. **Romashkin**, State Lomonossov University Moscow, Faculty of Economics, Chair of Agro-economics, Moscow, Russia, 05/04 - 09/05

Dr K. **Borodin**, Pan-Russian Institute for Agricultural Problems and Computer Science, Russian Academy of Agricultural Sciences, Moscow, Russia, 05/04 - 06/05

E. **Vöneki**, Agricultural Intervention Centre Budapest, Hungary, 16/04 - 15/07

Dr S. **Bojnec**, Ljubljana University, Slovenia, 26/04 - 14/05/2001 and 10/07 - 20/08

Prof. Dr E. **Otolinski**, Agricultural University, Krakow, Poland, 23/04 - 28/04

Prof. Dr D. **Epstein**, Northwest Institute for Agro-economics, St. Petersburg-Pushkin, Russia, 29/04 - 15/07

Prof. Dr A. **Revenko**, Ukrainian Academy of Sciences, Institute for Economic Forecasting, Kiev, Ukraine, 06/05 - 13/05

Dr V. **Shaikin**, Timiryazev Academy, Chair of Agricultural Markets and Market Conditions in Russia, Moscow, Russia, 10/05 - 23/05

Prof. Dr A. **Gataulin**, Timiryazev Academy, Chair of Economic Cybernetics, Moscow, Russia, 29/06 - 14/07

Prof. Dr W. **Zietara**, Agricultural University, Chair of Agricultural Business Studies, Warsaw, Poland, 09/07 - 11/07

Dr L. **Michailowa**, National Agricultural University, Sumy, Ukraine, 05/07 - 25/08

Dr S. **Gerasin**, RosAgroFonds, Moscow, Russia, 18/08 - 18/09

Dr A. **Kedaitiene**, Vilnius University, Economics Faculty, Chair of Marketing, Lithuania, 03/09 - 06/10

S. **Bondar**, Charkov State Technical University for Agriculture, Charkov, Ukraine, 08/10 - 04/11

I. **Khorechko**, State Agricultural University Omsk, Russia, 23/10 - 24/10

S. **Tolbatova**, State Agricultural University Sumy, Ukraine, 01/11 - 20/12

Prof. Dr V. **Zinovchuk**, State Agro-ecological Academy of the Ukraine, Zhitomir, Ukraine, 22/11 - 20/12

N. **Karlova**, Institute of Transition Economics, Moscow, Russia, 16/11 - 16/12



***Selected externally-funded projects***

In the past year further outside funding was obtained for research projects. The Food and Agriculture Organisation FAO gave the IAMO the task of producing a critical analysis of their prognoses for the development of agriculture, both globally and in the transition countries. The European Commission supports the Institute's research into commercial transaction costs by providing a research grant for two years. The 'Network of independent agricultural experts for the accession countries of Central and Eastern Europe', founded in 2000 and also funded by the EU, advises the Commission on questions of the development of the agricultural economy and rural areas. In a research project financed by the federal state of Saxony-Anhalt, the analysis of 'the relevance of the restructuring of agricultural businesses in eastern Germany to the shaping of the transition process in Central and Eastern European Countries' was continued.

*Learning from experience*

The last-mentioned project is being carried out by the IAMO, together with the Institute for Agricultural Economics and Regional Planning at Halle-Wittenberg University. Taking as a starting point the experience of transition in eastern Germany, which has been a focus of research at the university over the last few years, the investigation examines the extent to which this acquired knowledge can be applied to the countries of Central and Eastern Europe, so as to support the process of restructuring there. Combining the research capacity and specific knowledge of both institutes permits the topic to be approached speedily and systematically.

In the past year work has focused on the implementation and evaluation of long-term studies on a number of agricultural enterprises in Poland and Hungary. Past experience shows, amongst other things, that the learning process between the countries involved is not one-way traffic. The new *Länder* of Germany can also benefit from the experiences of their eastern neighbours. This partnership can help to prevent mistakes from being repeated in another country, check whether positive developments are generally applicable and, if so, help to disseminate them. Business models are also drawn up on the basis of typical businesses. These have already been successfully used in the new states of Germany, Poland and Hungary.

*The IAMO advises the European Commission in 2001 and 2002 as well*

In the 'network of independent agricultural experts for the accession countries of Central and Eastern Europe' IAMO scholars acted as co-ordinators and advisors to the European Commission in 2001 as well. The Directorate-General for Agriculture of the Commission established the network at the end of 2000. It is made up of over 20 country experts (two to three per accession country) and the Advisory Body, composed of academics from the IAMO and Trinity College, Dublin. The Advisory Body is headed by Prof. Dr Froberg. Its task is to advise the European Commission on questions relating to the development of the agricultural economy and rural areas in Central and Eastern Europe. The development of the food-processing sector in the candidate countries has been at the centre of the network's activities. In 2002, the analysis of the situation in the candidate countries will continue in two main areas: social security systems, care for the elderly and demographic developments in the agricultural sector; and issues relating to animal production, such as the demand for animal products and the use of feed.

In a currently ongoing project of the FAO, the developments of global agriculture until 2030 are being forecast. These prognoses for production, demand and trade of agricultural products are based on models and expert opinions. The FAO has commissioned the IAMO to examine the current prognoses for the development of agriculture in 27 transition countries, and to give an expert analysis of these. Besides the 10 EU accession countries, five Balkan states and 12 countries of the Commonwealth of Independent States (CIS) were examined. The project 'Prognosis for Agricultural Development in Transition Countries' was completed with an as yet unpublished report to the FAO in September 2001.

*Prognoses for agriculture in the transition countries until 2030*

The report 'Issues and Trends in Agricultural Development in Transition Countries - IAMO Comments on FAO's AT 2015/2030 Projections' first examines general trends of economic and particularly of agricultural development in the first 10 years of transition. The main part of the report is the concrete analysis of the FAO prognoses and takes groups of countries in turn. On the basis of the individual course of transition, the current macroeconomic environment and the production, demand and trade data for 1993-1998, the IAMO has produced a critical appraisal of the FAO projections for 2015/2030. This allows trends to be identified and balanced with the forecast data.

The analyses clearly show that all countries experienced a collapse in production after the beginning of transition. As previously, however, agriculture remains relatively productive, and in most countries will reach or surpass the level prior to the beginning of transition by 2015. For the main producers, Russia, Ukraine and Kazakhstan, however, such a rapid recovery is not expected. The prognoses for 2015 are, in general, lower than the production figures for 1993. These countries will not reach their starting level of agricultural production until 2030. In all transition countries, the production and trade structures increasingly conform to the respective comparative advantage of the countries on international markets. As an example of the expected developments it is noted that the region of the transition countries will develop from a grain importer to exporter, and that meat production will increase according to demand with the effect that a large drop in imports can be expected.

The 'Structural Development of Farms and Rural Areas' department managed to obtain funding within the framework of the EU program 'Improving Human Research Potential and the Socio-economic Knowledge Base' for the two-year project 'Evaluation of Transaction Costs in Agricultural Enterprises in CEES'. The aim of the project is to discover the level of transaction costs in selected large agricultural enterprises in Central and East European countries, and thereby draw conclusions about their further development. To help finish the project the EU has funded a research post relating to the topic. Post-doctoral candidates up to the age of 35 with the relevant theoretical and methodological expertise can apply.

*Transaction costs of agricultural businesses in CEEC*

For the IAMO, conferences and seminars represent an important forum for the exchange of scientific knowledge with experts from Germany and abroad. The lectures and discussions as well as the informal contacts on the fringe of these events often forge new relationships or strengthen existing ones. The coming together of experts with decision-makers from politics and the food economy often provides interesting stimulus for the work to restructure the agricultural and food sector.

**Conferences and seminars**



### Green Week 2001

At Green Week 2001 in Berlin, the IAMO, together with the working group 'Agricultural Research on the Transition Countries in Central and Eastern Europe' of the Council for Tropical and Subtropical Agricultural Research, organised a symposium as part of the 8<sup>th</sup> East-West Agricultural Forum. The topic was the 'Adoption of EU Production and Product Standards: the Effects on the Competitiveness of the Agricultural and Food Industry in the Accession Countries'. Experts from Central and Eastern Europe and from Germany discussed the necessity of standards and looked at examples of meat production in Hungary, Slovenia and Poland. It was observed that the adaptation of legal and administrative-technical structures to EU law, and the adjustment of production plants and processes to new standards is a substantial task for the accession countries. It is possible that grace periods for the introduction of strict quality standards, which were in part demanded by the accession countries, will be accepted for production standards (e.g. regarding the environment), but not for product standards affecting the health safety of the product. The introduction of formalised quality assurance systems promise success. In the Hungarian pork industry the spread of such programs has already led to a clear improvement in the quality of carcasses. In Poland systems to ensure quality are also being given a good opportunity. They will become more widespread as concentration of businesses in the meat-processing sector increases.

### Subsistence economy in CEEC

'Subsistence Agriculture in Central and Eastern Europe: How to Break the Vicious Circle?' - this was the title of an international seminar held at the IAMO from 6-8 May 2001. Under the patronage of the European Association of Agricultural Economists (EAAE) more than 40 experts from Europe and the USA discussed a widespread problem in the transition countries of Central and Eastern Europe: the subsistence economy. In spite of its considerable economic and social importance in Central and Eastern Europe, there has been little scientific knowledge about this form of agriculture until now. As a result the response to the seminar was considerable, as was the readiness of the participants to discuss possible solutions. The analyses of Prof. Dr Heidhues and Dr Brüntrup from Hohenheim University focused on transaction costs, risk and insecurity - these they deem to be the main problems of the

development from a subsistence to a market-oriented society. Prof. Lerman from the World Bank emphasised the necessity of functioning land and credit markets, but also the importance of co-operation between businesses, and of education and advice in the process of development of subsistence farms. Prof. Dr von Braun from the Centre for Development Research in Bonn also rejected a '*laissez-faire* strategy'. Instead he called for a policy aimed at reducing risk and at appropriate taxation of agricultural businesses, as well as increased research efforts in this field.







Together with the Bornim Institute for Agricultural Technology e.V. in Potsdam-Bornim, an international conference was organised in July 2001 with the title 'Approaching Agricultural Technology and Economic Development of Central and Eastern Europe'. It was primarily aimed at academics from Central and Eastern Europe and took place in the IAMO building in Halle. In total, 53 agro-economists and engineers from

*Technology and economic development*

13 countries and from the organising institutes took part. The focus of the lectures, poster presentations and expert discussions was the interaction between possible technological development, sizes of businesses, capital requirement and production efficiency.

Characteristic of agricultural technology in Central and Eastern Europe is an outdated stock of machinery which is often no longer appropriate to the structure of business sizes. There is both overcapacity in the businesses, and overloading of the machinery that still works. It is chiefly lack of financing possibilities that prevents new investment. The legal framework to secure credits and foreign investment must be improved, or in some cases even created.

This critical situation has led to the development of different forms of co-operative organisation for machine use in the transition countries. In Poland, for example, machine-share groups are becoming more popular, while in Hungary and Russia contracting should lead to an increase in capacity.

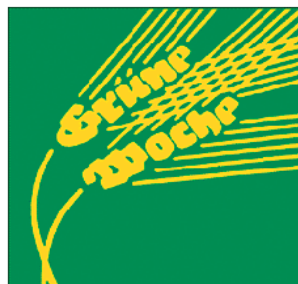
The participants all agreed that the existing institutional regulation mechanisms had long ago stopped meeting the requirements of an efficient factor allocation, and that the input markets are not fully functional. A number of suggestions for improving the situation were discussed. One important step, the participants agreed, was the establishment of specific state support programs to help purchase competitive agricultural technology. Both direct aid and improved credit conditions could be effective support for the enterprises. Particular importance was also attached to the improvement of management skills.

The regions on both sides of the present border between the European Union and the candidate countries of Central and Eastern Europe have been of particular importance historically. During the 'Cold War' they formed the demarcation line dividing Eastern and Western Europe known as the 'Iron Curtain'. Since the beginning of the transition process the border regions have developed differently. Due to their proximity to the EU and good infrastructure, many have become attractive industrial areas; others still lead the ghostly life of a remote rural region.

*Rural areas in border regions*

A project is to be launched to analyse the future prospects of these rural border areas in the course of EU Eastern enlargement. For this purpose, experts from Austria, Czech Republic, Slovakia, Slovenia and Hungary met up at the IAMO on 19 July 2001. It is expected that the project, which will form part of the INTERREG III - Community Initiative of the EU, will begin this year.

So far, the following events are planned for 2002:



As in previous years, the Institute is inviting academics and other interested parties to a discussion of current topics of EU Eastern enlargement during the 9<sup>th</sup> East-West Agricultural Forum of Green Week 2002 in Berlin. A stand at the forum will also provide details about selected research results from the Institute. On 11 January 2002 the IAMO and the working group 'Central and Eastern Europe' of the ATSAF are organising a symposium on the following topic: 'The Effects of the Adoption of the *Acquis Communautaire* by Central and Eastern European Countries in Preparation for EU Entry'. At these

events, experts from partner institutes in Germany and abroad will engage with problems that have particular relevance for agricultural research into the CEEC and CEAC.

#### *Final colloquium*

The final colloquium of the above-mentioned research project, 'The Relevance of the Restructuring of Agricultural Businesses in eastern Germany to the Shaping of the Transition Process in Central and Eastern European Countries', will take place in autumn 2002. The event will give academics from Eastern and Western Europe the opportunity to present and discuss their experiences of 11 years of restructuring of agricultural businesses in transition countries. The focus will be country comparisons and the question of the relevance of one country's experiences to another. Further information can be found on the IAMO web site.

#### *The challenge of 'process and product quality'*

Following on from the symposium to be held at the 9<sup>th</sup> East-West Agricultural Forum in January 2002, the IAMO is organising in the middle of July 2002 a two-day workshop titled 'The Adoption of EU Quality Requirements in the Meat and Milk-Processing Sectors in the Countries in Transition'. The event is aimed at agro-economists, experts from the food industry and political decision-makers from EU states and accession countries, with the intention of providing a discussion forum for a variety of problems resulting from the adoption of the *acquis communautaire*. In connection with the adoption of EU standards, the workshop will look at the status quo of harmonisation, the development of the administrative capacity to control production processes, and the creation and functioning of new institutions. With regard to requirements for restructuring, it will consider the interaction between vertical and horizontal integration, including the consequences for ownership and control structures. Particular attention will be paid to investment requirements in the agricultural and food sector and their support by the national SAPARD programs. Discussion topics will also include the effects on production costs, the danger of market power or how to prevent it, the access of the accession candidates to EU markets, and other influences on agricultural foreign trade in the Central and Eastern European Countries.

In conjunction with the Centre for Development Research in Bonn and the Institute for Regional Geography in Leipzig, the IAMO is preparing for an international conference on 22-24/9/2002 on the subject of Russian agriculture and the food economy. The aim of the conference is to obtain new findings about the course of the transition process, to explain these and to draw conclusions for agricultural policy. The following topics are planned: the history of agriculture and the process of transition, macroeconomics, the economic situation of agricultural enterprises and the food economy, the development of rural areas, factor and input markets, the integration of Russian agriculture and the food economy into the CIS and the global economy (WTO).

*Success and failure of the transition of Russian agriculture*

2002 sees the 500<sup>th</sup> anniversary of the Martin Luther University Halle-Wittenberg. For this reason, the Society for Economic and Social Sciences in Agriculture e.V. (GEWISOLA) agreed to the request of the agro-economists from the agricultural faculty to hold their 2002 annual conference at the MLU. It will take place from 30 September to 2 October 2002. The overall theme is: 'Perspectives of the European Agricultural and Food Economy after the Eastern Enlargement of the EU'. Although many problems related to the forthcoming accession remain unresolved, it is the job of agro-economists to highlight and discuss the possibilities and consequences of dealing with these unresolved issues. This topic is of great interest to political decision-makers, people working in agriculture and the food economy, and also to the general public in those countries concerned. Current events relating to Eastern enlargement, such as the conclusion of the WTO negotiations give the theme of this conference a particular significance.

*GEWISOLA 2002*

The staff at the IAMO publish their findings in specialist journals, monographs, collections of essays and discussion papers. A complete list of publications can be found on the IAMO's web site ([www.iamo.de](http://www.iamo.de)).

**Publications**

The Discussion Paper series continued in 2001 with the following issues :

*Discussion Papers*

SCHULZE, E., TILLACK, P., GERASIN, S.: Eigentumsverhältnisse, Rentabilität und Schulden landwirtschaftlicher Großbetriebe im Gebiet Wolgograd [Property Status, Profitability and Debt of the large-scale Farms in the Volgograd Region], Discussion Paper No. 32, 2001

KIELYTE, J.: Strukturwandel im baltischen Lebensmittelhandel [Structural Changes of the Food Trading System in the Baltics], Discussion Paper No. 33, 2001

ШУЛЬЦЕ, Э., ТИЛЛАК, П., ГЕРАСИН, С.: Отношения собственности, рентабельность и долги крупных сельскохозяйственных предприятий в Волгоградской области, [Property Status, Profitability and Debt of the large-scale Farms in the Volgograd Region], Discussion Paper No. 34, 2001

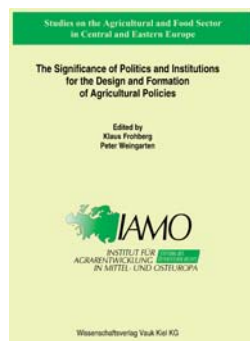
HARTMANN, M., FROHBERG, K.: Konsequenzen der Integration im Agrar- und Ernährungssektor zwischen Beitrittsländern und der EU-15 [Effects of Integration among the Agro-Food Sectors of Accession Countries and the EU-15], Discussion Paper No. 35, 2001

PETRICK, M.: Documentation of the Poland farm survey 2000, Discussion Paper No. 36, 2001

PETRICK, M., SPYCHALSKI, G., ÚWITÜYK, M., TYRAN, E.: Poland's agriculture: serious competitor or Europe's poorhouse? Survey results on farm performance in selected Polish voivodships and a comparison with German farms, Discussion Paper No. 37, 2001

*Studies on the Agricultural and Food Sector in Central and Eastern Europe*

In the series of *Studies on the Agricultural and Food Sector in Central and Eastern Europe* the IAMO publishes monographs and conference reports which deal with agro-economic issues of Central and Eastern Europe. Eight conference volumes and five monographs have already appeared in the series. The following four studies were published in 2001:



JÜRGEN WANDEL, *Landwirtschaft und Industrie in Rußland – der Transformationprozeß in der Ernährungsindustrie. Eine Analyse im Lichte des Structure-Conduct-Performance-Ansatzes.* [Agriculture and Industry in Russia – Transition Effects in the Food Industry. An Application of the Structure-Conduct-Performance Approach.]

KARIN ELSNER, *Food Consumption in Russia. An Econometric Analysis Based on Household Data.*

EBERHARD SCHULZE, Alexander Wasiljewitsch Tschajanow – die Tragödie eines großen Agrarökonomen [Aleksandr Vasilevich Chayanov – the Tragedy of a Great Agricultural Economist].

STEPHAN BROSIG, MONIKA HARTMANN, *Analysis of Food Consumption in Central and Eastern Europe: Relevance and Empirical Methods.*

*Other publication series of the IAMO*

In its *Annual Reports* the IAMO provides information about the academic work of the Institute, the current work of its staff, events in which the IAMO has participated, collaborations and projects, as well as personnel and financial details. An introduction to the Institute can also be found in the annual 'IAMO' series, to which this publication belongs. It is designed to give a wider public an overview of the IAMO's work, and of the current situation and expected developments in the countries of Central and Eastern Europe.

**Web site**

The IAMO web site gives a broad overview of the Institute's work. Visitors to the site can find general information concerning the aims, tasks and organisational structure of the Institute.

The web site announces the events, conferences and workshops, and gives a summary of past events. The Institute's publications are listed in full. *Discussion Papers* and the annual 'IAMO' can be downloaded straight from the web site. Current press releases, which are published by the Scientific Information Service, can be found in the 'Press' section. Detailed information about individual research projects at the Institute can be found on the 'Staff' page. The 'Library' page offers the opportunity to carry out online research via OPAC. From now on the Institute's projects can be found with a more detailed description in their own section.

The English version of the web site also contains most of the information listed above, and a Russian version is currently under construction.

The IAMO is a public foundation. It is made up of the Board of Trustees, the Directorate and the Scientific Advisory Board. In order to be able to cover a broad spectrum of areas of agro-economic research, the Institute was divided into three academic departments: ***Institutional Structure***

- External Environment for Agriculture and Policy Analysis; head of department and executive director of the IAMO – Prof. Dr Klaus Frohberg;
- Agricultural Markets, Marketing and World Agricultural Trade; head of department – Prof. Dr Monika Hartmann;
- Structural Development of Farms and Rural Areas; head of department and deputy executive director – Prof. Dr Dr h.c. Peter Tillack.

The heads of these departments, together with the head of the department of

- Administration, Central Service and Technical Support – Hannelore Zerjeski,

form the directorate of the Institute. In co-ordination with the Board of Trustees, this collegiate body manages the Institute's business and directs the long-term research and development planning of the IAMO. The scientific advisory board advises the directorate and the Board of Trustees on academic matters and carries out a regular appraisal of the Institute's work.



**Co-ordination at the IAMO** Weekly *departmental meetings* concentrate discussion at the Institute and ensure the exchange of information on organisational and academic issues. Those matters which are of significance for the whole Institute are also discussed at *Institute assemblies*. All staff can therefore contribute in many ways to the formulation of objectives and to decision-making at the IAMO. Associated with the postgraduate study at the Institute, the two *methodology groups* currently running – ‘Modelling’ and ‘Surveys’ – provide internal forums for the discussion of theoretical-methodological questions. The five *interdepartmental working groups* which deal with the library, electronic information systems, evaluation, public relations and publications are of great importance to the IAMO.

The entire spectrum of agro-economic research is required to analyse the process of transition of the land and food economy. The IAMO does not have the capacity, however, to cover this wide diversity. For this reason it concentrates on specific areas. Both thematically and in terms of content, however, these areas deal with the most important problems. Current research at the IAMO is geared towards three main concepts: *institutions*, *integration* and *rural areas*. These give a thematic and spatial limit to the areas under study. For the medium-term work of the Institute the following criteria were used to select research areas: political relevance, urgency of the problems, acceptance and applicability of the findings, feasibility and long-term effects of the research projects.

**Aims of academic work** Making use of the evaluation of the IAMO by the Scientific Council, a new medium-term research framework was developed last year, which provides for four research areas:

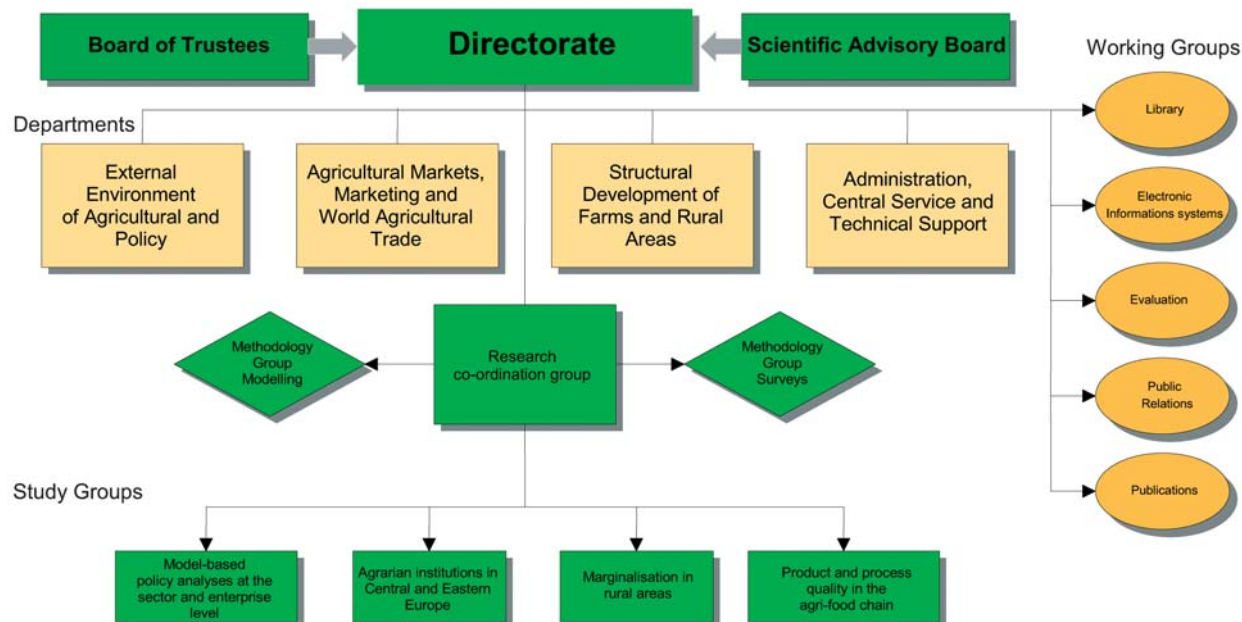
1. Model-based policy analyses at the sector and enterprise level
2. Agrarian institutions in Central and Eastern Europe
3. Marginalisation in rural areas
4. Product and process quality in the agri-food chain

These research areas each have a dedicated study team, headed by a well-qualified member of staff. Together with the heads of academic departments, the study team leaders make up the research co-ordination group. Its tasks are to select new research projects, organise interdepartmental research activity, plan academic events, and to stimulate further academic training for the Institute's staff.

During the transition process, the relevance of the above criteria to the selection of research areas is continually shifting. The IAMO will develop correspondingly, both in its work and on a structural level. In future, for example, the Institute plans to devote itself increasingly to analyses of institutions within the context of the transition process. The necessary structural adjustments will therefore be made to the IAMO's research organisation in 2002.



### Flowchart of the Institute for Academic Development in Central and Eastern Europe



Academic work at the IAMO relies on efficient support services. The IT staff work on the continuous development and maintenance of the Institute's hardware and software, continuously making sure that it is up to date. Interdepartmental working groups co-ordinate services and optimise their use for research activity. Via the public relations and publications working groups, staff at the IAMO inform about the work at the Institute and present research findings. The electronic systems working group co-ordinates the establishment and maintenance of a database relating to the agricultural and food sector of the transition countries in the Central and Eastern Europe. The library working group helps to ensure that the acquisitions and the organisation of the library are oriented towards research requirements. This includes expanding the stock, which gives particular consideration to new media.

#### **Support services**

## How to find us

### **By car**

*from the south*

Take the motorway A9 (Munich-Berlin) to Schkeuditzer Kreuz. Then take the A14 in the direction of Halle/Magdeburg and leave at the Halle-Peißen exit. Follow the B100 to Halle until you reach the outskirts of the city (traffic lights at Dessauer Brücke). Get into the right-hand lane and turn left still following the B100, to 'Zentrum' (centre) and Magdeburg. Turn immediately to the right onto the B6 in the direction of Magdeburg and leave this at the next exit (Zoo, Wolfensteinstraße). Carry on straight along the Wolfensteinstraße (underpass, several traffic lights, crossing the Reilstraße to Große Brunnenstraße) until you reach Burgstraße. Turn right (you have no other option) and at the next crossroads (restaurant "Zum Mohr", Burg Giebichenstein) turn left and follow the main road over the bridge crossing the river Saale. Once over this bridge turn right, go right again under the bridge and continue along the riverside. Turn left at the next crossroads towards the university and Weinbergweg, and follow the road until the next set of lights. Drive straight on into the Walter-Hülse-Straße. The building on the right-hand side is the IAMO. Now turn right into Theodor-Lieser-Straße and you are in front of the IAMO.

*from the north*

Leave the A9 at the Halle/Brehna exit and take the B100 towards Halle. See 'from the south' for further directions.

*from the north-west*

Coming from Magdeburg take the A14 (direction Leipzig or Dresden) to the Halle-Peißen exit and then take the B100 to Halle.  
See 'from the south' for further directions.

*from the west (on the B80)*

Follow the B80 to the Rennbahnring crossroads and follow the signs to Peißnitz/Kröllwitz. After about 2 km, after the third set of traffic lights, you will see the IAMO building (sandy-coloured with a red roof) to the left. Take the next left into the old barracks. At the other end of the large square turn left into Theodor-Liese-Straße. The IAMO is in the last building on the left-hand side.

### **By train**

Leave the station by the main exit and follow the signs to the tram stop 'Riebeckplatz/Hauptbahnhof'. From here trams 5 and 5E go in the direction of Heide. Alight at 'Weinbergweg' (about 20 minutes from the station). The Institute is on the left-hand side of the road.

### **By plane**

Halle/Leipzig Airport is 20km from Halle. From there bus number 300 leaves for Riebeckplatz/Hauptbahnhof every 30 minutes (60 minutes in winter). Read the 'by train' advice to find the way from there. Bus 300 also takes you to the Hallmarkt from where you can take trams 5, 5A and also 6 towards Heide. Alight at 'Weinbergweg'.

