LIMITED RESOURCES AND CLIMATE CHANGE – MANAGING A TURBULENT FUTURE

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Documentation




BVE
DBV Deutscher Bauernverband
DLG
gtz
Ost-Ausschuss der Deutschen Wirtschaft
oa

Feeding the world and climate change – Approach for the future

Sustainability and innovation are the answers to the challenges of our time

The current and future feeding of the worldwide population presents great challenges to the agriculture and food industry. At present, more than two billion people throughout the world are suffering from malnutrition. According to United Nations estimates, by 2050 there will be nine billion people to feed in the world, which also means that the global challenges for agriculture and the food industry are growing. However, climate change and its consequences aggravate these challenges; the more so as the increase in farming and food production using contemporary production methods amplify the emission of greenhouse gases.

"Nevertheless, climate change and securing world sustenance not only present great challenges but also huge opportunities," said Professor Klaus Mangold, Chairman of the Committee on Eastern European Economic Relations, in his opening address at the International Business Panel "Limited Resources and Climate Change – Managing a Turbulent Future", held during the Global Forum for Food and Agriculture (GFFA) at the Akademie der Künste, Berlin. He sees the economy as a potential beneficiary of this situation, "because it has the necessary technologies and innovation at its command, which can be used to boost climate efficiency and crop yields. The knowledge is there; now it is time to apply it." At the same time, Prof. Mangold underlined the economy's responsibility to expedite and develop solutions for adjusted crop technology, as in the area of risk management.

Using Russia as an example, Prof. Mangold explained that it would be possible to feed the worldwide growing population and, at the same time, prevent climate change. According to Prof. Mangold, by applying advanced technologies, the annual cereal production in Russia could be boosted from 100 million to 180 million tons. At the same time, modern technologies have already made it possible to drastically reduce the amount of energy required for agrarian production.

After these statements, host Udo van Kampen, head of the ZDF studio in Brussels, invited each of the representatives of the responsible body to give a brief statement. Jürgen Abraham, Chairman of the Federation of German Food and Drink Industries (BVE), explained how crucial it was that producers and consumers alike should do everything possible to constrain the emission of greenhouse gases. The food industry supports the sustainable production of agricultural commodities and improved energy efficiency. The President of the German Farmers' Association (DBV), Gerd Sonnleitner, explained that a competitive farming industry, adapted to its location, would be the key to both, overcoming starvation and poverty as well as confining climate change.

Carl-Albrecht Bartmer, President of the German Agricultural Society (DLG), emphasized the key role of innovation. The growing requirements of both agriculture and the food industry could only be solved by innovation, he said. "Innovation means new species, new technologies, new machines, healthy and well fed plants, and, most of all, knowledge and competence." Last but not least, this also meant an increased investment in research and education and, thus, in human capital. Independent entrepreneurs who choose and apply

adequate technologies would also be required. Dr Bernd Eisenblätter, Managing Director of the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH (German Technical Cooperation), added that development strategies could only be successful if based on the principles of sustainability: "In its implementation, sustainability is very difficult because of the conflicts between short- and long-term interests, short- and long-term perspectives, as well as short-term gains which might not influence long-term perspectives in a positive way."

from left to right
Gerd Sonnleitner (DBV),
Jürgen Abraham (BVE),
Udo van Kampen (ZDF),
Carl-Albrecht Bartmer (DLG),
Dr. Bernd Eisenblätter (GTZ).

Our most important resources are water and soil

Following these statements, the panel discussion began with the keynote speech by Professor Klaus Toepfer, former Federal German Minister for the Environment, ex-Executive Director of the United Nations Environment Program (UNEP) and now founding Director of the Institute for Advanced Climate, Earth System and Sustainability Studies (IASS). Prof. Toepfer emphasized that securing world feeding and climate change required a sustainable handling of the scarce resources of water and soil more than ever. This would include water efficiency and recycling just as much as water storage. "The more the climate changes, the more we will have to prepare for extreme weather conditions. This not only includes the amount of precipitation but also how we can store it so that it can be used the most efficiently," Prof. Toepfer explained.

Equally important was the handling of the resource of land. This was one of the most neglected factors in the international discussion and in his opinion an alarming issue. A contaminated river could be cleaned with some effort "but land which is so contaminated that it is no longer productive can hardly be regenerated." According to Prof. Toepfer, land for agricultural use is being lost worldwide as a result of weather changes and the resulting erosion, which in itself aggravates climate change. "We have got to understand that the way we treat soil has a negative influence on climate change at the same time as the soil's absorbency for carbon vanishes."

Development is the new formula for peace

Climate protection and feeding the world should not only be made a top priority due to economic and ecological interests but, according to Prof. Toepfer, also increasingly for the sake of peace-keeping: "A world in which 40% of the population claims 94% of the income, and the other 60% have got to content themselves with 6%, can't be a safe place to live in," he said with reference to Nobel Peace Prize Laureate Mohammed Yunus. This could not be a formula for peace. On the contrary: development was the new term for peace.

Prof. Klaus Töpfer

Professor Toepfer underlined that it was mainly a task for the industrialized nations to set a good example with the necessary innovations and their implementation: "We have got to step ahead and initiate the necessary technological and market-based strategies." The challenge consisted, among others, of developing regionally adjusted ways of management:
"If we apply the same agricultural management in Africa as in Europe, I see a bleak future for the stability of the continent. There we need work-intensive strategies. There we need small family farms to get problems under control."

In addition, Prof. Toepfer broached the consequences of consumerism for the environment: "We have lived at the expense of nature," he said. That was why the economic crisis and the climate crisis were connected so tightly with each other: "This economic crisis is nothing but the declaration of bankruptcy of short-termism." That was why he supported German Chancellor Angela Merkel in her call for a 'Charter of Sustainability'.

Public-Private Partnerships insure crop failures and stabilize national economies

Dr Thomas Blunck, board member of the world's biggest reinsurance company, Munich Re, focused in his keynote speech on another central aspect which will be decisive for feeding the world: the financial insurance of climate and crop risks. Climate change was so essential to farming because it changed the growing seasons and influenced the quantity and intensity of extreme weather occurrences such as heat, drought and storm, Dr. Blunck explained. Unlike other areas of the economy, it was far more difficult for farming to elude climate change and its effects because it was directly exposed to water, warmth and air. The summer of 2003 in Europe showed how drastic the consequences of climate change were for the farming sector: "Depending on the region, we saw a decline of production between 10% and 60%. The losses totaled up to 1.5 billion EUR in Germany alone," he explained. The affected farmers had to bear the damages largely by themselves. In Italy, the heat caused a loss amounting to five to six billion EUR, corresponding to almost 2% of the country's national product. In order to contain this loss of profits, Dr. Blunck pointed out the advantages of a Public-Private-Partnership (PPP). Only a risk management coordinated between farmers, insurers, the governments, and non-governmental organizations (NGOs) could enable the farming sector to sustain the incalculable risks and costs, Dr. Blunck emphasized.

Dr. Thomas Blunck

Professor Friedrich Berschauer, Chief Executive Officer of Bayer Crop Science AG, Cathrina Claas-Mühlhäuser, Deputy-Chairwoman of the Shareholders' Committee of the agricultural machinery maker Claas KGaA mbH, Shri Surampudi Sivakumar, Chief Executive of

Agribusinesses of ITC Limited India, and Dr Thomas Kirchberg, Chairman Südzucker AG, subsequently completed the panel discussion.

The experts of the International Business Panel, similar to the representatives of the responsible body, agreed that innovations were most of all necessary for the required increase in yield and capacity, and the simultaneous climate protection in order to feed the growing population worldwide until 2050 and beyond. At the same time, cultivation techniques and supply engineering would have to increasingly meet the requirements of sustainability in order to protect scarce resources. The participants called on the representatives of the farming and food sector to be stronger and more self-confident in the political and public debates concerning their benefits for society.

We need to observe gene technology in a less ideologically driven way

Professor Berschauer, among other things, pointed to the advantages of gene technology and how it can make agricultural products more resistant to climatic fluctuations. Prof. Berschauer criticized the scientific policy of the German government, especially in the light of increasing global requirements: "Certainly we cannot solve all the problems in this world with gene technology, but in my eyes it is wrong to believe that agriculture could do without these new technologies. We simply cannot afford to ignore them."

from left to right
Shri Surampudi Sivakumar,
Prof. Friedrich Berschauer,
Dr. Thomas Kirchberg

We need to inspire young people more towards agriculture

Moreover, Prof. Berschauer emphasized that the capacity for innovation and the sustainability of agriculture depended more than anything else on the young academics. He was worried that this sector did not belong to the students' favoured area. "The masterminds are not interested in agricultural science – but we need them." This sector, therefore, needed to show its innovative ability and its attractive growth and future prospects.

Regional development as an approach towards feeding the world

Cathrina Claas-Mühlhäuser, like Professor Toepfer, turned her attention to the regionally different requirements of the farming sector. She stressed the impact of regionalization as an approach towards feeding the world: "The technical needs of a farmer in India differ considerably from a farmer in Germany." This required the ideal adjustment of engineering to regional circumstances in order to achieve a sustainable increase in yield on a long-term basis. There was no concept which could be applied everywhere in the same way, Ms. Claas-Mühlhäuser emphasized. She therefore called on the companies in the food and farming sector worldwide to create individual and flexible solutions.

Cathrina Claas-Mühlhäuser,
Udo van Kampen

We are modernizing our farming sector through mobile shared information

Shri Surampudi Sivakumar catered to the specific possible solutions for requirements of farmers in remote areas. Through the initiative E-Choupal, which he generated, ITC tried to enforce the use of the Internet in India's rural areas. It was necessary to adjust the local production methods to modern standards and to provide the farmers with the individualized know-how for this purpose, Mr. Sivakumar explained. How to coordinate the disposability of loans and how to handle instruments for risk management, so that farmers could apply the latest knowledge for crop protection and increase yields in spite of climate change were other relevant issues.
According to Mr. Sivakumar, the combination of the Internet and mobile telephony are the solution. With their help, ITC could provide the farmers with the necessary information in a fast and personalized way. "In fact, the Internet is the visible component of what constitutes our system: namely shared information," he added. At the same time it enabled an interactive exchange between the farmers. Thus they could not only exchange know-how and inform themselves about new technologies but also protect their interests better. This information network already connects four million farmers.

We improve our own and our partners' efficiency through knowledge management

Dr Thomas Kirchberg focused on the aspect of knowledge management and its possibilities of raising efficiency in the value-added chain. Dr. Kirchberg explained that Südzucker has applied contract farming very successfully for many years. The improvement in efficiency resulted from the fact that "we compile knowledge together with agricultural organizations". This model was not only applied in Germany, but anywhere the degree of efficiency was below its actual potential. "We have also already tried out our system in Moldova. There we achieved a bigger output with a smaller input under economic as well as ecological aspects." Within the European sugar industry, the increase of output amounted to 30% per hectare now as compared to 2000. "This shows that we have already got the necessary instruments to be prepared for the challenges of climate change." Dr. Kirchberg also emphasized the meaning of sustainability: "Sustainability is the prerequisite for the farming and food sector to be able to shape the future."

Conclusion

In spite of the partially differing approaches to the central topics of world feeding and climate change, the International Business Panel experts agreed that it is possible to secure feeding for nine billion people and reduce the impact of climate change at the same time. An innovative food and farming industry, as well as coordinated and constructive cooperation between business, policy-makers and civil society, which will produce long-term solutions in compliance with the principles of sustainability were key prerequisites to achieve this goal. They added that there was an outstanding duty to respect regionally different challenges, develop customized strategies for adaption, and implement them.

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