

2nd Forum for the Future of Agriculture

**The Global Financial and Economic Crisis:
the challenge of financing and governing food and environmental security**

17-18 March 2009
Bibliothèque Solvay, Brussels

The official executive summary

EXECUTIVE SUMMARY

“We are wrong to have turned attention away from the food crisis. It does look that we went too far from the policy of maintaining food stocks within countries as a protection against crisis... Yes, with an individual country harvest failure, global markets work quite well. But a systemic hike in food prices leads the global market to break down. Food is different to other markets such as steel. Food is fundamental and needed to live on particularly in poor countries. The effects of a global food price rise are to cause global markets to break down exactly when we need them most. Commodity price volatility is a clear problem too... All indications are that the food crisis of 2008 was a dress rehearsal for future crises. We had better have some mechanism in place to deal with this.”

Paul Krugman,
Professor of Economics & International
Affairs, Princeton University.

“We face a future of food scarcity, with high, albeit volatile prices. This is aggravated by managed trade, lack of finance and environmental degradation. The market has lost its magic. Recent events have proven that markets can fail. Deregulation has backfired. Regulation has been rehabilitated. Non-trade distorting farm subsidies will have to stay, not just in Europe, but world-wide, if food scarcity is not to worsen. Southern hemisphere countries will have to introduce land reforms allowing the poor to accede to the land and adopt more appropriate food pricing policies. But this may not suffice. If there is going to be enough food at affordable prices for everybody, we may also have to change our food habits, not to say our life-styles.”

Franz Fischler,
Chairman of the Forum and of
the RISE Foundation and
former EU Agriculture Commissioner.

“We need 50% more food by 2030 in the context of water shortages and a changing climate. And there isn't enough additional land to cultivate without threatening natural habitats. But technology can enable us to achieve this goal and to do so sustainably.”

John Atkin,
Chief Operating Officer,
(Crop Protection), Syngenta AG.

Forum Objective

The Forum for the Future of Agriculture (FFA) is an initiative of the European Landowners' Organization (ELO) and Syngenta. It brings together a diverse range of stakeholders to catalyze thinking on the way agriculture, particularly in Europe, needs to respond to the major challenges it faces in delivering food and environmental security.

Created in 2007, the FFA is responding to a belief that many policies in the EU which impact on agriculture are focused on solving yesterday's problems, such as overproduction, and do not deal with the new challenges and market opportunities. Challenges include feeding a growing world population, demand for a higher quality diet, increased demand for renewable sources of energy and changing weather patterns. With limited arable land available, there is now an urgent need to sustainably increase production from that already under cultivation.

The FFA2009 will take forward the debate and work with stakeholders in shaping the development of European agricultural and environmental policy.

Key Findings

Whilst we are currently in the midst of one of the greatest economic crises of our time, there is a growing concern that the global financial crisis could divert attention away from other issues of vital long term importance, including climate change and food & environmental security.

FFA2009 was attended by over 500 delegates and speakers, many of whom warned against the temptation to focus solely on the economic crisis. They argued that the underlying structural problems impacting on food and environmental security have not gone away. Most agreed in their addresses to the Forum that these problems cannot be ignored and should not be underestimated. Rising demand for food and the protection and enhancement of the environment were just two of the main challenges facing agriculture in the 21st century, cited by speakers and delegates. There was a general consensus that meeting these challenges in a sustainable way requires clear political leadership, together with progressive policies and financing, which enable farmers to pursue food and environmental security. There was also

agreement that at farm-level, innovative farming practices and access to and appropriate use of cutting edge technologies would be essential.

During FFA2009, speakers and delegates were polled on their views on a range of subjects relating to the key topics of discussion. The key highlights are:

FINANCING FOOD & ECONOMIC SECURITY

- Approximately 75% believe that the financial crisis has had an impact on food & environmental security.
- When asked about the most serious effect of the financial crisis on food security, 55% said they believe that it will disproportionately affect the poor; 23% believe that it will impact on food trade; and 10% said it would affect food production.
- When asked whether a new architecture is necessary for financing food and environmental security, 63% said yes at an international level, 23% at an EU level and 7% at the national level. Just 4% of the audience believe a new architecture is not necessary.

CAP REFORM

- Over half believe that a new Common Agriculture Policy (CAP) is necessary to provide food and environmental security, whilst a third said that the existing policy could be maintained if amendments were made. Less than 10% thought the current CAP could deliver food and environmental security.
- Nearly 50% believe that the current arrangements for Pillar II of the CAP protect and enhance the environment.
- To respond effectively to the food and environmental security challenge, 81% of the delegates believe a new CAP reform is necessary.

FUTURE OF COMMODITY PRICES

- 52% said they think international agricultural commodity prices will become more volatile in the medium term whilst 26% think they will go up. Just 7% expects them to decrease.

PAYING FOR PUBLIC GOODS IN AGRICULTURE

- Approximately 90% believe that European land managers should be

remunerated in accordance with the amount of environmental security they generate.

- 48% believe that the current Pillar 2 fulfils the role of protecting and enhancing the environment, but only 11% think it does so fully.
- Over 75% believe that the EU should support the provision of public goods by land managers.
- In terms of the measures needed to ensure the delivery of public environmental goods by land managers, 46% voted for a combination of the Single Farm Payment, redesigned measures in Pillar I, extended Pillar II measures, and the development of environmental markets.
- Over three-quarters of delegates regard the provision of public goods by land managers as a valid justification for EU policy and financial support.

Overall, participants unanimously called for strong and immediate action in dealing with both issues of food and environmental security. Over two thirds believe that food productivity must double to 2% annual

growth in order to feed the world population by 2050 but this cannot be done at the expense of the environment. Finally, well over half the speakers and delegates said that the restoration of financial health can and must be pursued in parallel with enhancing global food and environmental security.

(Full results from the opinion polls are available on request)



INTRODUCTORY SPEECH

Franz FISCHLER, Chairman of the RISE Foundation, Chair of the Forum for the Future of Agriculture

We face three global crises. They concern the environment, finance and food. The sharpest of them is the current financial collapse, the worst since the Great Depression. The most frightening is the looming food crisis with world hunger approaching one billion people this year. The most alarming is climate change because of its different and greater scale of risk. They are interconnected. For instance, without a greater and more stable food economy, one cannot expect to meet the Kyoto goals against climate change. Without success at the Copenhagen Conference later this year food production itself would suffer in turn from declining yields. Without trust in the financial framework, there is no way to meet the food and environmental challenges.

World population growth is the biggest trend-making factor: 220,000 more people a day, close to 8bn overall within the next 17 years (2025), and 3bn with less than \$2/day by 2050. Africa's population alone

will grow by nearly a quarter in barely 9 years (2007-2016), while Asia's population will rise by nearly half a billion. At the same time, we see huge movements from rural towards urban zones. Consequently, there is rapidly growing demand for crop products including feeding stuff with meat consumption increasing with living standards. World grain consumption is expected to quadruple in developing countries by 2025 compared to 1969, with a 40% jump from 1997 and about one quarter of additional demand originating in China. Other major global trends are globalization and urbanization with production moving to the most competitive regions and trade in food becoming more open, but also more concentrated and managed; growing energy demand and climate change with agriculture contributing to emissions, but also suffering or benefiting from changing climates depending on climatic zones.

Additional challenges are increasing market volatility, uncertainty regarding innovations



and the financing of public services provided by farmers. Market volatility results from yield and end stock fluctuations, food imbalances and market segmentation, input and output and exchange-rate fluctuation, consumer sensitivity to food quality, safety and price. There is uncertainty regarding timing and application of innovations as regards biotechnology, nanotechnology, precision farming, carbon sequestration,

and information technology. Finally, there is the challenge of who will pay for agricultural public services provided by land managers that the market does not pay for, such as rural landscape maintenance, environmental protection, biodiversity and animal welfare. These challenges are aggravated by global irresponsibility regarding finance, food security, water and environmental sustainability (not to mention energy sufficiency).

There is good potential new land for cultivation, notably in Latin America, Africa and east Europe. But, new land is insufficient, and either inappropriate because of poor or polluted soils, or difficult to use for food production (due to doubtful property rights and/or poor finance and/or due to government mismanagement), or difficult to feed the market because of lack of transportation infrastructure.¹ Moreover, cultivated land is diminishing fast, not just because of expanding deserts, but also because much of it being lost to urbanization. It has been calculated that the addition of some 70 million people every year claims nearly 3 million hectares for housing, roads, highways and parking lots.

To meet world demand the necessary

production growth will to a large extent have to be met by a rise in the productivity of the land already being farmed today. However, this will be difficult to accomplish as global agricultural productivity growth has been in decline since the Green Revolution in the 1960s and 1970s. Global crop yield increases have plummeted from 4% per annum in the 1960s – 1980s to 2% in the 1990s and barely 1% in 2000 to 2030 forecasts, despite substantial expected yield increases in India, the USA, Russia and the Ukraine by then.

Europe's role as provider of food to the world is diminishing. The net crop-trade position of the EU-27 can be expected to deteriorate. Between 2003/05 and 2013/15 European Union demand for grains and oil seeds can be expected to increase more than its supplies for both grains and oil seeds. As we approach 2015, average net imports of corn are diminishing; net imports of oilseeds are expected to go up by 70%; and for wheat the EU will move from a net exporter to a net importer position. Part of the explanation lies in a shift towards bio-fuel production. The EU capacity to help fight world starvation will be reduced at a time in which food production will decline predominantly in those countries which

already record increasing food import needs. Nevertheless Europe will become a more secure production location in comparison to other world regions, while higher food prices will boost deforestation there. "Consequently, Europe has to take responsibility to significantly contribute to world food security and also to combat global warming by utilizing its production potential."²

Europe is of course only one player, however big. All countries will have to improve their food security policies. In many of them, in particular in Africa, one cannot expect to boost agricultural production without land reform and courageous food

¹ For instance, an increase in Brazil's grain land and the creation of new rural settlements there would have negative consequences for the environment: domestic-soil sustainability, rainfall recycling, biodiversity and climate effects worldwide. In some countries, particularly in Africa, little can be achieved without agrarian reform and/or unpalatable pricing policies. "Africa's soils are the poorest in the world, and poor soils produce poor crops" (Kofi Annan). They are thin, laden with iron and often lacking nitrogen, potassium and zinc. They cannot hold much artificial or natural fertilizer, because their nutrient retention is very poor and most of it will be washed away. Africa loses about 8m tones of soil nutrients a year. Much of the land is degraded to the point that 95m hectares have seen productivity reduced.

² Humboldt Universität zu Berlin, Working Paper no. 84/2008



price policies favouring the farmer and costly to the urbanite. Consumption patterns will also have to change, notably reducing beef intake. There is already a fight for food in many countries. Moreover, there are signs of an international scramble for food, and beyond it a scramble for land to produce it. According to FAO, the race by some countries to secure farmland overseas risks creating a “neo-colonial system”. A poor country such as Ethiopia, infamous for more than one food crisis, has just openly offered Middle Eastern countries to lease hundreds of thousands of hectares of its farmland in order to help them ensure food security in the Middle East. These plans show how important food security has already become. One can well imagine what sort of political problems may eventually arise if a country hosting foreign investment in farming faced a serious food crisis at a time in which rich foreigners exported all the food produced there for the exclusive benefit of their richer and better fed people abroad.

Clearly, banking crises have a substantial impact on food demand and supply, notably on planting, investments and trade.

Last year, production costs have grown far more than corresponding farm income. The world’s poorest developing countries lack the necessary credit lines to buy food; the great food exporters suffer from a lack of export finance. Trade financing costs tend to overtake trade margins. Food commodity markets are meanwhile so volatile and unpredictable, that barter trade has become too tempting to resist, despite its costs in shrinking markets. So has commodity speculation.

The credit crunch has also an impact on the environment, notably leading to decisions to forego investments to reduce GHG emissions. This is a missed opportunity.

In the long term, environmental security is the mirror image of food security because there is no food without substantial clean water resources, productive soils, and appropriate climate.

In turn, failure to tackle environmental degradation jeopardizes the future of agriculture and of the countryside. It has been estimated that hot summers will double in Europe by 2020 and become

drier in the South, whereas winters will become wetter in the North with more frequent flooding, and the Gulf Stream might possibly change its behaviour. This notably calls for further reduction in the impact of agriculture on Greenhouse Gas emissions, principally carbon dioxide, methane and nitrous oxide

Climate change puts all businesses and society at cumulative, long-term risk. The failure of agriculture alone would lead to widespread hunger in developing countries and mass migration of people (half a billion according to the UN), mostly to developed countries.

The search for more environmentally friendly agricultural inputs and practices must continue. Scientists are actually working to improve the efficiency of photosynthesis, carbon capture, nitrogen fixation and many other cellular processes that boost biomass yields. It may also become possible to plant crops in soils lost to salinisation, and to genetically produce plants that can grow in marginal or otherwise unusable farmland. If and when this happens, the demand will be there.

The next reform of the CAP will have also to respond to the new challenges it faces in the first half of this century. These include the demand for public goods and services – such as eco-system services, including carbon sequestration and the preservation of less favoured areas – provided by farmers, which are not paid for by the market. This subject is attracting growing attention at a time in which the trend in agricultural support points downwards, whereas temperatures, emissions and environmental degradation point upwards. If farm prices rise in the long term and presumably production costs as well, the opportunity cost for land managers of producing eco-systems and other public goods and services will rise as well. If direct farm payments are reduced after 2013, we might witness farming intensification and landscape neglect. So far, market signals have actually been distorted, because scarce resources such as a good atmosphere, biodiversity and beautiful landscapes have been priced at zero. Resource degradation is the consequence. The risk is that it will worsen.

There are two ways out. Either one finds a method to attach an attractive price to these public resources, or – if one doesn't know how, doesn't want, or can't do it –, one provides for payment of public goods in the context of the CAP. In any event, in order to save our planet, we need to give a value to what cannot be bought such as most public goods produced by land managers.

We need more responsibility in world trade in order to avoid that globalization allows a few to enrich beyond belief excluding many others. We need in particular more responsibility regarding food trade, and more responsibility in supporting a coordinated regulatory framework, as well as virtuous public and private behaviour fighting environmental degradation. Trade responsibility also means accepting special and differential treatment of developing countries in temporary trade protection so as to allow them to catch up with the more competitive industrialized and emerging countries.

We need greater responsibility in cutting GHG emissions, in showing greater respect

for the environment and in strengthening and widening the Kyoto process. We also need greater responsibility in budgetary and financial affairs. Necessary stimulus packages must cater more to the taxpayer than to shareholder interests, and avoid budgetary indiscipline passing the burden of adjustment on to future generations. All stakeholders must be given to understand that they have not only rights, but also obligations, have an interest in avoiding beggar-thy-neighbour policies, notably on investments, and need to cooperate on environment, finance, and food, not to mention energy.

On all three accounts – food, environment and finance – the Group of 20 must take into account the plight of the developing countries. Similarly, the EU-15 countries must take into account the plight of EU members in Central – and Eastern Europe that face fund withdrawals by western banks and the negative consequences of currency devaluations on household debt denominated in foreign currencies. George Soros has just proposed the creation of a Euro zone government bond market,

complementing national bond markets, in order to help rescue the banking system and serve as a financing mechanism for coordinated counter-cyclical fiscal policies in Europe. Soros called on the EU to contribute to the stabilization of the financial markets of its new members. Without financial recovery, food production and the environment will suffer.

We face a future of food scarcity, with high, albeit very volatile prices both for inputs and outputs. Food scarcity is aggravated by managed trade and lack of finance and eventually also by environmental degradation. The market has lost its magic. Recent events have proven that markets can fail. Deregulation has backfired. Regulation has been rehabilitated. Open trade and related financing depend on it. A new financial architecture is urgent. Non-trade- distorting farm subsidies will have to stay, not just in Europe, but worldwide, if food scarcity is not to worsen. Southern hemisphere countries will have to introduce land reforms allowing the poor to accede to the land, and adopt more appropriate food pricing policies. But this may not suffice.

If there is going to be enough food at affordable prices for everybody, we may also have to change our food habits, not to say our life-styles.

Our leaders in Europe will have to recognize the fundamental role Europe is called to play in feeding the world in the context of food scarcity. The reform process of the CAP must be continuously adapted to changing realities. The status quo is not an option, nor can we expect radical departures from it. Our challenge is to update the CAP so that it allows us to preserve our capacity to sustainably produce the food we need, and help satisfy a growing world demand as well. Our farmers have a key role to play and have the right to ask how they can contribute to meet world food demand, save energy and water, conserve the environment, all at the same time, while attacks against the CAP continue to grow as if there was no continuing need for it, and no ongoing, remarkable reform process. Similarly, we need to periodically adapt our environmental policies. If certain measures prove counterproductive, such

as bio-fuel support for instance, they must be promptly recast.

The global economic crisis may well become the longest in three generations. Investment and even trade protectionism may be temporarily on the increase. If trust in finance and economy does not return rapidly, economic reform, socio-economic growth and political stability will suffer. While some confidence in the financial system will return in due course, a new financial architecture will be required to strengthen the global economy and increase economic and financial fairness. In this connection, it is of the essence that the demands of global food and environmental security are taken into account, and that ways are found to finance the services that farmers provide to society. Let's hope that the G20 meeting in April is a success.



A year ago we were all very focused on the issue of sharply rising food prices; it was at the top of the agenda for much of our discussion. At this point, a lot of that discussion has just faded into the background, we pushed it on to the backburner and we don't seem to think it's a terribly important issue anymore. It's been overshadowed as an issue by the global macroeconomic crisis and the financial

KEYNOTE ADDRESS

Paul KRUGMAN,
Professor of Economics, Princeton University

crisis. There has been a broad sense that it has been a false alarm. But what I argue for a good part is that we are wrong to have turned our attention away from the food crisis so quickly.

Looking back, the sharp rise in prices of basic food stuffs created, for a large part of the world, extreme difficulty. For many people in the world this represented a depression level reduction in real income. This was not in terms of dollar or euro values perhaps as large as the current crisis but it arguably affected even more people, more severely, than the macro crisis has so far because those who were most affected by the sharply rising food prices are those who spend a larger share of their income on food, which is the poor. So the global food crisis had an extraordinary human impact – arguably a larger adverse human impact than the global financial crisis so far. One indication of how severe it was is the remarkable amount of civil unrest and political instability that was seen last

year. For example, Ethiopia, Egypt, Mexico and Thailand were among a very large number of countries that were severely disrupted, politically, as people were unable to afford basic nutrition.

There were also some extraordinary political responses. Much of the world's system of trade in foodstuffs broke down temporarily as food exporting countries moved to limit, or in some cases completely ban, exports in an attempt to provide some protection to their domestic consumers. There was widespread discussion about whether in fact the world had started to fulfil the prophecies of Malthus – whether we had in fact entered into a neo-Malthusian era of the world – with much discussion of the pressure of a growing world population and economic growth, as well as some problematic policies that impacted on the world's food resources.

All of that moved into the background rather abruptly in late 2008 as we went from the

world of Malthus to the world of Keynes. We went into a severe economic slump striking the whole world. It is an extraordinary world downturn and quite clearly the worst downturn since the great depression. Global GDP will decline this year for the first time since World War II.

Whilst there were expectations of a decoupling of the emerging markets, this has not happened. Instead, it became coupling with a vengeance. No part of the world economy is spared. It started with the US, but Europe and Japan will suffer as deep or even deeper recessions with no real end in sight. All of this has taken the attention away from the food crisis. The macro crisis has led to many people to write off the food and more broadly the commodity price crisis of 2008 as not fundamental. There is widespread belief that all that really happened was a speculative bubble with too many people trading commodities driving prices to unsustainable levels. Some argued that all the concerns about ultimate supplies of food were misplaced.

But I argue against this view. International trade in commodities futures has expanded enormously and food and commodity

prices went up very sharply but then fell a great deal. A lot of people took this as vindication that it was a speculative bubble. But this is not right. Firstly, the rise and fall of commodity prices affected not only commodities with large futures but those without, for example, iron ore. Trading commodity futures only affects the price to the extent that speculation leads to withdrawal of real supplies which leads to hoarding. That was not the case as food stocks were at record lows. With an economic slump, the real price of commodities always falls and vice versa. The great depression showed a spectacular collapse of agricultural prices. Therefore the current fall in prices is expected. It is a global recession so global prices should fall.

The crisis will eventually end and when it does, we'll discover that neo-Malthusians were not wrong. Resource constraints plus bad policies are creating a major problem for the supply of food in the world.

Despite the sharp fall in food prices since their peak in early 2008, prices of basic foodstuffs are still higher than the beginning of this decade.

Aside from the level of food prices still on an upward trend, the volatility is a clear

problem. People do not eat in the long run, they eat every day. Should high prices from 2008 re-occur, it would be a very serious problem. We are very vulnerable to such high prices. For example, when a country imposes an export ban – the global economy is affected even if the domestic consumers are protected.

The poor have no access to ways of diversifying risk and they have no protection against high food prices. The bottom line is that the system we evolved which relied on faith that world markets in physical food stuffs plus world financial markets for diversifying risks would provide a reasonable protection against volatility did not work and we do face a secular upward trend on food prices. Fundamentally we are moving towards a world where Malthusian type pressures are increasing and it's a problem.

So what do we do at this point? One thing is to invest in future food production and this is both physical and R&D. We tend to think of agriculture as being economics 101 – producers and consumers getting the market right.

This is true but only up to a point.



Agriculture production and progress in production depends heavily on public goods, especially R&D. So thinking about why we got through the Malthusian warnings of the 1960's and the green revolution – a critical role was investment in basic research by international organizations. There has been much less emphasis on this research and physical infrastructure for agriculture in recent years largely because people thought it was a solved problem. But at this point it looks like

we have seriously underinvested and need to play catch up.

There are some policies that are major aggravating factors. Biofuels is not really discussed at the moment because of the decline in oil prices which reduced the demand and at the same time food prices have gone down. But it will come back as an issue and it's clear that there was a significant increase in the pressure on global food supplies that was the result of

badly conceived biofuels policies. I need to know more, but this was a serious mistake. It is pushed to the background because of the current economic crisis, but it will be a problem that will come back to haunt us.

Beyond the long run policies, what about stability? There was scrambling to provide financial aid to countries that were suffering severely from high food prices. Aid did help but it was very difficult to come up with the money. Looking back, the aid that went to Africa arrived because the Saudi's came up with a cheque. With the current oil prices, this may not happen again anytime soon.

We should therefore have a reserve system in place for emergency support and the ad-hoc response shows that a better system for financial aid is needed.

It does look that we went too far from the policy of maintaining food stocks within countries as a protection against crisis. Yes, when an individual country's harvests fail, global markets work quite well. But a systemic hike in food prices leads the global market to break down. Food is different to other markets such as steel. Food is fundamental and needed to live on,

particularly in poor countries. The effects of a global food price rise are to cause global markets to break down exactly when we need them most.

The environmental resource scarcity issues also still look entirely real. Right now we have a severe slump for everything and in the case of raw materials this means a decline in relative prices. But this will end and when it does we are back in a world that has growing population, growing purchasing power, and growing consumption of foods that are very intensive in the use of cereals. For example, the production of meat uses a lot more basic agricultural materials than that of grain.

Water is a concern and so too is the use of potential arable land. When arable land is diverted to non-agricultural uses it usually raises world GDP but it also has the effect of reducing the incomes of those already at the bottom of the earning scale. But last but not least, the environmental issues. To the extent climate changes, most agricultural patterns become disrupted, and again the countries that are the poorest are the ones that are most vulnerable in the face of this.



Specific institutional remedies should be discussed to counter these disruptions but it ought not to be beyond our abilities to come up with a solution.

We had a very serious outbreak of human suffering and political instability resulting from a really quite brief spike in the price of food. It was not an extended period; it was overtaken by events by the broad collapse of economic activity thanks to the financial crisis. Had it gone on any longer, it might

have been much worse and all indications are that the food crisis of 2008 was a dress rehearsal for future crises and we better have some mechanisms in place to deal with these.

Responses to the keynote address



Alexander SARRIS, Director Trade and Markets Division at FAO

In his response to Professor Krugman, Mr. Sarris argued that over the past 40 years, real agricultural prices have gone down in real terms and – since

the 1980's – appear a lot more stable. Indeed, he argued that the volatility has not changed very much over the last 30-40 years but it can be said that recent swings in price levels are similar to that experienced in the 1970's.

But Mr Sarris recognised that a new element today is the rapid growth in demand for food, particularly in the developing world. Nevertheless, he argued that up until now, supply has kept up with demand and – based on current trends – there is no reason why there should be a long term shortage.

Alexander Sarris therefore examined the reasons behind the food crisis of 2008. He argued that the crisis emerged because several individual factors came together at one time rather than because of a major shock to food production or distribution. He argued that this shows how small shocks can have large implications.

To really move forward and be able to manage and contain such crises, Mr. Sarris

argued that we need to make use of the considerable room available for improving investment in agriculture and to expand research and development.

As far as Mr. Sarris is concerned, future investment in agriculture should be targeted toward the poor where the issue of access to food is a fundamental issue.

Addressing the point about the creation of a fund for tackling food crises, Mr. Sarris argued that there is no IMF equivalent and we must never believe that an emergency institution can solve food crises. He specifically argued that food needs to be created. There is no such thing as a lender of food as there is a lender of money.

Alexander Sarris concluded his response by arguing for the creation of a system of international coordination and the establishment of global safety net for food security.



Marc Van STRYDONCK, Senior Banker,
European Bank for Reconstruction &
Development

Mr. Van Strydonck said that as we seek new ways of increasing food levels we often ignore the vast quantities of

untouched arable land in the former CIS countries. He argued that the potential for increased productivity is tremendous and we must act to realize this.

He also argued that food distribution is a major challenge and this includes the provision of adequate storage facilities and the availability of transport. But meeting this challenge will probably depend on the availability of finance. For Mr. Van Strydonck, we need to find support for finance and investment in the former CIS countries.

To combat the food and environmental issues we face today, Marc Van Strydonck argued that we must:

- (1) develop policies and a coherent environment which encourages collaboration, for example, preventing export restrictions which have in turn deterred investments.
- (2) Technology must be available to every farmer to raise yields and support international development, and
- (3) financial investment must substantially

increase, particularly in the emerging markets and developing nations.

Finally, Mr. Van Strydonck argued that vertical integration will support the capacity for a sustainable and ecological way forward.



The global financial crisis and speculation on commodity markets

The Panel Chair, **Anastassios HANIOTIS**, Head of Unit, Agricultural Trade Policy Analysis, argued that it is crucial to bring the food crisis into perspective and that effective policies and collaboration have the ability to prevent such crises from happening again.

is the outcome of modern functioning markets. For Mr. Schulmeister, the upward trends in commodity prices, such as what we witnessed during the last year, always come to an end.

Looking at what has been driving the boom in agriculture commodity prices, Mr. Schulmeister argued that whilst a lot of last year's net demand for food was blamed on China, the evidence suggest that country's demand was actually flat.

Therefore, other factors must have also contributed.

In contrast to Paul Krugman, Mr. Schulmeister believes that speculation did play a role and that the boom and bust cycle was not confined to agricultural commodities but to all commodity classes. He concluded by arguing that whilst upward movements do take longer to

develop, downward trends emerge quickly and are exploited by technical trades. He also pointed to the fact that there is growing discrepancy between real and financial



The main provocation of this panel session was provided by **Stephan SCHULMEISTER**, Austrian Institute of Economic Research, who argued that we are currently experiencing a financial tsunami. The dynamic epicentre of the current crisis is the devaluation of housing and commodity assets.

He argued that swings are important for the world economy and what we see today



transactions and we see that the instability of one asset in the market spills over to another.

In his response to Mr. Schulmeister's presentation, **Mikhail ORLOV**, ex-President and founder of Black Earth Farming (Russian Federation), said that a lot of responsibility for what has happened over the past 18 months can be attributed to the collectiveness of society. The crisis is

most certainly something to worry about. He argued that the hoarding witnessed in 2008 is similar to that of 20th Century Russia. In particular, he referred to the Soviet experiments arguing that they all failed and that "bureaucrats are not known for making things happen".

He therefore said that we need to look at markets, and their rationality, and argued that we need frameworks in place to enable farmers to have access to all of the technology and methods of advancement that we so often speak about and advocate. He also argued that there is a significant amount of additional land that can provide extra food.

Mr. Orlov also questioned why Russia imports vast quantities of agricultural produce yet has the ability to produce so much more from its own land. But he also said that in 10 years from now, Russia will be able to produce amounts that will feed its own needs and that of the export market. However, he said that the country's ability to exploit this potential and bring the food to market will depend on large-scale investment in land, infrastructure and farming practices.

In his response, **Jean-Philippe OLIVIER**, Head of SIGMA Solutions (BNP Paribas AM), founder of the Parvest Agriculture Investment Fund, argued that with concerns about food security increasing, it is crucial to concentrate on the fundamental elements of food production and get these right, as well as looking to control food price inflation, which maybe caused – at least in part – by speculation.



Do the recent problems in the global economy impact on our ability to build Sustainable Farming Systems in Europe?

Panel Chair, **Roger WAITE**, Editor of AgraFacts, introduced the following two panel sessions by arguing that sustainable farming must become a “normal way of working”. He said that it must not be seen as an option for farmers to adopt and that the world must work together to achieve a sustainable approach to increased production.

PANEL ADDRESS: **John ATKIN**,
Chief Operating Office (Crop Protection),
Syngenta AG



Science, and the technological advances it delivers, has been the cornerstone of the development of human beings, society, and our overall quality of life. It has also played a key role in transforming our food supply. From its production and processing, to distribution and storage, science and technology enables most of us to eat what we want, when we want it, at a price we can afford.

I believe today's food production is an example of excellent technology every bit as impressive and impactful as the development of computers and the internet. Of course, many of us take this for granted. Few really consider what it takes to produce.

They want less technology in food production. In its most extreme form, this results in the preference for organic food which of course uses little or no technology but results in much lower yields at a higher cost than modern intensive agriculture. This

wouldn't be an issue either if these views weren't passionately held and, particularly in Europe, are influencing government policy and regulation. And this at a time when the challenge of producing more food with the least possible impact on the environment means we will need to embrace technology in farming like never before.

In Europe, Member States recently upheld the rights of Austria and Hungary to ban GM crops by a big majority in spite of the overwhelming scientific evidence attesting to their safety. Moreover, these crops had passed the EU's own approval laws for GMOs, widely considered as the toughest in the world. This seems to be another move away from science based decision making in Europe.

Around the same time, China, announced plans to spend an additional 20 billion dollars, equivalent to 40% of the annual CAP budget, to boost crop yields and raise rural

incomes³. The China National Development and Reform Commission stated that it is difficult to keep grain production growing steadily to meet increasing demand particularly as competition for land use, rising temperatures, and the over use of water, weighs heavily on local production.

Most of this funding is aimed at intensive agriculture and technology including GM crops. This move recognizes the essential role that technology plays in meeting the challenges facing agriculture and reflects the view of most governments, particularly in developing countries.

Global population has grown from about 3 billion in 1959 to over 6.7 billion today and by 2030 there will be 2 billion more mouths to feed⁴. And the growth of the middle classes suggests that these people are not going to be happy with just rice, nor should they be. This translates into the need for 50% more food in 20 years time⁵.

Can we cultivate more land? The FAO estimated in 2002 that as much as an additional 20% of the 1.5 billion hectares⁶ currently under cultivation could be added. But this gets nowhere near meeting the 50% increase in demand for food. And what

about the risk this could create for natural habitats?

The FAO is right then to recognize that yield improvements – making the most of existing land under cultivation – will be the best way of meeting the increased demand for food⁷. And this means greater use of technology. Of course, Europe's apparent aversion to technology in agriculture can be traced back to its relatively privileged position with a plentiful supply of high quality, affordable food. However, there are reasons to believe we can change direction. The food crisis that we discussed in this room one year ago helped to propel food security back into Europe's political lexicon. And whilst the economic crisis may have replaced concerns about food security the underlying challenges of demand increase and supply uncertainty remain.

For Europe, there are perhaps two critical points: currently there is no food shortage but there is an increasing demand for cheaper food as consumers' budgets come under pressure in the economic crisis. Secondly, Europe's favourable weather – adequate water and good soils – provide real potential to further improve productivity and competitiveness of farming. And global

warming may even have a favourable impact on agriculture in central and northern regions. But this will only happen with the help of modern technology.

By using the full range of tools available – including GM crops – we can increase production of safe, healthy, food and make it available at lower prices than ever before. We would also enable our farmers to compete effectively in export markets around the world and increase the potential for non-food uses of crops, including renewable sources of energy.

We must address the concerns that some have over the use of technology in agriculture and promote a science based

³ Annual Budget Speech, Prime Minister Win Jiabao, March 2009

⁴ UN Population Division; World Population Prospects: the 2006 Revision

⁵ UN Secretary-General, Ban Ki-moon, June 2008

⁶ Food & Agriculture Organisation (FAO) FAOSTAT/ World Agriculture Towards 2015/30, FAO, 2002

⁷ "Land expansion is expected to account for 20 percent of production growth, yield improvements for about 70 percent and increased cropping intensity for the remainder. In sub-Saharan Africa and Latin America, land expansion will still be important, but it is likely to be increasingly outweighed by yield increases". – World Agriculture Towards 2015/30, FAO, 2002

approach to its regulation in Europe. Some of the most compelling rationale for technology comes from a look backwards. 50 years ago, food was around twice as expensive as a proportion of disposable income as it is today⁸. Although I acknowledge that the decline in food prices has slowed in recent years. Back in 1960, variety was limited and quality was inconsistent.

On the production side, technology comprised basic fertilizers, low yielding seed varieties and little in the way of chemical crop protection. This just about sustained a global population at roughly one third of today's level. Contrast that with the six and a half billion people on the planet in 2009, the majority of whom have adequate quantities of high quality, affordable food⁹. A remarkable success story.

A look at how different developing regions of the world have performed is equally revealing. In South Asia the improvements in yields from the adoption of technology led to self sufficiency and increasing economic strength. Compare this with most of Africa, where agricultural productivity is not increasing, little technology is used,

many are under-nourished, and economic development is poor.

Increasing crop yields correlate beautifully with greater food availability and decreasing prices. Since 1959, global wheat yields have almost tripled and corn more than doubled¹⁰. Technology made this possible. Better seed hybrids, GMOs, chemicals that control weeds, diseases and insects. Without this, yields would be 40% lower¹¹. Improved fertilizers and advanced mechanization has also made a significant contribution.

The good news is that this can continue. Getting 50% more food by 2030 is possible. For example, wheat yields in Russia can be doubled, and on the best soils tripled, with modern fertilizers, good seed varieties and effective use of seed treatments, herbicides and fungicides. Increased use of technology was a major driver of the bumper harvests of 2008. Furthermore, a recent comprehensive analysis of the benefits of GM crops clearly shows that this technology contributes to increasing yields and improving productivity. And the industry pipeline now includes traits to help plants resist drought stress as well as disease and pest pressure¹².

Earlier this year, it was also reported that the International Rice Research Institute were confident of breeding rice varieties adapted to most forms of climatic stress with the aid of GM technology¹³. The quality of chemical crop protection products has also increased markedly in recent years. Today, we have seed treatments that protect young plants against pests and diseases and increase plant vigor fungicides that increase green leaf size and growth regulators that increase root size allowing the plant to make greater use of water and fertilizers.

Unfortunately, the word 'pesticide' conjures up a negative image for many people in the developed world and we need to address this. That image is totally unrepresentative of the contribution they make to food production and consequently our quality of life.

⁸ USDA/ Economic Research Service

⁹ UN Population Division; World Population Prospects: the 2006 Revision

¹⁰ USDA PSD Database

¹¹ Oerke, 2006, 'Crop Losses to Pests'; Journal of Agricultural Science (2006), 144, 31–43. f 2005 Cambridge University Press

¹² Biotech crops; evidence, outcomes and impacts 1996-2006: PG Economics, 2008

¹³ IRRI, January 2009

Probably the most critical point in the technology debate in Europe, however, is the environment. But any worthwhile discussion on the environment must surely be in the context of needing to produce more food. This is not always the case. In contrast, the climate change debate is always in the context of society's need for energy. Why do we make this distinction?

Non-intensive or organic production systems could be considered but only if population was declining and people were satisfied with less protein rich food. Yields in such systems are 30-40% less than from intensive agriculture. But the trends are for an increase in demand...not a decline¹⁴. We have to produce adequate quantities of affordable food in the most sustainable way possible. Can intensive agriculture achieve this? I believe so.

First, technology enables maximum productivity on existing land, thereby minimizing the need to bring new land under cultivation. This protects natural habitats and biodiversity. Second, the technologies that increase productivity do so partly because they help plants make better use of water and fertilizers. They therefore help to address two critical considerations for the

environment. Also, conservation tillage has been a really helpful development in recent years. By using a simple herbicide application to remove weeds and crop residues you don't need to plough the land. This has the benefit of conserving soil moisture, reducing greenhouse gas emissions and saving energy.

Our industry runs programs with specific environmental objectives such as Syngenta's work to boost pollinator populations. The goal is to cultivate field margins to provide them with vital habitats – important work in the context of declining bee populations.

However, I do not want to give the impression that technology alone is the answer. The leading providers of technologies train millions of farmers every year on safe and effective use of products, particularly in developing countries. The contribution from the private sector in these areas is vital because many governments have cut back on extension support for farming. Our industry association, Crop Life, in partnership with other interested parties has launched Farming First an initiative to promote sustainable development. It is focused on helping

subsistence farmers become small-scale entrepreneurs.

In conclusion, we need 50% more food by 2030 in the context of water shortages and a changing climate. And there isn't enough additional land to cultivate without threatening natural habitats. Technology can enable us to achieve it and to do so sustainably. And in the environment, we can learn from some of the areas that could be improved from the first intensity phase of 40 years ago. But this is not being reflected in decisions made by many at the EU level and in member states. There is hope.

Pro-technology voices are being raised. Its importance is being acknowledged. A retailer with a strong organic food focus, the Coop in Switzerland, stated that Bio cannot feed the world. The CEO of Tesco recently said "stand by the science". This is right. The evidence is clear.

All of us engaged in agriculture and the food industry have a responsibility to promote the importance of technology to produce more from existing resources.

¹⁴ 24 Mäder P et al; "Soil Fertility and Biodiversity in Organic Farming"; Science 296 (2002): 1694–1697

Responses to the panel address

In his response, **Benoit PASSARD**, Vice President, Marketing & Communications, DeLaval, argued that more efficient resource use is essential to sustainably increase production, particularly during these testing times. In particular, he argued that we need to support sustainable farm development by better understanding the challenges farmers



face and then, armed with this knowledge, we can ensure they have access to the new and appropriate technology and services available to help them do their job sustainably.

The key message which Mr. Passard delivered is that “Sustainable Farming = Profitable Farming = Sustainable Farming”.

Francesco QUARANTA of New Holland Agriculture took a slightly different approach to the subject arguing that we need to minimize the risk of volatility and energy costs for farmers. Farmers need stability and independence and by helping them to be less exposed to cycles, we immediately alleviate numerous pressures they often face.

He argued that market volatility is very difficult to deal with and so by offering solutions such as advanced technologies, we can enable farmers to be more efficient and ultimately more successful.

In making his address to the Forum, **Pekka PESONEN**, Secretary-General, COPA-COGECA, argued that there are three areas of focus:

1. Market Management - the recent crisis has shown us a lot and taught us many lessons. The European Commission must look at today's' circumstances

and not look back to former management tools.

2. Research and Investment – productivity growth and the need to keep costs down have been the recent approach. However attitudes must be changed to encourage both productivity and sustainability together.

3. Response to Climate Change – there is a great and urgent need to assist farmers to adapt. We cannot just preach and not be there to help and develop understanding.

As far as Mr. Pesonen was concerned, these three points affect the whole world but particularly impact on the poorest. Furthermore, Mr. Pesonen argued that farmers are very vulnerable and they deserve long overdue attention because agriculture is becoming more important than ever before. Finally, Pekka Pesonen said that we need a strong CAP to improve production capacity in a sustainable way. He implied that by doing this, we would be developing a model for others around the world to follow.



Agriculture and the question of environmental security – meeting the Eco-System Challenge

USING OUR SOIL & WATER EFFICIENTLY

Michael HAMELL, Head of Unit, Agriculture, Forest, and Soil, DG Environment, European Commission, used his address to the Forum to make the point that money should be obtained from rural development and structural funds to help



agriculture prepare for the future challenges it faces.

He made clear that whilst productivity would need to be increased the environment must not be ignored and most certainly be ranked higher in its importance.

For Mr. Hammell, finance and agriculture go hand in hand and he argued that the sooner this is realised, the greater chance we have of preventing any more food crises in the future. He argued strongly for action, making clear that “we cannot be idle”.

PROTECTING & ENHANCING BIODIVERSITY

In his intervention, **Ariel BRUNNER**, Birdlife International, argued that agriculture is everywhere yet many just think of it as farmland. Natural habitats, water, farms and birds all add to the environment and are all at the heart of human lives. Mr. Brunner said that agriculture keeps the world living and we can no longer ignore its value to all of us.

Ariel Brunner argued that the technology

debate is a “fake debate”. For him, technology is about how you use it – not if it is right or wrong. He argued that technology is not just big machines and chemistry, but it is about knowledge and optimisation too. In the last 50 years, technology has replaced significant amounts of labour. It has increased productivity and agricultural technology has immensely increased productivity in Europe when compared to China and Brazil.

Mr. Brunner said that he recognised the need for more food, but also argued for caution. He argued that in Europe, there is great emphasis on high productivity levels but sustainability in the long run must be just as important. Water, biodiversity and climate change must be acknowledged and worked with. Maximizing the social benefit of the land through creating the right incentives to farmers is crucial. Society must find a mix of rules and positive incentives such as CAP. For Mr. Brunner, joint policies have the best chance of dealing with challenges.

PROTECTING THE ENVIRONMENT WHILST ENSURING HIGH PRODUCTIVITY

Speaking as a farmer, **Hervé MORIZE**, Chairman of Société des Agriculteurs de France, strongly argued that Europe has a

wonderful environmental heritage, from the landscape to the arable land. However, there is the need to increase capacity for our farmers. To do this, he believes that we must invest more to produce more and develop more. We need to make sure productivity of our land is achieved but in a responsible way.

Mr. Morize argued that to feed Europe and the world is a real challenge. In the last 15 years, productivity has fallen but as



farmers, who are also businessmen, we must see that we need to produce more and better. We need to optimize resources that cannot be replaced, for example energy, land and water – basic assets of all companies.

Hervé Morize said that he believes that technology can help with erosion and also with water. Air, the third major asset must also be cared for. He argued that we must limit GHG's and set agreeable balances. While we want to improve productivity to remain competitive, we must better organize crops, manage fertilisers, use technologies such as seeds and keep in mind the positive relationship of good practises.

For Mr. Morize, respecting biodiversity and nature means working together, being aware

and conscious of what we do and sharing our visions in society.

LAND MANAGER'S PERSPECTIVE

In his contribution, **Victor RIBEIRO**, CEO Cork stopper division, Grupo AMORIM, argued that we must recognise the value of biodiversity. He said this is often overlooked but is something that is pivotal to our future. He referred to forestry around the world, which makes a huge contribution to the environment. In particular, Mr. Ribeiro said that cork forests help contribute to the retention of CO2 emissions with each cork retaining approximately 118grams.

For Mr. Ribeiro, it will be initiatives and ideas that will help us succeed in maintaining and enhancing biodiversity.

The Nature & Scale of Public Goods Delivered by EU Land Managers

PANEL ADDRESS: **Allan BUCKWELL**, Chief Economist, Country Land & Business Association. He spoke as head of a European Task Force organized by the RISE Foundation for Rural Investment Support for Europe (RISE), and financed by a grant from the Italian Government.

Security is the archetype of the public good. Food and the environment must be nurtured and we must acknowledge the market failures. Europe should take the lead collectively but this requires a policy change. The challenges include the interdependence between EU food and environmental security: 4/5ths of Europe's land is farmed or forested. But the way we 'do' our farming and forestry massively impacts the environment particularly in relation to the quality of the environment. This particularly relates to soils, water, air and genetic diversity. This all makes a huge contribution to our food producing capacity

A food and environmental security policy should achieve food security by ensuring there is a profitable farming industry which maintains its production capacity. But the key to this is the protection of our best

agricultural land and ensuring that we keep it in good agricultural condition. We also need a flow of Research & Development in agriculture and investment in the necessary Extension Services, if we are to maintain and increase productivity growth whilst reducing negative environmental impacts.

The policy should achieve environmental security through ensuring highly productive



and active land management with an appropriately-scaled set of environmental policy measures to deliver public goods.

It should be recognised that the breadth and components of the interaction between land management and environment is positive as seen through the services already provided by land managers. After all, farming and forestry occupy 80% of EU land.

But there are also market failures. For example, too many environmental "bads" occur and insufficient "public goods" are provided. One needs to internalise these externalities, but there is always the question of who pays, for example food consumers or food producers. The choice between these is a matter of cost/effectiveness and fairness. It can be defined as a question of assignment of property rights in land use.

The scale of the problem should be highlighted in a way to motivate commensurate policy action. Big measurement problems should be addressed and the resources needed

to deliver Environmental Public Goods (EPG's) must be acknowledged.

In his intervention, **Peter NOWICKI**, Wageningen University, said that he believes that public goods are non-excludable and non-rival in consumption. For him, there are a broad range of public goods provided by agricultural land management which can vary in nature and scale. These can include:

- Water basin management
- Landscape maintenance
- Biodiversity protection

The benefits of these “goods” include:

- Water quantity & quality, which is important for local development
- Attractive countryside, which benefits tourism
- Fauna & flora diversity, which benefits agricultural productivity and is of great interest to both environmental specialists and ‘amateur’ observers

Making his response, **Jozséf POPP**, Hungarian Research Institute of Agrarian Economics, focussed on mechanisms for delivering public goods in agricultural land management. He began by outlining the main ways in which public goods can be



delivered. These include:

- Creation of markets where this is possible
- Establishment of private or charitable organisations
- Public payments to private land managers
- Consumer purchasing power exercised in a way which demands that the environment is properly considered in food production

For Mr. Popp, his main focus was on the creation of markets. He argued that markets for carbon and water quality trading, for example, are created to

reduce compliance costs associated with environmental regulations. However, such markets require the establishment of a regulatory entity or arbiter to define the tradable good and oversee and enforce legitimate transactions. Cap-and-trade programmes create a tradable environmental service using programme rules to create demand. But such markets also require government backing to be successful ensuring that regulated business firms also meet strict environmental standards.

Nevertheless, Mr. Popp also argued that to assist market development, uncertainty

must be reduced by setting standards for environmental services and helping reduce transaction costs. As markets are established, entities/clearing houses emerge to reduce costs. The Government's role should be to develop tools and methods to quantify how farming practices affect environmental services. For example, an online Nitrogen Trading Tool can be developed to help farmers determine the number of nitrogen credits that can be generated on their farms for sale in a water quality trading programme.

However, to make the most of environmental services delivered, Jozsef Popp argued that the EU must define its policy on markets for environmental services, support producers wanting

to participate in such markets, conduct research and develop tools to quantify environmental impacts of farming practices and establish technical guidelines for measuring environmental services. Markets for environmental services do not replace the need for traditional conservation programmes, but they can contribute to more investment in agriculture for the provision of environmental services.

David BALDOCK, Executive Director, IEEP, argued that public goods can be delivered wherever land management takes place and this currently happens all across Europe and not just in small pockets. But public goods do need policy intervention as they face increasing pressures such as limited land availability. For Mr. Baldock,

society has increasing expectations of land managers and we need to make an effort to ensure public goods continue to be provided.

He argued that we must be precise about public goods, for example where they are and what are the synergies and conflicts between them. We need clear standards of land management and enforceable regulations. We must have sufficient resources for their provision, whether generated locally or predominantly from the European level. This is necessary to award and incentivise the delivery of public goods by land managers. For David Baldock, the CAP has the potential for funding of public goods but not within the existing conditions.

Is Europe responding effectively to the food and environmental security challenge?

Opening the panel session, **Neil PARISH**, Chair, Committee on Agriculture and Rural Development, European Parliament, argued that land can be used for both food and energy. He said that some of the new EU member states such as Romania and Bulgaria have huge potential to improve the productivity of existing farm land and to clean up and bring into production land that is currently unused.

For Mr. Parish, he believes that there is great scope to really develop agriculture further and is a strong advocate of producing as much food as possible in Europe. He particularly finds it “obscene” that Europe imports as much food as it does because of what he describes as “conflicts of interest”. This results in other parts of the world starving.

He also used his address to remind the Forum that agriculture is a market and we need to ensure we get the balance of production right.

In her intervention, **Loretta DORMAL-MARINO**, Deputy DG Agriculture, European Commission, argued

that food security can mean different things. For example, does it refer to quantity or price? She remarked on how we appear more cautious about food security after last year’s food crisis. Whilst she accepted that prices will go up again, Ms. Dormal-Marino believes they will stabilize at a point not higher than 30 years ago.



Turning to land availability, she argued that there are still tracts of land that can be brought into production and this can help alleviate the pressure on food supply. She stressed the need to make good use of this resource.

Ms. Dormal-Marino insisted that we should not be in a “black mood” about food security but rather see the solutions available and seek to maximize them. For her, reforms of the CAP in a more market orientated direction have been tremendously useful, enabling farmers to respond better to market signals. She also argued that up to now, European policy has responded relatively well to agricultural requirements, with the exception of R&D.

For the future, policy should continue to ensure the market orientation of the CAP but also help to maintain the knowledge base. We need research and innovation but she argued for the need to maintain both the physical and social infrastructure of farming in Europe. She stressed the need to find a more efficient way of managing the land.

Finally, she pointed to the fact that the real

income of farmers has not gone up very much in recent years, yet input costs have. For Ms. Dormal-Marino it is imperative that we continue to respond to farmer needs otherwise they will lose out and it will be the poor who suffer most from future food crises.

Willem - Jan LAAN, Director Global External Affairs, Unilever, argued that in spite of the economic crisis, food security remains a key issue on the agenda. He pointed to the number of demand and supply factors that continue to point to the scale of future challenges:

- Demand: increasing world population (about 1 billion people are undernourished), changes in diets (more calories and proteins are required), biomass used for energy purposes (including biofuels) and increasing volumes of feedstock's burned as fuel and electricity.
- Supply: declining yield improvements, environmental limits including biodiversity/eco-systems, water availability, cost of inputs and Greenhouse Gas Emissions limits.



Mr. Laan argued that sustainable agriculture is clearly the goal and is supported by different stakeholders up and down the supply chain. This includes the food industry and retailers; farmers; input industries; and governments. In this respect, he pointed to the fact that several Roundtables have now come together to agree sustainability criteria and standards.

But as far as Mr. Laan was concerned, there is now the need to invest in agricultural

production if we want to double food production by 2050 (with a 50% increase by 2030). For him, a viable sector with profitable growth is essential.

This means that governments need to support R&D in agricultural production. He also stressed the need for an appropriate assessment about the future generation of energy from agricultural land. For him this needs a paradigm shift where we only grow optimal energy crops avoiding the use of 'environmentally poor performing' first generation biofuel crops.

Mr. Laan also raised the prospect of Climate Change receiving a significant amount of attention in 2009 in the run-up to the Copenhagen Summit. For him this is absolutely right because if we do not act swiftly we will only see bigger problems in the future. There are a number of areas where we need to work together, including a reduction of Greenhouse Gas Emissions in the total supply chain. And this includes agricultural production, food processing and distribution and consumer use of food. A low carbon economy also includes a low carbon farming sector. Fertilisers, herbicides and pesticides are part of the Life Cycle Analysis.

At the technical level, we need to find common standards with regards to emissions and emission reduction. If we agree that we all need to do a fair share, we have to agree on total commitments in an international agreement (Copenhagen). In the meantime we will have to adapt to the new situation with regard to the production capacity (temperature, rainfall, availability of water, the use of new seed

varieties). This is particularly relevant in a number of developing countries which will face the most serious consequences.

Corrado PIRZIO-BIROLI, CEO, RISE Foundation and Chairman of ELO Consultative Committee, argued that Europe has responded effectively to the food and environmental challenges, which were key motivations of the 'Fischler reform'.

But he said that much remains to be done to adapt policies to a changing world context. As policy priorities evolve, the current distribution of single farm payments, still based on historical production figures, will be questioned more and more. Therefore, redistribution is inevitable but greater equity will also mean that some will lose out and this could lead to opposition.

In addition, Mr. Pirzio-Biroli argued that given EU farmers are now subjected to much more open markets there is also a need to address price volatility of agricultural commodities.

With regards to the simplification of CAP rules and procedures, he recalled that, as a rule, Commission proposals become more complicated after Council and Parliament deliberations due to national differences. He referred to former Director-General, Guy Legras, who used to say that CAP simplification is only possible outside CAP reform! Putting things in perspective, Mr. Pirzio-Biroli contended that without the CAP there would be national, contradictory agricultural policies within the EU making it impossible to have a Single Market without borders.



The impact of the financial crisis on food and environmental security



During this panel session, the Forum was addressed by **Jiří URBAN**, Deputy Minister of Agriculture, Czech Republic. He argued that it is important to encourage good economic practises within agriculture. Mr. Urban stressed that the EU is very highly regarded around the world and is seen as

the epicentre of agriculture. Playing a very important role in the world's total agriculture, he argued that it is obvious that European agriculture needs to be prepared to manage challenges such as climate change and biodiversity. At the same time, it has to produce safe food of high quality. He made clear that without technology or new developments it will not be possible to achieve the targets we set for the future.

The Minister's address was followed by **Mariann FISCHER-BOEL**, Commissioner for Agriculture and Rural Development.

In her address, she argued that the farm sector in the EU benefits in ways other sectors do not. In her view, the various forms of support for agriculture remain valid and vital but there is a need to find ways to deal with agricultural price fluctuations providing greater stability to farmers facing more open markets so that they can remain in business.

Mrs. Fischer-Boel argued that farmers deserve high incentives in order to address environmental challenges such as climate

change and water shortages. She was also hopeful that an agreement could be reached at the EU March Summit to free EU budgetary resources saved under the CAP for stimulating rural, notably broadband, development. Since there are 27 member states with different



geographies and traditions, the CAP needs to be more flexible.

She also believes that agriculture must contribute to the provision of renewable energy, including biofuels. Bio-ethanol has become a scapegoat in the renewable energy debate when food prices shot up. How can one continue to blame them after the recent collapse of commodity prices? Therefore, Mrs. Fischer-Boel argued that the EU renewable energy targets must remain and said that she believes they are subjected to the right sustainability criteria. But she conceded that research should be strengthened in order to speed up second generation bio-fuels.

Turning to the subject of GM Crops, she said that we need to stand by a science

based approach to GMO's. Mrs. Fischer-Boel argued that we need to be open to what the technology can do for us, for example, having crops that are resistant to heat and drought. She expressed surprise at the public reaction to genetically modified crops when they accept GMOs such as insulin to be injected into their bodies for health reasons.

In terms of achieving long term food and environmental security, Mrs. Fischer-Boel said that to move forward we need to work together at the international level. She argued that the EU can solve some issues on a unilateral basis but when it comes to food, an open, global approach needs to be adopted. She made clear that trade restrictions made the markets nervous in 2008 and she is worried about the "ugly

head of protectionism" reappearing in some countries.

On the issue of improving farm productivity in the developing world, Mrs. Fischer-Boel argued that there are number of areas which deserve attention such as the empowerment of women working on the farms; access to seeds; and the availability of micro loans.

Finally, she argued that agricultural research must move up in importance as it has been too low a priority for too long.

Has the world responded effectively to the challenges of food and environmental security?

Carlo TROJAN, Chairman, International Food & Agriculture Trade Policy Council (IPC), opened this session by arguing that the global challenges of the agricultural sector in the 21st century are daunting. He said that it is vitally important that we find the right balance in addressing food production, energy dependence and climate change. Most of these challenges are interrelated and require a comprehensive policy approach. The policy approach has to be a global one. This has become even more urgent since the financial crises and the present deep economic recession has led to the emergence of protectionist measures.

For Mr. Trojan, an open trading system is even more important now that the world is in the midst of a financial crisis of historic proportions and in a deep economic recession. He argued that last year we saw all kinds of export restrictions and export taxes in the face of the food price crises. This year we see protectionist pressures growing all over the place. World trade has been shrinking dramatically with long-lasting effects on emerging economies and the people most in need. So Mr. Trojan argues

that we have observed a shift from a supply driven agricultural economy to a demand driven one. The “cheap food policy” of the past has come to an end. An open trading system remains an essential element for economic growth, global food security and poverty alleviation. Trade will also play its part in climate change adaptation and mitigation policies.

But Mr. Trojan also agreed with previous speakers that there is huge potential for productivity increases notably in developing countries. There is still arable land available in Latin-America, Africa and Eastern Europe.

Turning to the issue of climate change and agriculture, Mr. Trojan pointed out that global and local food security vulnerability patterns will be modified by climate change. Technical adaptation measures will be required to cope with a changing climate.

But he also said that agriculture had to make its contribution to tackling climate change, specifically by reducing its Green House Gas (GHG) emissions and guarding against unnecessary deforestation. This is

particularly the case in developing countries which count for three quarters of global agricultural emissions. More advanced farming techniques, improving land management, supplementary irrigation, reorganizing farm land and better livestock/manure management can all contribute to reduce emissions.

Finally, Mr. Trojan argued that Europe has been at the forefront of protecting and enhancing the environment both at home and beyond our frontiers. The successive reforms have made the CAP much greener. The EU is a key international actor in promoting environmental security at large. It is a driving force in the international Climate change negotiations. With the recent adoption of the Energy and Climate change package, he believes the EU will be in a strong position of leadership together with the new US administration.

In his provocation, **Colin TUDGE**, Biologist and Writer, argued that there is a horrible mismatch between economic theory, (e.g. the economic strategies that are brought to bear), and the biological realities of the



world. This is true in all aspects of human existence but it is most obvious and most immediate in agriculture.

He argued that one of the most “destructive conceits” of the modern world is that the ideas and ideology of economics, and the economic models that emerge from those ideas, are a given; that everything else must adjust to the theory and models of the day. This notion is reinforced by the argument

that with more science we can understand exhaustively how the world works, and that with more technology we can adjust the fabric of the world, and make the animals and plants, that are our livestock and crops, meet our political and economic demands. Mr. Tudge argued that the truth is entirely the other way around. The biological and physical realities of the world are the given. The economic theory and practice must adjust to those realities.

As far as Mr. Tudge is concerned, we are not sorting out or understanding the underlying physical and biological problems. We are not seeking to devise systems of agriculture that are truly adapted to the biological realities and – for Mr. Tudge – limits of the world. The problem the world now faces is one both of economic structure, and is Malthusian – which is to say it is biological – problem. Mr. Tudge believes that the Malthusian problem can be overcome but only if and when we start to think about working within biological limits.

In his provocation, Mr. Tudge claimed that none of the people who farm well, in an enlightened fashion, are economically mainstream. He argues that you cannot

farm in a benign and sustainable way in the present economy and hope to make a living. In practice, farming that is truly designed to feed people must first focus on arable, which he argues can be the chief source of energy and protein; then focus on horticulture; then fit in the livestock if and where possible.

So for Mr. Tudge, the basic model – worldwide, if we seriously want to feed people well – is a farm that is small to medium sized and very mixed. He therefore argued that the basic structure for the modern farm is traditional – the kind of farm that is now being, in his words, “systematically trashed”. But traditional structure does not imply traditional science and technology. But this new, small-scale, labour-intensive mixed farm should only be as high-tech as necessary to farm sustainably.

Directly approaching the panel question, **James SHIKWATI**, Chief Executive of Inter Region Economic Network (IREN), argued that for Africa, the world has not yet responded effectively to the food and environmental security challenge. Speaking from a continent where there is a constant



worry about food supply, Mr. Shikwati argued that Africa will become a greater problem unless freed from migration, conflict and turmoil.

Mr. Shikwati said that he understood the temptation to seek aid and finance to solve the food security problem in Africa. However, he argued that this could still drive

the continent into a Malthusian trap. Obtaining finance is not access to farming knowledge – which he argued Europe has in abundance. Denying African people the opportunity to learn and be productive in farming is completely wrong. Finance and food aid can play a short term role but in the long run, Africa needs to develop a farming system which is sustainable for itself, built on long term knowledge and know-how – something that is missing at the moment.

He referred specifically to the fact that African Governments do not look at building the necessary institutions within Africa to properly support the development of sustainable agriculture. He said that many experts and commentators argue that Africa is a copy of Europe but since the continent has no institutions this cannot be true.

Mr. Shikwati specifically argued for the need to work with smallholder farmers to help build this sustainable farming system in Africa. He said that approximately 75% of the population are smallholder farmers and therefore food and environmental security needs to target the real African population. This can be done through the sharing of knowledge and education.

In conclusion, he said that whilst Africa wanted to apply European technologies in Africa, they remain very expensive. He said it is important for European farmers to go and share their knowledge with Africa – but that this needs to be handled sensitively. Governance, in particular, needs to be fixed, and effective policies developed to support African farming.

In the final contribution to the FFA2009, **Gustavo IDIGORAS**, Minister Counsellor-Agriculture Affairs, Permanent Representation of Argentina to the EU, focussed specifically on the role of technology in achieving sustainable agriculture. But he questioned whether this term has the same meaning across the world. For example, he argued that in Argentina, farmers are pro-GM Crops because this is perceived to be for the socio-economic and environmental good of the country. In his country, Mr. Idigoras argued, biotech crops are needed more and more for these reasons but the European attitude to GM Crops presents a real problem.

He said that approximately 60% of Argentina's agricultural exports are to

Europe, India and China. But if Europe refuses to approve GM Crops for import, these exports are not accepted in the EU.

Mr. Idigoras concluded by arguing that we need to encourage politicians and officials in EU member states to work together and

realise that decisions in Europe do affect the whole world, not just the 27 members. Only then will they start leading towards world food and environmental security.

(Select speeches are available in full on request)



CONCLUSION

The job of concluding and closing the FFA2009, fell to Carlo Trojan.

He argued that the addresses by Franz Fischler and Paul Krugman had successfully drawn the link between three serious crises: finance, food, and environment. In their addresses, both called for a new financial architecture for food and environmental security, a conclusion of the Doha Round, and argued for a strong role for the EU in contributing to feeding the world by producing more and better food in a more sustainable way.

But the Forum also heard different views on the future availability of food. A great majority expect rising, volatile prices, which are signs of a deteriorating balance between demand and supply. The need for a global food safety net was also underlined whilst many lamented the lack of a food lender of last resort.

In this context, there was strong support for

increasing food production in a sustainable way. It was understood by speakers and delegates alike that food security could not be provided without a profitable farming industry, the maintenance of production capacity, and the use of modern technologies. However, there were some who questioned the extent of the role of technology but many argued for greater investment in research & development to ensure modern tools are available to farmers and land managers.

Most participants in the Forum recognised that food demand was greatest in developing countries and specific solutions needed to be found and applied there and greater investment, in this respect, will be crucial.

There was also a long discussion about the extent to which speculation in commodity markets had caused last year's food crisis. However, the consensus appeared to be that it was the fundamental structural

problems in food demand and supply that were the main problem but that speculation had probably aggravated the situation.

In relation to climate change, doubts were expressed at the world's capacity to limit temperature increases to 2c and emissions to 459 parts per million. It is believed that this will have negative consequences for food and environmental security.

In terms of environmental security, the protection of soils was considered to be essential as they are the "biggest terrestrial source of carbon". Evidence of a decline in soil matter pointed to the need to take action by adapting agricultural systems. But most felt that the slowing pace of productivity increases meant that there was a need to focus on the optimisation of all natural resources available.

Regarding public goods produced by farmers, there was a report by the Task Force on the subject, financed by the RISE

Foundation with input from the Italian Government.

The European Commission has also launched two new studies on the issue.

The clear message here is that ‘what one cannot measure, one cannot manage’! It was clear from the speeches made, and many of the responses, that public goods in agriculture are difficult to measure but their value was enormous. Yet the market does not recognize this fact and therefore had failed to pay for them. Therefore, this posed the question, who should pay in the future: producers, consumers or taxpayers?

Setting standards for environmental services was also considered to be beneficial in this respect and that a clearer definition of a policy on markets for environmental services is needed. But this should not replace traditional conservation programmes.



Furthermore, the CAP was widely considered to be another important instrument that can help with the purchase of public goods but that there would have to be a permanent change in direction with new targeted policy instruments that would produce verifiable results.

On the CAP, Commissioner Fischer-Boel believed that the publication of individual CAP payment data would clarify future reform discussions, and better explain to

taxpayers why direct payments were still justified. Finally, she too recognized the need to agree remuneration for ecosystem services.

Mr. Trojan finally remarked that the rich debate held at the FFA2009 created the basis for ongoing discussion during the next twelve months which will help to inform the 3rd Forum on the Future of Agriculture, (FFA2010).

About the conference organizers



About ELO

The European Landowners' Organization (ELO), created in 1972, is a unique federation of national associations from the 27 EU Member States and beyond, which represents the interests of landowners, land managers and rural entrepreneurs at the European political level. Independent and non-profit making, ELO is the only organization able to stand for all rural entrepreneurs. ELO aims at promoting a prosperous countryside through private property dynamism. Its Secretariat is based in Brussels. Information can be found on www.elo.org

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