



Federal Ministry
of Food
and Agriculture

GLOBAL
FORUM OF **FOOD**
AND
AGRICULTURE

Global Forum for Food and Agriculture 2017

Summary of Results



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Foreword



Dear Readers,

The Global Forum for Food and Agriculture (GFFA), hosted by the Federal Ministry of Food and Agriculture, has firmly established itself as a driving force and marketplace for innovative ideas on international agricultural policy issues relating to the global food situation. This year's 9th GFFA once again brought together around 2000 international guests from 136 different countries to take part in the three-day international conference, including many high-level representatives from politics, industry, science and civil society. It is precisely this cross-sectoral exchange, transcending national borders and continents, that makes the GFFA so unique.

The 2017 GFFA was dedicated to the issue of water, a particularly vital resource for the agricultural sector. Because it is only if agriculture has sufficient clean water that it will be able to fulfil its role as a major supplier of food and ensure food supplies for the growing world population. However, the competition over this unique resource is becoming increasingly fierce. There are many reasons for this: rapid economic development, steady growth of the world population, climate change and also changes in lifestyles and eating habits.

The GFFA discussions therefore focused on what contribution agriculture could make to the sustainable stewardship of water. For while on the one hand agriculture requires adequate access to water, agriculture is on the other hand the largest user of water and therefore has a responsibility to manage this resource sustainably. This includes, for example, both the cultivation of drought-resistant crops and the international exchange about water-saving agricultural production methods such as precision farming.

GFFA again succeeded in being a platform both for discussion and above all for information, facilitating the sharing and development of knowledge.

The political highlight of the GFFA was the 9th Berlin Agriculture Ministers' Conference, which was attended by 83 Ministers of Agriculture – a record high. Together with high-level representatives from the European Commission, FAO and other international organisations, the Ministers agreed on a Communiqué that put equal emphasis on the responsibility and needs of the agricultural sector, whilst reflecting the outcome of the previous days' discussions.

At the same time, the Communiqué served the G20 Agriculture Ministers' Meeting, which was hosted under

the German presidency on the day after the GFFA, as a basis for the jointly adopted Action Plan. At the G20 Agriculture Ministers' Meeting, we succeeded in further specifying the recommendations for action formulated in the GFFA Communiqué.

As in previous years, the pro-active support and committed cooperation of many actors were once again absolutely central in ensuring the GFFA's success. This includes, above all, the international organisations, the panel members, the organisers of the expert panels and also the exhibitors at the Cooperation Market. I would like to express my heartfelt thanks to all of them.

I hope you find this brochure a stimulating read and would be delighted to welcome you again to the GFFA in 2018.

With best regards,

Christian Schmidt
Member of the German Bundestag
Federal Minister of Food and Agriculture

Global Forum for Food and Agriculture (GFFA)



Foyer in the CityCube

The GFFA is an international conference that focuses on central issues regarding the future of the global agri-food industry. It was held in Berlin during the International Green Week (IGW) and took place for the ninth time this year. The forum gives representatives from the worlds of politics, business, science and civil society an opportunity to share ideas and agree on political reference points on a selected topic of current agricultural policy within the context of food security. The GFFA is organised by the Federal Ministry of Food and Agriculture (BMEL) in cooperation with GFFA Berlin e.V., the Senate of Berlin and Messe Berlin GmbH.

Under the title “Agriculture and Water – Key to Feeding the World”, the GFFA brought together over 2,000 visitors from 136 different countries in Berlin this year, including 83 agriculture ministers. Furthermore, representatives of young farmers from around the globe, nine international organisations, such as FAO and OECD, and the European Commission attended the Berlin Agriculture Ministers’ Conference and were actively involved in the debate.

At the different events held during the GFFA, representatives of science, business, civil society and politics discussed what role agriculture, as a major user of water,

could play globally in the sustainable stewardship of water as a valuable resource and in maintaining water quality, how it could be ensured that, given the increasing competition over water usage, agriculture had access to water, and hence could provide the global population with food, and how agriculture could contribute its considerable potential regarding the use of water as a resource towards political processes at international level. The many events carried out under GFFA 2017 provided important impetus for future global developments in the area of “Agriculture and Water”.

This year’s GFFA thus once again offered one of the most important international platforms for dialogue on the topics of agriculture, food security and nutrition and, being the biggest agriculture ministers’ meeting in the world, it also remains the most significant driver of the international agricultural agenda.

The GFFA 2017:

- ... is one of the most important events on food security and nutrition;
- ... includes the Berlin Agriculture Ministers’ Conference, which is the largest conference of agriculture ministers in the world;
- ... welcomed agriculture ministers from **83 countries**;
- ... drew over **2,000 participants** to Berlin from **136 countries**;
- ... consisted of **18 events** which took place over 3 days;
- ... attracted participants from over 50 national and international organisations, institutions and companies, including the European Commission and the Food and Agriculture Organisation of the United Nations (FAO);
- ... was an important driving force for the action plan adopted at the G20 Agriculture Ministers’ Meeting under German presidency held the day after the Agriculture Ministers’ Conference.

Kick-off event: A wide range of aspects on the topic of Water and Agriculture discussed

“Agriculture and Water – Key to Feeding the World”.
Around 2,000 participants from politics, industry, the scientific community and civil society discussed this subject at the Global Forum for Food and Agriculture (GFFA) held in Berlin from 19 to 21 January 2017.

The GFFA kick-off event traditionally gives an introduction to the key topic and sheds some light on the core issues from different angles. The event consists of informal discussions between representatives of business, science, civil society and the audience.

This year, the GFFA was once again officially opened by the Parliamentary State Secretary to the Federal Minister of Food and Agriculture, *Peter Bleser*. In his opening address held in the packed conference room of the CityCube, Mr Bleser underlined the vital importance of the issue of water for agriculture: “Agriculture can only fulfil its core task of producing foodstuffs and will thus only be able to continue feeding the growing world population if it has sufficient and reliable access to water.”

In this context, Mr Bleser referred to the increasing water scarcity and said careful stewardship of this resource was one of the key challenges of the 21st century. He said, however, that an isolated approach was not helpful, but rather that all relevant actors would have to make their contribution across sectors.



Margit Gottstein, State Secretary of the Berlin Senate Department for Justice, Consumer Protection and Anti-Discrimination



Peter Bleser, Parliamentary State Secretary to the Federal Minister of Food and Agriculture

Mr Bleser underlined his conviction that agriculture as the largest user of water had to bear a special responsibility in this regard. He emphasised that the agricultural sector would be willing to get involved in the debate on the future of global water management and encouraged all GFFA participants to actively contribute their expertise and experiences to this process.

In her welcoming address, the State Secretary of the Berlin Senate Department for Justice, Consumer Protection and Antidiscrimination, *Margit Gottstein*, stressed that the topic treated at the GFFA 2017 was also of great importance for a city such as Berlin with a comparatively small agricultural sector: she said that Berlin was a consumer city, and as such had a special focus on consumer interests with regard to water.

She went on to say that, at the same time, the topic of agriculture and water had a global component which was of particular relevance to Berlin. In this context, State Secretary Gottstein referred to the high number of refugees arriving in Berlin, among them many climate and environmental refugees. She claimed that there was a great societal and political interest in addressing the topic of agriculture and water in terms of preventing large-scale migration.



Katie Gallus - Facilitator, Greg Koch - Senior Director for Global Water Stewardship (Coca-Cola Company), Marilene Alves de Souza - Director of the Center for Alternative Agriculture of the Region Norte de Minas and Claudia Ringler - Deputy Division Director of the Environment and Production Technology Division (International Food Policy Research Institute) during the panel discussion of the GFFA 2017 kick-off event

The following panel discussion facilitated by the journalist and geographer Katie Gallus started with a stocktaking of the current global water situation by Deputy Division Director, Environment and Production Technology Division of International Food Policy Research Institute (IFPRI), *Claudia Ringler*. Ms Ringler stated: "Water is doing bad". She said that the world population was growing while water reserves stayed the same. She went on to say that the amount of water used by industry and cities was growing all the time. She said that agriculture was the main user of water and would remain so in the future. She continued by saying that the rising water consumption was currently being met by groundwater resources which it was increasingly difficult to replenish. She also stated that the existing water reserves were becoming more polluted and that water therefore needed to be used sustainably and existing water resources conserved. In her view, this was a special challenge for agriculture since there could be no food security without water.

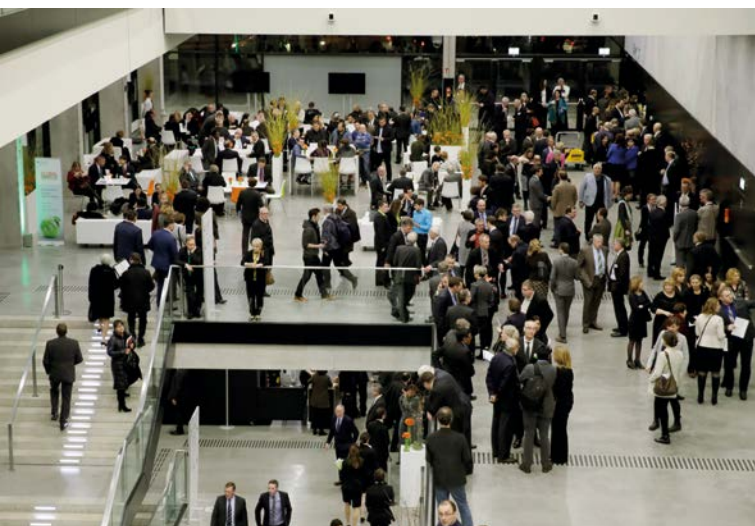
The water situation in agriculture was then examined from the perspective of civil society and industry. The Director of the Center for Alternative Agriculture of the Region Norte de Minas in Brazil, *Marilene Alves de Souza*, reported critically on the role of her country's agriindustry that, in her view, jeopardised the local water reserves. She said that countermeasures had to be taken now to preserve water reserves for future generations and avoid irreversible situations. She said she believed that water was a common resource that ought not to be traded.

Greg Koch, Senior Director for Global Water Stewardship at Coca Cola, underlined the importance of sustainable water management from industry's angle. He said that this concerned his company both in its role as purchaser of juices, teas and sweeteners and as a producer of agricultural products. He stated that there were problems throughout the world with both the quality and the quantity of water. He went on to say that the main problem with the former was salinisation and pollution while the problems with quantity represented the bigger challenge. Mr Koch stated that it was not only water shortage, but in some cases also surplus water that was a problem: heavy rainfall and floods not only endangered harvests, but large quantities of water remained unused for lack of storage facilities. Mr Koch said he also viewed it as problematic that wide-spread subsistence farming often depended exclusively on rainfall.

The panellists then discussed what impact increasing water scarcity and competition for use of water might have on food prices. *Claudia Ringler* stated that an upsurge in prices was probable in the face of increasing global problems. She said that, in her view, price increases were not inevitable since the agricultural sector had a number of options to manage water differently from before. She continued by saying that water savings were possible by using drought-tolerant plants and the water that was saved could then be used for other purposes. She also argued that, furthermore, the respective governments needed to provide better water management systems and more water reservoirs in order to make water available at the right time.

In this context, *Greg Koch* emphasised the importance of collecting comprehensive data in the field of water, e.g. on the location of sources and of layers containing groundwater, on water quality and on areas where water is wasted. He said that carefully monitoring whether water was replenished or the aquifer was emptied could be useful to decide whether to use the water source.

Marilene de Souza referred to the importance of information for the agricultural sector: she said that the farmers had to be shown how to manage the available water sustainably to prevent them from rashly opting to exploit groundwater reserves. She said that, in her view, the experience gained in this matter needed to be shared worldwide. She demanded that the issue of preserving biological diversity should also not be forgotten in this context. She stated that production methods needed to be changed to this end. Ms de Souza considered agroecology to have great potential to sustainably secure global food supplies, both now and in the future.



View of the Business Lounge

Claudia Ringler pointed out that technologies always required a certain management: she said that the indiscriminate use of water pumps, for example, without a central water management system that included the allocation of water usage rights led to inefficient and non-sustainable use and thus to a waste of water. Greg Koch agreed with this: he maintained that technology was not a panacea if it entailed an even higher water consumption. In his view, what mattered was the right mix of technology, water data use and suitable water management.

Later, the debate addressed the issue of how much water was wasted due to foodstuffs being wasted, foodstuffs that were often produced using large quantities of water. It was stated that improving supply chains could counter this wastage, especially the high post-harvest food losses. All in all, the debate made clear that there was more than just one specific possible solution. It also became clear that more investments were needed to increase the water supply per hectare.

In the final analysis, this lively and multifaceted discussion not only highlighted the different perspectives on the topic of agriculture and water, but also considered the subject areas of water management, new technologies and the gathering and dissemination of information and thus depicted some key options for action; these options were dealt with in detail by the subsequent GFFA events, culminating in the Agriculture Ministers' Conference.

Parallel to the kick-off event, the BMEL presented its concrete active engagement in the area of agriculture and water at an information booth: visitors had the opportunity, via factsheets or by engaging in a direct dialogue with staff members, to find out about the various projects



Audience at the kick-off event of the GFFA 2017

related to the GFFA topics that the BMEL has promoted in recent years. These projects demonstrate that key GFFA topics are not only discussed in theory, but that they are directly anchored "in the fields" via the so-called "Bilateral Trust Fund". The "Bilateral Trust Fund" is a programme operated by the BMEL and the FAO in which selected food security projects are carried out in a number of countries. Here, the GFFA topics are reflected at operative level and implemented in concrete projects. The FAO implements the programme, whilst the BMEL provides the financial base. This has enabled roughly 100 projects to be carried out since 2002, channelling a total of approximately 121 million Euros.



Information exchange at the stand of the German Federal Ministry of Food and Agriculture on the topic of the Bilateral Trust Fund (BTF)

Expert panels and High-Level Panels

The second day of the Global Forum for Food and Agriculture (GFFA) 2017 was dominated by indepth discussions in technical meetings and High-Level Panels.

Traditionally, the second day of the GFFA is dedicated to holding expert discussions and analysing the main topics in greater detail. The events aimed in particular at identifying the challenges of limited water resources, especially for the agricultural sector, but also at demonstrating approaches for agriculture to address this issue. It was particularly important to identify and compare different approaches from different countries and regions.

The expert panel discussions provided an informative platform to illustrate different perspectives and an opportunity for an exchange of views with an interested expert audience. Organisers from politics, industry, science, civil society and international organisations had extended invitations to 10 different events. The subjects presented and discussed ranged from the issue

of groundwater use in agriculture and the question whether and how waste water could contribute to food security to an indepth look at certain regions and countries such as Africa, Eastern Europe, Central Asia, China and South Asia.

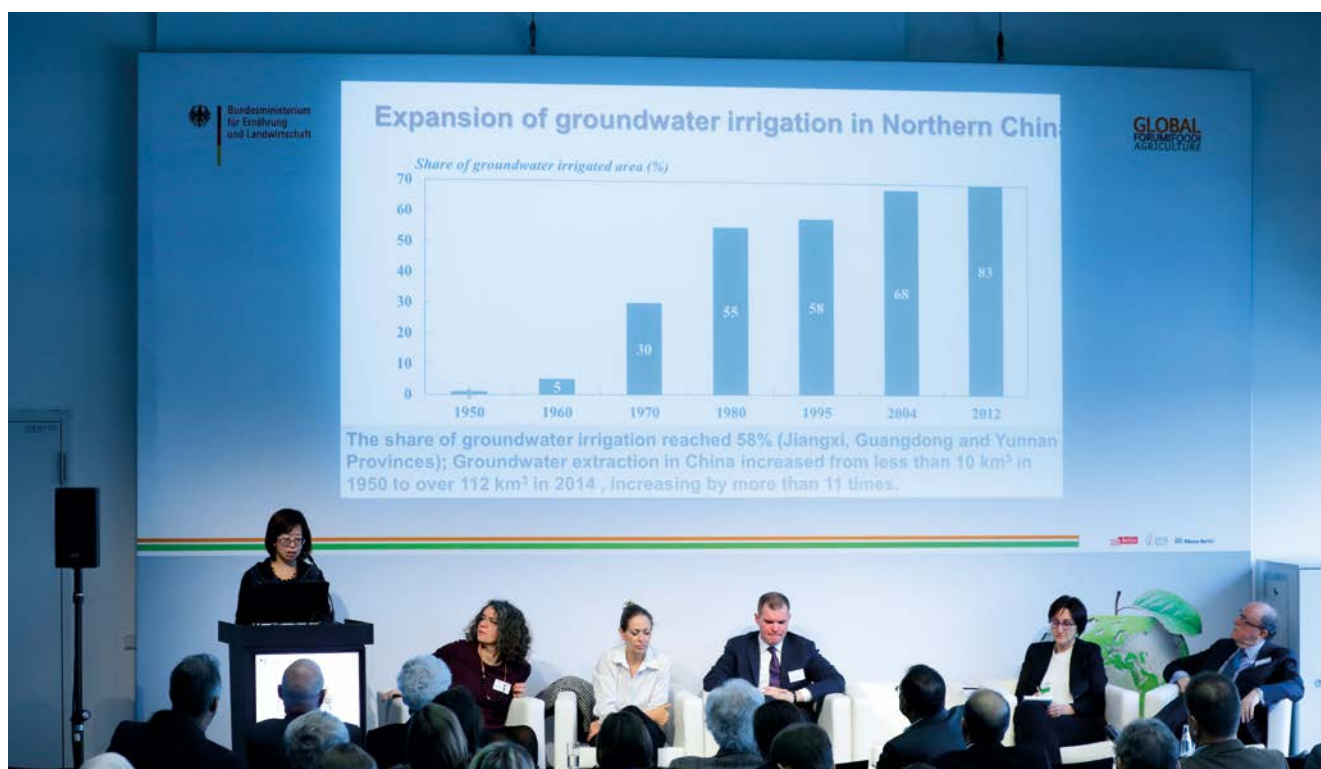
The events, which were almost all booked out, allowed panellists from various areas of expertise to contribute their views and perspectives. For instance, the advantages of water-efficient drip irrigation were set out, as well as the requirements that need to be met to ensure that the use of waste water in agriculture is harmless to health and accepted by all parties concerned. It was repeatedly demonstrated how smart water management strategies could both decrease water consumption and increase agricultural yields at the same time. With reference to the Agenda 2030 objectives for the water and agricultural sector, the participants voiced support for innovative solutions that took into account the entire value chain of food production, i.e. the production areas, the crops, the production process and the supply chain.



High-Level Panel of the European Commission



Not an empty seat left during the expert panel discussions



Information exchange during one of the expert panel discussions

And the expert panels were not the only place where the expert audiences were able to exchange views and ideas; in the Cube Café, the Business Lounge served as an ideal setting for meeting dialogue partners, establishing new contacts and continuing discussions on insights acquired at the previous events. Many visitors gladly took advantage of this opportunity and once again turned the GFFA into a platform that closely combines formal and informal discussions and exchanges.

Following the expert panel discussions, two High-Level Panels were held, which were this year once again organised by the FAO and the EU Commission. These panels examined in greater detail the role of agriculture in dealing with water scarcity (FAO) and the challenge for the agricultural sector to increase productivity whilst decreasing negative impacts on water availability and quality (EU Commission). One of the main results of the EU Commission's High-Level Panel was the insight that new technologies such as digital farming as well as knowledge transfer were very important for meeting current challenges. The FAO's High-Level Panel discussion demonstrated that success requires taking cross-sectoral measures that involve governments, the private sector and civil society.

The results of the High-Level Panels were presented by the EU Commission and the FAO at the 9th Berlin Agriculture Ministers' Conference and integrated into the final communiqué of the GFFA.



Expert Panel Discussion

GFFA – High-Level Panel of the European Commission



“Meeting the twin challenges of food security and water management”

Panel participants:

Phil Hogan, EU Commissioner for Agriculture and Rural Development

Claudia Ringler, Deputy Division Director of the Environment and Production Technology Division, International Food Policy Research Institute (IFPRI)

Barnaby Joyce, Minister for Agriculture and Water Resources of Australia

Dora Siliya, Minister of Agriculture of the Republic of Zambia

Veng Sakhon, Minister of Agriculture, Forestry and Fisheries of the Kingdom of Cambodia

Facilitator:

Roger Waite, European Commission

What can we do to counteract water stress in agriculture? What can we do to improve farming systems and which technologies would be of help? How do we handle droughts and how can we reduce food waste? The High-Level Panel of the European Commission focused on finding answers to these questions and on developing interesting concepts.

Claudia Ringler of IFPRI introduced the topic by giving an overview of the water situation in the agricultural sector which is one of the largest consumers of water. She explained that as much as 70 percent of all fresh-water extracted today was used for irrigation purposes. She said that as the area to be irrigated would continue to increase in the future, there would also be increased competition for water between agriculture and other users. She went on to say that in addition to the dwindling water resources, water pollution was another significant problem, as nitrogen and phosphate fertilisers used in agriculture were leading to eutrophication which exacerbated water pollution. Ringler explained that there

was still not enough investment to deal effectively with this problem and there was a lack of dialogue as well. She said that an irrigation engineer, for example, would have no problem in providing for suitable irrigation with service water but that this was of no use to agriculture if he did not take into account appropriate technical measures to ensure that water that was contaminated with pollutants and pathogens did not get onto the fields and thus into peoples' food.

EU Commissioner *Phil Hogan* emphasised that the underlying situation to which the debate referred had nevertheless improved. He declared that it was a step forward that the Sustainable Development Goals (SDGs) had been adopted within the scope of the 2030 Agenda but that this also entailed a great responsibility. He said that, in particular, he asked himself how the competing development goals should be dealt with, particularly the call for food security and thus for increased agricultural production (SDG 2) on the one hand and the call for the sustainable management of water (SDG 6) on the other.

In the ensuing discussion, the agriculture ministers of Zambia, Cambodia and Australia gave an overview of the water situation in their countries.

Zambia's Minister of Agriculture, *Dora Siliya*, talked about current risks in the field of food security which could increasingly be attributed to droughts. She declared that Zambia had to share its water resources with Congo and Malawi. She explained that this required clear political measures and requirements in order to ensure an efficient water management. She went on to say that the Zambian government had established a special ministry for water development, hygiene and environmental protection.

During the panel discussion, the Minister referred to the still poor use of water as a valuable resource and, in this context, also pointed to food waste and post-harvest food losses. She explained that Zambia was investing in the cultivation of maize, which required irrigation, but that, unfortunately, naturally occurring fruits, such as mango, often remained unexploited. She added that agriculture in Zambia was generally regarded as the



Clockwise from the left: Roger Waite, Barnaby Joyce, Dora Siliya, Veng Sakhon, Phil Hogan and Claudia Ringler

traditional way of life of poorer population groups and not as an independent economic sector. According to Siliya, this was due to the lack of infrastructure. She said that more investment was needed to make full use of the existing resources, as without such investment, competitive agricultural enterprises would not be able to develop.

Cambodia's Minister of Agriculture, *Veng Sakhon*, reported on enormous increases in agricultural production. He said that Cambodia was a country with plenty of water but that the irrigation systems had to be improved all over the country in order to distribute the Mekong's water resources fairly and equitably. He explained that the government was developing clear requirements in this regard. Minister Veng Sakhon said that he was aiming to establish a sustainable water management system in his country, as required by SDG 6. He said that this would mean developing an agricultural sector that was capable of increasing its productivity whilst at the same time minimising the negative impacts such as poor water availability and quality but that implementing a sustainable water management system would require modern

methods and technologies for the use of water. He concluded by saying that greater incentives for farmers needed to be created to this end.

Barnaby Joyce, Minister of Agriculture of Australia, then gave an overview of the situation in his country. He explained that Australia was the driest continent on earth. He said that about 42 percent of all agricultural land was located in the Murray-Darling Basin but that the water in this, Australia's largest river system, had already decreased by 25 percent. He said that the implementation of efficient irrigation strategies, the reuse of treated service water and the use of marginal water resources were necessary to make the agricultural sector more sustainable and, if necessary, to also increase the area under cultivation.

The discussion concluded that the transfer of knowledge and technology was key to ensuring that the agricultural sector could continue to fulfil its role in providing global food security, and that governments played a decisive role in the realisation of these tasks.



Audience at the High-Level Panel of the European Commission

Both the panellists and the members of the audience that participated in the discussion emphasised that all stakeholders – i.e. policy-makers, economic operators, scientists and representatives from civil society alike – needed to be involved in order to better address the challenges posed by dwindling water resources. They agreed that agriculture and water were two topics that went hand in hand and that it was necessary to think outside the box to be able to successfully develop and implement multi-sectoral approaches.

They concluded that in addition to making investments in reducing the dependency of the agricultural sector (especially in developing countries) on access to water

resources that fluctuated due to climatic conditions, ways had to be found to increase productivity and crop yields through optimised resource efficiency.

They also considered it crucial that farmers had improved access to information adapted to local and national circumstances and that farm extension services should be available across the globe rather than restricted to farmers in developed countries.

They agreed that these and other measures had to be integrated at national and local level into medium- to long-term strategies.



Panel discussions during the High-Level Panel of the European Commission



Questions from the audience

GFFA – High-Level Panel of the FAO



Food and Agriculture
Organization of the
United Nations

“Agricultural leadership in a water-scarce world”

Keynote speaker:

José Graziano da Silva, Director-General of the FAO

Panellists:

Esperanza Arellana, Director-General of the Department for Rural Development and Forestry Policy at the Ministry of Agriculture of the Kingdom of Spain

Itzik Ben David, Senior Deputy Director-General of the Department for Foreign Trade at the Ministry of Agriculture and Rural Development of the State of Israel

Johannes Cullmann, Director of the Climate and Water Department of the World Meteorological Organisation (WMO)

Monty Jones, Minister of Agriculture of the Republic of Sierra Leone

Kenneth Quinn, President of the World Food Prize Foundation, USA

Tumusiime Rhoda Peace, Commissioner for Rural Economy and Agriculture of the African Union

Ratan Sarkar, Executive Director of INCIDIN (Integrated Community & Industrial Development Initiative) Bangladesh and representative of the Civil Society Mechanism (CSM) Bangladesh

Facilitator:

Tanja Busse, Journalist and Author

The FAO’s High-Level Panel provided a platform for an exchange of views among high-level experts and the audience on how agriculture is affected by water scarcity and what contribution it can make to address this issue.

In his welcoming address Director-General of the FAO **José Graziano da Silva** underlined that increasing water scarcity was one of the biggest challenges for sustainable development and that climate change and the growing world population would increase competition over water even further. Graziano da Silva pointed out that approximately one billion people would be affected by water scarcity in the near future, according to estimates. “It is time for action!” Graziano da Silva stated.

He claimed that in this situation agriculture was both the cause and the victim, with agriculture today already polluting the groundwater with pesticides and being responsible for 70 percent of global fresh water consumption, while at the same time millions of small-scale farmers in developing countries had little access to fresh water.

Graziano da Silva noted that droughts could not be prevented, but that provisions could be made to prevent droughts from translating into famines. To this end, he stated that agriculture needed to use less water and to use this water in a more efficient manner, while at the



Panel members of the High-Level Panel organised by the FAO



Clockwise from the left: Kenneth Quinn, Ratan Sarkar, Tumusiime Rhoda Peace, Johannes Cullmann, facilitator Tanja Busse, Monty Jones, Jose Graziano da Silva, Esperanza Arellana, Itzik Ben David



Impression of the discussion during the FAO's High-Level Panel

same time steps needed to be taken to give farmers, in particular poorer small-scale farmers, guaranteed access to water. He added that access to water was after all a human right and this right included farmers.

By means of practical examples, Graziano da Silva pointed out that the improvement of water reserves was of particular importance. He explained that in Brazil, millions of people profited from cisterns. He also propagated an increased cultivation of crops that need less water than conventional cereals, for instance quinoa.

Moreover, Graziano da Silva highlighted the high post-harvest food losses and food waste. He said that these losses and waste also meant a great waste of the water used to produce this unused food. Graziano da Silva vividly evoked just how much water was wasted on unused food, saying that the amount equated to three times the volume of Lake Geneva.

All in all, he concluded, better water stewardship was necessary to deal with water scarcity. He declared that it was to this end that the FAO, on the occasion of the last UN Climate Conference in Morocco, had launched a "Global Framework". Graziano da Silva explained that this instrument was intended to support the development and implementation of programmes for sustainable water use in agriculture, as well as cooperation between different stakeholders, including civil society, the private sector, financial institutions and development aid organisations.

Monty Jones, Minister of Agriculture of Sierra Leone, talked about the water situation in his country in the

panel discussion, saying that there had repeatedly been heavy rainfalls and that it had not been possible to either hold the rain water back or to store it. He explained that, due to simultaneous widespread deforestation, this led to nutrient leaching from arable soils. Jones went on to say that the prerequisites for agriculture were good in general, but that intensification would only be possible if water storage could be improved.

The Commissioner for Rural Economy and Agriculture of the African Union, *Tumusiime Rhoda Peace*, emphasised the role of governments: she claimed that with the right policy measures an adequate response to climate change was possible. She went on to say that appropriate institutions for sustainable water management needed to be established and at the same time, more water-efficient plants needed to be planted.

The Executive Director of INCIDIN Bangladesh, *Ratan Sarkar*, pointed out an additional political dimension of the water issue regarding the distribution of water reserves and the possibility of this leading to interstate conflict. He further emphasised the issue of agricultural water pollution, namely from pesticides, which also contaminated the cultivated crops. He said that food was not food if it was not safe. The President of the World Food Prize Foundation, *Kenneth Quinn*, also stressed the importance of water quality.

Johannes Cullmann, Director of the Climate and Water Department of the WMO, talked about the consequences of climate change and water scarcity and made it clear that we did not have much time left to react. He also criticised the fact that there was often a lack of relevant

data to enable agriculture to deal adequately with water scarcity. He explained that 70 of the world's countries did not have a meteorological service that could provide the agricultural sector with the necessary data.

Itzik Ben David, Senior Deputy Director-General at the Ministry of Agriculture in Israel, spoke of the challenges concerning the distribution of scarce water resources. He explained that these were under state control to guarantee optimal distribution. Moreover, he stated that Israeli agriculture relied heavily on the use of treated waste water.

Spain also has a longstanding tradition of dealing with water scarcity. *Esperanza Arellana*, Director-General at the Spanish Ministry of Agriculture, gave a report on Spain and talked about the importance of providing adequate legal conditions in order to give the right production incentives with consideration to the water resources available.

Ms Arellana also raised the issue of proper price determination for water. According to her, this measure could generate funds to modernise the irrigation infrastructure as well as reduce water consumption. She explained that by this means water consumption of irrigated agriculture in Spain had been reduced by 15 percent with a simultaneous increase in irrigated areas. This subject was discussed critically among the panellists: Minister of Agriculture Monty Jones pointed out that as a matter of principle water was a free commodity in Africa and that nobody was willing to pay for it. José Graziano da Silva thought that setting prices for water was a useful instrument in general, but that it was not appropriate for every country and that it did not solve all problems, because in some cases it denied people access to water.



Esperanza Arellana presents the measures against water scarcity in Spain



Itzik Ben David in discussion with facilitator Tanja Busse

The panellists were in agreement on the subject of food waste and therefore also water wastage: They claimed that the amount of water and energy used for food that is ultimately thrown away was unacceptable, and that consumers needed to be informed and educated. José Graziano da Silva pointed out that in addition to this serious problem of wastage – predominantly in industrialised countries – there was the issue of food loss caused by a lack of storage capacities in developing countries. He claimed that without these losses people in Africa would have enough food already.

The outcome of the panel discussion shows: There are already manifold opportunities for more efficient water management. Due to the fact that climate change has led to more droughts and floods, and that this has changed water availability considerably in comparison to the past, improved water storage is gaining in importance. For useful water management and equitable distribution of water resources it is necessary on the one hand to provide the agricultural sector with comprehensive information and on the other to create a suitable legal framework, which needs to be developed in cooperation with the public and private sectors. Finally, care should be taken to ensure that not only industry but also civil society has the most fitting solutions for the right management approach to the issue of water scarcity.

It also became clear that water scarcity was a problem that would require solutions in the near future. Because, as José Graziano da Silva concluded: “Access to water is a human right, and without clean water it is impossible to live a healthy life.”

Cooperation Market



Visitors of the Cooperation Market in discussion

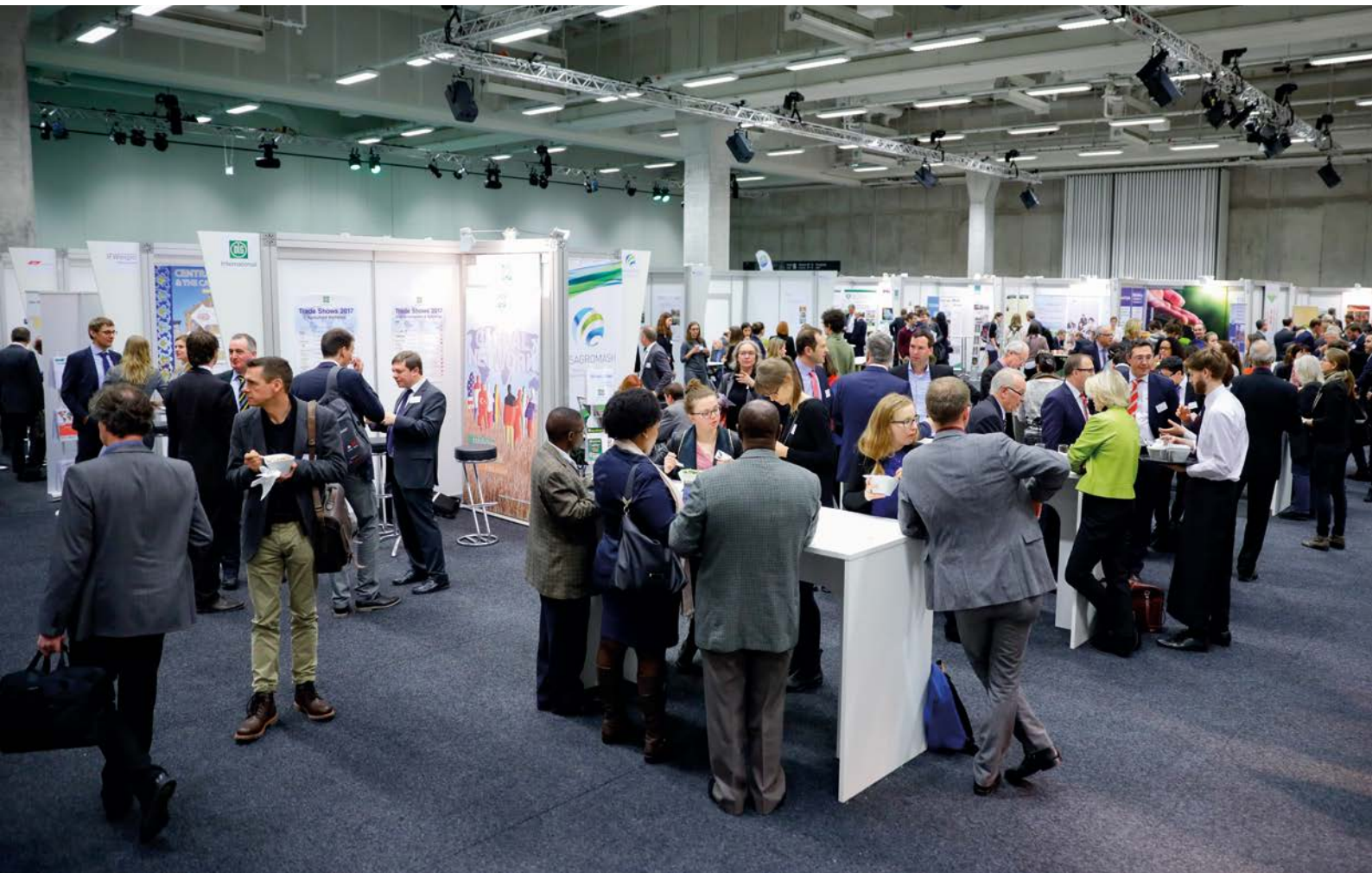
Networking is one essential aspect of the GFFA. The Cooperation Market serves this goal in particular: It offers companies, institutions, universities and associations the opportunity to showcase their projects and to get in touch with GFFA visitors. This year, once again, 30 exhibitors from home and abroad took part in the Cooperation Market.

As in previous years, the GFFA was officially declared open by the Parliamentary State Secretary to the Federal Minister of Food and Agriculture, *Peter Bleser*. In his welcoming address, Bleser highlighted the role of exhibitors as important partners in the goal to further develop global agriculture in terms of a good legal and political framework, strong institutions and structures and the availability of know-how and state-of-the-art technologies. Bleser pointed out that cooperation between policy makers and the business community was a prerequisite for paving the way for the development of agriculture.

At the subsequent tour around the Cooperation Market, Bleser engaged in talks with the exhibitors and received first-hand information on their products and projects. For the first time, exhibitors and visitors had the chance this year to engage in talks over a buffet lunch hosted by



Peter Bleser, Parliamentary State Secretary to the Federal Minister of Food and Agriculture (right) at the Cooperation Market



The Cooperation Market 2017



UNESCO exhibition at the Cooperation Market

the Federal Ministry of Food and Agriculture (BMEL) in the premises of the Cooperation Market.

In parallel, visitors were able to find out more at an interesting UNESCO exhibition entitled “International cooperation on water resources”. The exhibition provided a broad range of facts and figures on the subject areas of water and sustainability, water diplomacy, water research, the human right on water, water distribution and consumption and a perspective on the cultural history of water.

Young Farmers' Forum

For the first time, Federal Minister Christian Schmidt invited 8 young farmers from around the globe to add a new component to the GFFA this year. With the newly introduced “Young Farmers’ Forum”, the young generation had the chance to share their experiences, to express their expectations with regard to the future of agriculture to political decision makers and to actively participate in the discussion on “Agriculture and Water”.

In cooperation with the German Farmers’ Association and the World Farmers’ Organisation, Andrea Sordelli (*Sociedad Rural Argentina, Argentina*), Daniele Perrone (*Word Farmers’ Organisation, Italy*), Alan Jagoe (*European Council of Young Farmers, Ireland*), Denis Kabiito (*Uganda National Young Farmers Organization, Uganda*), Sovanthy Meas (*Cambodian Farmers Association Federation of Agriculture Producers, Cambodia*), Hamish Best (*New Zealand Young Farmers Organization, New Zealand*), Chris Holman (*National Farmers Union, USA*) und Christoph Daun (*Bund der Deutschen Landjugend,*

Germany) were chosen and invited to come to Berlin to jointly champion the interests of young farmers. During their stay they took part in a variety of events at the GFFA and the International Green Week (IGW).

On the second day of the event, the young farmers met to finalise their message to the Agriculture Ministers. They recorded their results in the “Young Farmers’ Declaration”.

In their declaration, the young farmers placed a particular focus on their perceived challenges and risks associated with the GFFA focal topic of “Agriculture and Water”, namely the rural exodus to cities and a frequent lack of interest among the younger generation in working in the agricultural sector.

Due to the water that is wasted daily by industry, agriculture and the population alike, the young farmers consider binding laws on water stewardship a necessity while they also call for more effective cleaning and storage methods for water to enable a more sustainable use



Daniele Perrone presents the finalised Young Farmers’ Declaration to the participants of the Berlin Agriculture Ministers’ Conference 2017



Young farmers handing over their declaration to the Federal Minister of Food and Agriculture Christian Schmidt at the Berlin Agriculture Ministers' Conference 2017

of this resource. Their highest priority, however, is open communication and the effective sharing of information and knowledge between consumers, policy makers, the scientific community, farmers and in particular the young generation.

At the end of the GFFA, young farmers had the opportunity to actively contribute to the 9th Berlin Agriculture Ministers' Conference. Daniele Perrone presented their finalised declaration to the Ministers. Surrounded by his colleagues he then handed over the paper to Federal Minister Christian Schmidt who explicitly commended the commitment of the young farmers and thanked them for their participation. After receiving the paper, Federal Minister Schmidt said, "the impressive work and

the messages of younger people will be considered when negotiating and we will continue talks at this level".

The involvement of young farmers was also applauded by the participating Ministers. They referred several times to the "Young Farmers' Declaration" during the plenary meetings as well as the discussions during the breakout sessions. Thus, the results of the Young Farmers' Forum were also fed into the political dialogue of the Berlin Agriculture Ministers' Conference.

Since the Young Farmers' Forum generated a lot of interest from all sides, it is intended to become a fixture in the GFFA programme.

Statement of Young Farmers GFFA 2017

We, as young farmers, are ready and motivated to face the challenge to feed a growing world population. We also need to ensure, however, that our futures are viable, sustainable, and profitable.

The importance of what we produce as farmers is critical for food safety and food security and water is central to this. The need for access to sustainable water is a social responsibility and is not just a necessity but a right.

Water is a global problem with local solutions. Policy makers must work together to fill information gaps, learn from one another and ensure that farmers, consumers, scientists and policy makers have access to the information they need.

We, the young farmers, propose the following:

1. Involve farmers and especially young farmers in the decision making process. As young farmers, we are educated, connected and innovative. Therefore, we are more inclined to work together and find solutions.
2. Agriculture has a role in every part of government. It therefore needs to be a central part of government policy making and should be appropriately funded.
3. Water, energy and food are integrated ecosystems. Incentivizing sustainable management of water and its ecosystems is crucial for sustainable production of food by farmers.
4. Give more opportunities to young farmers to access land, credit, markets, technology, innovation and education. We need to make the rural areas more attractive to avoid their abandonment, taking in consideration the role played by farmers in protecting the environment and its resources.
5. As farmers, we are the local resource for global policies to be implemented. The future of food security is dependent on farmers on the ground.
6. Ensure that the economic value of each drop of water is maximized.
7. Policies need to be introduced that promote the responsible use of water for all citizens.
8. Consumers need to be educated on where their food comes from and how it was produced.
9. Measures need to be introduced to improve water quality coming from alternative sources such as groundwater, waste water or cities.
10. Measures need to be introduced in each country to improve the storage capacity of water such as traditional methods like reservoirs or innovative methods to improve soil fertility.

We, the young farmers of GFFA 2017, would like to thank the German Ministry of Food and Agriculture for the invitation to take part in this special event and thank all of you for the opportunity to present our vision to you.

Berlin Agriculture Ministers' Conference

Agriculture Ministers from 83 states agree on measures for the agricultural sector to contribute to sustainable stewardship of water.

On the last day of GFFA, Ministers and their deputies from 83 states as well as high-level representatives from the EU Commission and the international organisations FAO, OECD, World Bank and WWAP agreed measures on how food supply could be secured for a growing world population while water resources were becoming scarcer and competition for use was on the rise.

At the beginning of the world's largest Agriculture Ministers' Meeting, Federal Minister of Agriculture *Christian Schmidt* said "Only if agriculture has sufficient access to the clean water it requires can it fulfil its foremost task which is to ensure food supplies for a growing world population. At the same time, agriculture bears a special responsibility, being the largest user of fresh water. It is a responsibility we are taking on. With the communiqué we will adopt today, we endorse water stewardship and the safeguarding of water quality."

With this statement, Minister Schmidt highlighted that there is more to the GFFA than personal exchange: at the end measures will have been agreed on with the aim of feeding them into various international processes. The minister said that this applied in particular to the further development of the international water architecture, currently under discussion at United Nations level. He stated that the final communiqué also specifically laid the groundwork for the negotiations of the G20 Agricultural Ministers who met – also in Berlin – on the day after the Berlin Agriculture Ministers' Conference.

In her welcoming address, Minister of State at the Federal Foreign Office *Maria Böhmer* picked up on the main topic of the GFFA 2016: urbanisation and agriculture. She said that continuous urbanisation increased the global need for water and exacerbated competition over use. She went on to say that Southern countries were experiencing a particularly rapid increase in urbanisation while water scarcity was disproportionately high. She also emphasised within this context that only the sustainable use of water could ensure longterm food security and that feeding the world was one of the most vital tasks we were faced with.



The Berlin Agriculture Ministers' Conference at the Weltsaal in the Federal Foreign Office



Participants of the Berlin Agriculture Ministers' Conference 2017 in discussion

Minister of State Böhmer highlighted that the issue of water was a particular challenge for foreign policy as well, as the fight for water had already started and was increasingly leading to regional and international conflicts. She said that the Federal Foreign Office was therefore promoting transnational dialogue processes in such cases to build trust. She went on to say that, furthermore, the global water architecture would need to be further developed to detect disputes in this area at an early stage and mediate them. She continued by stating that the Berlin Agriculture Ministers' Conference also served this goal. Minister of State Böhmer stated: "Water and agricultural policy are consequently part of international security and peace policy."

In the following, the high-level representatives of FAO and the EU Commission reported on the results from the panel discussions that were part of the High-Level Panels hosted the day before.

On behalf of the EU Commission, Agriculture Commissioner *Phil Hogan* stated that water was a human right while being a prerequisite for food production at the same time. He said that reliable food supply chains therefore required smart and sustainable water strategies. He continued by saying that there was a lot to catch up on in this regard, despite the necessary knowledge being available, and that the final communiqué that was to be adopted was therefore another important step. The following results were concluded from the High-Level Panel hosted by the EU:



Agriculture Ministers during the breakout sessions

1. The problems cannot be solved by political initiatives alone; instead, what is needed is cross-sectoral cooperation.
2. Involving farmers is vital for good water stewardship.
3. It is time to improve dissemination of existing best practices in this area.

It was reported that the EU Commission was already providing specific support for the latter aspect and was investing in research and development in this area.

FAO Director General *José Graziano da Silva* reported on their High-Level Panel: He said that water, according to all participants, was the scarcest resource and agriculture required the largest share of it. He continued by stating that climate change made water availability even more uncertain and that although the global amount of water remained the same, the sea level rise meant that there was less fresh water and more salt water. He went on to say that at the same time precipitations had increased in regions where there was plenty of rainfall, while droughts were on the rise in already dry areas. He stated that for this reason water would need to be saved and water storage improved, and that rain water storage was a particularly vital aspect. He said that water would also need to be used more effectively in the agricultural sector, and that to this end irrigation infrastructure would need to be improved. He concluded by saying that, furthermore, food losses and food waste would need to be cut since this would entail a reduction of water wastage.

Graziano da Silva also highlighted the issue of water pricing: He said that providing water for free ran the risk of water being used inefficiently, and that, in any case, water stewardship required a solid legal framework at national level. He stated that improvements were necessary in three areas:

1. Water administration bodies;
2. Meteorological services and the provision of meteorological data for farmers in developing countries; and
3. Knowledge transfer and capacity building on water saving methods.

Young farmers then reported to the Agricultural Ministers on their forum and presented their joint declaration which they then handed over to Federal Minister Schmidt. He thanked the young farmers for their important contribution and reaffirmed the intention to consider the declaration in ensuing negotiations and to continue the Young Farmers' Forum in the future.

To make the exchange more interactive, Ministers met in smaller discussion groups for the first time, so-called breakout sessions, to discuss the implementation of recommendations for action listed in the final communiqué. Picking up on the subject areas of the final communiqué, breakout sessions were held on the following topics:

- ➔ Water scarcity;
- ➔ Surplus water;
- ➔ Access to water; and
- ➔ Improving water quality.

Subsequent to the four parallel sessions, the participants met again in the plenary to share the discussion results with their colleagues.

The chair of the breakout session on water scarcity, the Zambian Minister of Agriculture *Dora Siliya* reported that everyone agreed that, in order to combat water scarcity, investments in water infrastructure were needed, in particular water pipes and water storage. She said that, furthermore, a reduction of water subsidies for agriculture and an adequate pricing structure for water use were needed to promote efficient water use. She continued by saying that crops needed to be planted more water-efficiently, for example by reducing water losses via evaporation. She stated that small holders, in particular, would need to receive far more training in water-saving production methods. She also said that research and development would need to focus on methods and technologies for producing more with less water. She continued by saying that in relation to competition for use, it would need to be ensured that agriculture was given priority regarding access to water in order to adequately supply the population with food.

Blairo Maggi, Brazilian Minister of Agriculture, reported from the session on surplus water: He said that the phenomenon was global and would therefore, like the resulting ramifications, need to be seen in the context of climate change. He continued by saying that water surplus was often only a temporary occurrence and required cross-regional coordination and suitable infrastructure (dams, polders, etc). He stated that water stor-



Participants of the Berlin Agriculture Ministers' Conference 2017 in the Weltsaal of the Federal Foreign Office

age was the essential issue to be able to deal with ensuing dry spells, and that modern technology was required to protect against floods as well as to store water. He said that this also applied to measures that would need to be taken to protect agriculture against soil erosion which went hand in hand with surplus water.

The breakout session on access to water was chaired by Australian Minister of Agriculture *Barnaby Joyce*. As the results of the deliberations, he stated that the right to water, set out in the Sustainable Development Goals (SDGs), could help to secure sustainable access to water for all. However, he said that the food-water-energy nexus needed to be considered in this regard: A 60 percent increase in food demand by 2050 meant that at the same time the demand for energy would increase by 50 percent and the demand for water by 55 percent. He stated that the governance of water resources therefore played a key role but that this governance was still too fragmented, from local level right up to international level under the UN. He went on to say that better coordination was therefore required between different sectors (agriculture, environment, energy, mining, etc.) and countries as well, and that effective institutions played a pivotal role to ensure sustainable access to water. Furthermore, Minister Joyce highlighted the importance of adequate investments in, for example, water storage, the distribution network and the modernisation of the irrigation infrastructure. He concluded by saying that affordable water resources such as rain water and appropriate waste water should also be used to a greater extent.



Federal Minister Schmidt welcoming his Chinese colleague Han Changfu

The Dutch Minister of Agriculture *Martijn van Dam* chaired the breakout session on improving water quality. This was, according to van Dam, an issue of global reach, since contamination did not stop at borders. He said that this was an issue that also affected future generations, and that, for this reason, it required global commitments to define water quality goals and to disseminate knowledge and technology. He continued by saying that prevention was better than subsequent cleaning treatments with regard to improving water quality – and that excessive appliance of fertilisers and pesticides should therefore be avoided. He stated that a legal framework and incentives for farmers would be required to make agriculture assume responsibility for improving water quality, and that smallholders required extra support. The importance of water treatment was also highlighted, as this would tap further water resources for the agricultural sector. This breakout session also highlighted the significance of technology transfer and cooperation between the various sectors and across levels of government.

Next to policy makers, international organisations were also involved in the discussions of the breakout sessions. Their high-level representatives subsequently commented on the discussions. For the International Food Policy Research Institute (IFPRI), Director General *Shenggen Fan* stated that the discussions of the preceding hours resulted in five key aspects:

1. Investments in irrigation systems were needed to allow more smallholders to benefit from irrigation, in particular female farmers in developing countries, who often still had to spend a lot of their working time fetching water.
2. Digitisation needed to be advanced to gather data on water scarcity and surplus water in order to use water more efficiently.
3. Research on water-saving and drought-resistant crops needed to be expanded.
4. Institutional innovations were required in order to manage water in a way that ensured access for all.
5. A new perspective on water markets was needed. Water needed to be priced in order to use and distribute it sensibly.

Ken Ash, Director of the OECD Trade and Agriculture Directorate made clear that the use of water was a global issue requiring local solutions and that farmers



Federal Minister of Food and Agriculture Christian Schmidt hands over the final communiqué to FAO Director General José Graziano de Silva

were the problem solvers on the ground. He went on to say that, at the same time, attention should be devoted to the political solutions that, despite having good aims, often had unintended consequences, for instance import subsidies, which often promoted excessive use of fertiliser and pesticides and constituted an inefficient approach to supporting farmers. He stated that in order to set the right incentives for farmers, Ministries of Agriculture could not act in isolation but required exchange with Environment, Finance and Infrastructure Ministries. Ken Ash concluded by highlighting the importance of international cooperation, saying that many good solutions already existed and it was not necessary for everyone to reinvent the wheel if there was regular exchange. He stated that there was a need for talking with and listening to each other, which would then need to be translated into concrete actions in order to succeed in further developments.

Ulla Kask, the WTO representative, described the diverse impacts of agricultural subsidies and reported on the WTO efforts to reduce these.

Subsequently, the Ministers of Agriculture present adopted the final communiqué. In this final communiqué, they reaffirmed the commitment of the agricultural sector to use this precious resource sustainably. They identified the following as the key challenges which must be faced to ensure that agriculture can meet its role as the key food supplier going forward: the reduction of water scarcity risks and water contamination, the management of surplus water, and the safeguarding of adequate access to water for the agricultural sector. Specific measures were agreed upon to meet these challenges, e.g. the obligation to develop national strategies on improving water quality, the need to support the breeding of important agricultural crops to improve their tolerance to drought and salt, the need to make existing knowledge and experience on water saving production methods available and fit for application, and the promotion of an international exchange on this subject.

International Business Panel Discussion organised by GFFA Berlin e.V.

“Water, Food and Agriculture: Challenges for Farmers and Agribusiness”

The global water crisis is among the most pressing challenges of our times. Water is wasted while at the same time it is distributed extremely unequally. According to WHO estimates, 1.8 billion people do not have access to clean water. While some regions on this planet are beset with high water scarcity, elsewhere flooding leads to harvest losses. Agriculture, being the largest user of global fresh water resources, must assume special responsibility for managing this vital resource.

How can agricultural stakeholders face up to the global water crisis? What tools are available for using water more sustainably and efficiently? How can the increased food demand of a growing population be covered without further compromising the quantity as well as the quality of global water resources? And finally: How can agricultural production become more resistant to droughts and flooding? Five representatives from politics, industry and civil society addressed these issues at the International Business Panel Discussion of the GFFA Berlin e.V.

The address by the German Minister of Agriculture *Christian Schmidt* marked the start of the panel discussion. Minister Schmidt emphasised that the private sector and research played a pivotal role in combating worldwide hunger. Schmidt continued by saying that without private sector investments in the agricultural sector, there would be neither economic growth nor progress. He stated that it was necessary to set incentives for sustainable and efficient water stewardship in the agricultural sector and that resilience in the sector had to be strengthened. He went on to say that research played an important role in this regard and that it was essential to invest in drought-resistant plant species with the aim of further increasing food yields with less water. Schmidt also addressed global trade relations, saying that food produce requiring a lot of water should not be produced in countries with high water scarcity.

Ashok Gulati, Chair Professor for Agriculture at the Indian Council of Research on International Economic Relations (ICRIER) and advisor to the Indian government, agreed with Minister Schmidt that water-intensive



Federal Minister of Food and Agriculture Christian Schmidt

agricultural produce should be imported to water-scarce regions instead of being produced locally. He went on to say that the problem was, however, that water used in agriculture worldwide was offered below value and that this set wrong incentives and favoured water-intensive production and water wastage. Gulati therefore favoured a price reform on irrigation which would increase the appeal of efficient water management and support the expansion of badly needed infrastructure. He said that efficient and sustainable water storage and distribution systems needed to be installed and that, furthermore, a reward system should be established that compensated water-saving measures which could in turn counteract water wastage. Gulati stated that such a price reform only made sense if it went hand in hand with institutional changes, improving the services the water sector provided for agriculture. He highlighted the fact that in order to raise production of food per water unit (“more crop per drop”), it was necessary to use technologies that contributed to efficient water use. Gulati emphasised that it was now up to policy makers to implement these recommendations, since technologies were already available.

Thomas Böck, member of the CLAAS Group managing board, introduced some of the new technologies. He pointed out that CLAAS was developing equipment and apps that could compute the efficient use of fertilisers, thereby contributing to the minimisation of nitrate found in groundwater. He went on to say that sprinkler systems could help to considerably reduce water use. Böck also pointed out that knowledge transfer of efficient agricultural cultivation methods is of utmost importance besides the development of technologies to raise quality and quantity of global water resources.

For *Han Changfu*, Minister of Agriculture of the People's Republic of China, securing water quality was a significant challenge. It was for this reason, he said, that China was committed to reduce the use of fertilisers and developed a "Green Roadmap" for agricultural production. He continued by saying that water stewardship should aim to reduce the negative impact on water scarcity in China and that China was promoting new technologies and improved seeds. He said that good experiences had, for example, been made with the breeding of drought-resistant wheat varieties that were able to withstand dry periods and that this would help keep agricultural production competitive.

Rodger Voorhies, Managing Director of the agricultural sector of the Bill & Melinda Gates Foundation, said that financial services could help poor farmers to improve their resilience towards extreme weather events such as droughts or flooding. He went on to say that bank accounts and loans enabled investments to be made in technologies that improved the efficiency of agricultural irrigation systems and production methods. Voorhies continued by saying that, unfortunately, granting loans, particularly to female smallholders, was often seen as too much of a financial risk but that without involving smallholders hunger could not be tackled.

The organisers

GFFA Berlin e.V., an association of the German agri-food industry, organised the International Business Panel Discussion.

The founding members of the organisation are:

- Federation of German Food and Drink Industries (BVE)
- German Farmers' Association (DBV)



The audience at the International Business Panel

Ertharin Cousin, Executive Director of the UN World Food Programme emphasised that there were also "low-tech solutions" at hand to tackle hunger and water scarcity worldwide. She said that it was important to scrutinise the root causes of water scarcity and to address questions of redistribution. She continued by saying that climate change was a global challenge, particularly for the poorest and that supporting them was not only a moral imperative but also an opportunity for private investors. Cousin fiercely criticised the fact that female smallholders were often excluded from agricultural investments. She said that all stakeholders needed to work in concert in order to meet the Sustainable Development Goals by 2030.

- German Agricultural Society (DLG)
- Committee on Eastern European Economic Relations (OA)
- German Agency for International Cooperation (GIZ)

With the establishment of the association, the sector underpins its commitment to improve global food security and protect our natural living environment.

GFFA Communiqué

9th Berlin Agriculture Ministers' Conference 2017

21 January 2017

Agriculture and Water – Key to Feeding the World



Participants at the Berlin Agriculture Ministers' Conference 2017

Preamble

We, the agriculture ministers of 83 nations, who have assembled on 21 January 2017 for the 9th Berlin Agriculture Ministers' Conference during the Global Forum for Food and Agriculture (GFFA),

- **stress** that water is essential for life and for the progressive realisation of the right to food, particularly as drinking water and as a balance for ecosystems;
- **recognise** that the conservation, protection and sustainable use and management of water as one of the most vital natural resources for agriculture represents a global challenge of the 21st century;
- **affirm** that policy makers, civil society, the private sector and academia all have important roles to play in addressing this challenge;
- **point out** that climate change, land degradation and many trends, in particular urbanisation, economic development, population growth, migration and changing lifestyles, are exacerbating competition over water, resulting in the need for more sustainable stewardship of water, in line with the Declaration of the 8th Agriculture Ministers' Conference adopted during GFFA 2016;
- **underline** that water management needs to be integrated and inclusive, requires coordination and strategies adapted to all levels of water governance and should give due consideration to cross-sectoral approaches to address the synergies and trade-offs between the goals of food production, protection of water, land and biodiversity as well as energy use through enhanced dialogue, collaboration, coordination and policy coherence;

- **acknowledge** that the agriculture sector faces the challenge of providing a growing world population with adequate, safe and nutritious food whilst at the same time increasing the efficiency of water usage and reducing water pollution;
- **recognise** that farmers, in particular smallholders and women farmers, are facing various water-related constraints, including water scarcity and salinisation, flooding and inadequate water allocation systems;
- **emphasise** that, alongside soil and biodiversity, water is an essential natural resource used in agricultural production and that adequate and reliable access to suitable water for agriculture is consequently a prerequisite for achieving global food security and nutrition;
- **stress** that water needs to be of sufficient quality to ensure the safety of agricultural products and the preservation of healthy soil ecosystems;
- **acknowledge** that the sustainable and efficient use and management of freshwater resources, including groundwater, is essential for agriculture and for other uses;
- **are convinced** that sustainable water management across scales is an important means of increasing agricultural productivity;
- **stress** the need to protect and restore aquatic and terrestrial ecosystems, in particular forests and wetlands, due to the important role that they play regionally and worldwide as natural water reservoirs, as water filters, in erosion control and flood management and in the global water cycle;
- **underline** the great potential of agriculture, as the largest water user worldwide, for contributing to sustainable water management, water quality and availability;
- **acknowledge** the efforts made by the agriculture sector so far to improve or maintain good water quality;
- **will work to ensure** that agriculture shoulders its share of responsibility in achieving and maintaining good status of water bodies, including water quality and quantity;
- **are determined** to promote adaptation measures consistent with wider national and regional adaptation strategies, thereby building on the 6th Agriculture Ministers' Declaration from GFFA 2014, in order to make agriculture more resilient both to stress factors, in particular those of climate change such as temperature rise and altered precipitation patterns, and to the impact of these stress factors on water availability and water quality;
- **stress** the need for agricultural risk management instruments to cope with adverse weather events (such as droughts and floods) and climate change;
- **underline** the need to develop coherent strategies and policies on the conservation, protection and sustainable use and management of water and on the reconciliation of different interests among water users at all levels;
- **underline** the need to include agriculture in these strategies and policies to enable agriculture to continue fulfilling its role in providing adequate and nutritious food for the growing global population;
- **acknowledge** the need to take conservation, protection and sustainable use and management of water into account in agricultural and related policies;
- **acknowledge** the need to establish and expand water-related information systems, building on other existing monitoring initiatives, in order to improve water management in agriculture and develop early warning mechanisms that can be made available to agriculture;
- **will provide** impetus with this declaration, in particular for the G20 Agriculture Ministers' Meeting 2017 in Berlin (Germany);

- **acknowledge** the
 - ◆ final report of the UN Secretary General's Advisory Board on Water and Sanitation (UNSGAB 2015) and its structural recommendations for a more effective global water architecture;
 - ◆ Action Plan issued by the United Nations/World Bank High Level Panel on Water in September 2016 (HLPW);
- **firmly endorse** the implementation of the
 - ◆ 2030 Agenda's Sustainable Development Goals, particularly those relating to food and water;
 - ◆ UNFCCC and the Paris Agreement (COP21, COP22), in force since 4 November 2016, subject to ratification;
 - ◆ New Urban Agenda – Quito Declaration on Sustainable Cities and Human Settlements for All;
 - ◆ recommendations of the Committee on World Food Security (CFS) in its 42nd session on “Water for Food Security and Nutrition”;
 - ◆ initiative by FAO and its partners entitled “Coping with water scarcity in agriculture: A global framework for action in a changing climate” (2016).

Call for Action

We, the agriculture ministers assembled at GFFA 2017, intend to meet the following four challenges in order to safeguard the supply of and access to safe and nutritious food for a growing world population, giving due regard to each country's local conditions:

Enhancing access to water

We intend to

1. **establish and strengthen arrangements to improve water allocation systems, e.g. through regulatory or market-driven mechanisms, to promote inclusive access and the efficient and sustainable use of water;**
2. **reduce incentives conducive to water mismanagement gradually and in a socially acceptable manner, while protecting the most vulnerable, in order to promote efficient water use and reduce water wastage;**
3. **integrate agriculture into local and regional initiatives with the aim of striking a balance between different user interests and managing competition, inter alia by making efficient use of water;**
4. **promote responsible investment in the development, maintenance, rehabilitation, modernisation and expansion of water infrastructure, while taking into account local conditions, in order to enable farmers, in particular youth, smallholders and women farmers, to have sufficient access to suitable water;**
5. **establish and strengthen cooperation to develop policies that encourage water conservation and the use of brackish water and of efficient technologies for wastewater treatment, recycling and water and nutrient reuse whilst complying with food safety, environmental and nature protection standards that are backed by supportive implementation measures.**

Improving water quality

We intend to

1. use, conserve, protect and rehabilitate soils so that they can fulfil their natural functions, e.g. as a filter and buffer to protect water resources and to prevent sedimentation and degradation such as erosion or salinisation;
2. develop and implement corresponding management strategies to reduce pollutant loads from agriculture in water and water-related ecosystems by promoting water-friendly agricultural practices and animal-husbandry management;
3. make available knowledge, technologies (including ICT) and experience relating to methods for the maintenance or improvement of water quality.

Reducing water scarcity risks

We intend to

1. increase productivity and water-use efficiency in agriculture (irrigated and rainfed), taking into account local, national and regional conditions (optimising “crop per drop”, reducing water losses and waste, and using proper irrigation technologies);
2. share information and experience on water-efficient farming methods (e.g. precision farming, no-till farming) on a voluntary basis and support their practical implementation, including sustainable soil management;
3. foster the dissemination of ICT technologies as an important tool to improve agricultural water-use efficiency; fördern;
4. promote research and development on innovative production methods and technologies to improve water-use efficiency;

5. intensify research and development, and strengthen international research-and-development structures, in order to improve the drought stress tolerance and water-use efficiency of crops and livestock, in particular those important for food security and nutrition;
6. promote innovative approaches to improve water availability for agricultural purposes, including the re-use of waste water or rain water harvesting;
7. encourage national and local agronomically suitable agricultural production systems in order to maximise efficiency of water use.

Managing surplus water

We intend to

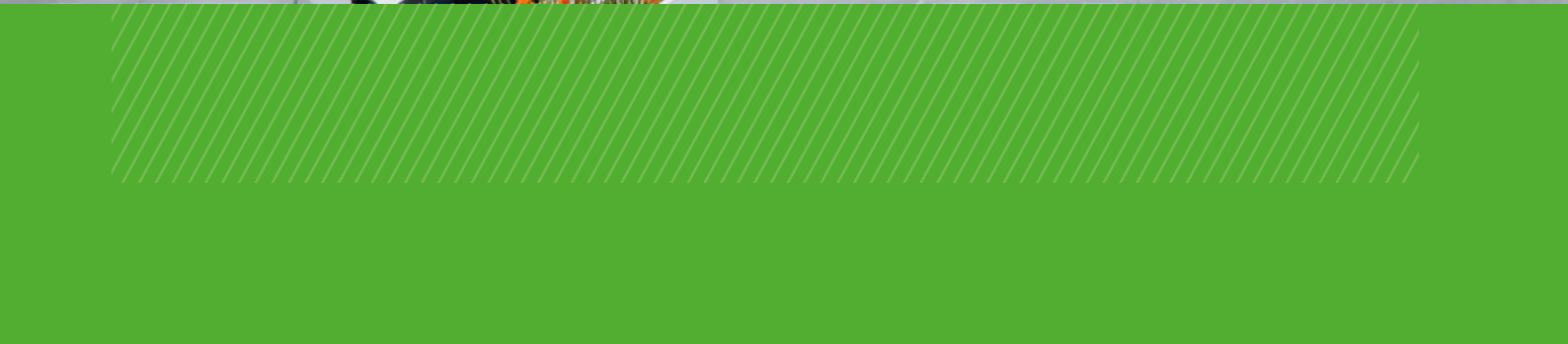
1. promote investment in water infrastructure in line with the Principles for Responsible Investment in Agriculture and Food Systems (RAI) and the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGT), and the Voluntary Guidelines for Sustainable Soil Management developed by the Global Soil Partnership, including investments in retention measures to protect against flooding;
2. support sustainable land management and farming methods that improve the water infiltration and water retention capacity of soil, enhance the productive use of rain-water and provide proper drainage;
3. use retention and storage methods to make excess rain and flood water available for use in agriculture in a stable and sustainable manner, and strengthen our research-and-development efforts in that regard.

Conclusion

We, the agriculture ministers, agree that

- we will continue to shoulder our responsibility for better stewardship of water as a scarce resource and contribute to safeguarding water quality through sustainable water management and production methods in agriculture;
- agriculture needs adequate and reliable access to suitable water as a production resource in order to feed the growing world population without endangering the natural resource base and compromising the availability of safe drinking water;
- we must strengthen efforts in the research and development of technologies, including ICT applications, to improve the efficiency of water use in agriculture;
- we must improve access to education, training, extension services and know-how, and enhance capacity building and the use of technology, including enhanced trade in efficient water-use technologies and services, in order to meet the challenges mentioned above and sensitise farmers and agricultural extension officers regarding the sustainable management of water;
- it is important to support implementation and financing mechanisms proven to help achieve these objectives, particularly with respect to the poorest countries, such as the Global Agriculture and Food Security Program (GAFSP) and those provided by the International Fund for Agricultural Development (IFAD);
- agriculture plays a relevant role and bears responsibility in the sustainable stewardship of water at all levels. We therefore call upon the international community, in particular relevant United Nations organisations such as FAO, as well as OECD and World Bank Group, to
 - ◆ enhance the sharing of information and dissemination of experience on sustainable water management and technologies in agriculture;
 - ◆ further develop and strengthen the international water architecture in order to enhance its political impact;
 - ◆ ensure that agriculture is integrated as a key actor within the international water architecture;
 - ◆ promote the extensive participation of stakeholders and the application of cross-sectoral, local and regional policy approaches, including sustainable land management, in structuring global water policy;
- initiatives and measures implemented in or as a result of this communiqué will not impose unjustifiable barriers to trade and will respect WTO commitments.

We welcome the fact that the G20 Agriculture Ministers will address the topic of “Agriculture and Water” as part of their meeting in Berlin.



Participating countries

Berlin Agriculture Ministers' Conference 2017

Republic of Albania

Republic of Angola

Argentine Republic

Republic of Armenia

Australia

Republic of Austria

Republic of Azerbaijan

Republic of Belarus

Kingdom of Bhutan

Bosnia and Herzegovina

Republic of Botswana

Federative Republic of Brazil

Republic of Bulgaria

Burkina Faso

Kingdom of Cambodia

Canada

People's Republic of China

Republic of Congo

Republic of Croatia

Republic of Cyprus

Czech Republic

Arab Republic of Egypt

Republic of Estonia

Republic of Finland

French Republic

Georgia

Federal Republic of Germany

Hungary

Republic of Iceland

Republic of India

Ireland

State of Israel

Italian Republic

Japan

Republic of Kazakhstan

Republic of Kosovo

Kyrgyz Republic

Lao People's Democratic Republic

Republic of Latvia

Principality of Liechtenstein

Republic of Lithuania

Grand Duchy of Luxembourg



<i>Republic of Madagascar</i>	<i>Republic of Sierra Leone</i>
<i>Republic of Malawi</i>	<i>Republic of Singapore</i>
<i>Republic of Malta</i>	<i>Slovak Republic</i>
<i>Islamic Republic of Mauritania</i>	<i>Republic of Slovenia</i>
<i>Republic of Mauritius</i>	<i>Federal Republic of Somalia</i>
<i>United Mexican States</i>	<i>Republic of South Africa</i>
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<i>New Zealand</i>	<i>Swiss Confederation</i>
<i>Kingdom of Norway</i>	<i>Togolese Republic</i>
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<i>Portuguese Republic</i>	<i>Ukraine</i>
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<i>Romania</i>	<i>Republic of Uzbekistan</i>
<i>Russian Federation</i>	<i>Socialist Republic of Viet Nam</i>
<i>Independent State of Samoa</i>	<i>Republic of Zambia</i>
<i>Kingdom of Saudi Arabia</i>	

International Organizations:

African Union (AU)
 European Commission (EU COM)
 Food and Agriculture Organization of the United Nations (FAO)
 United Nations World Water Assessment Programme (UN WWAP)
 Organisation for Economic Co-operation and Development (OECD)
 International Fund for Agricultural Development (IFAD)
 International Food Policy Research Institute (IFPRI)
 World Trade Organization (WTO)
 World Bank Group (WB)

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