

# FUTURE OF FOOD

an exploration of the global food system

Report  
Future of Food seminar

## From vision to action

16 - 17 November 2011, Lausanne

Chair: Arie van der Brand



# Contents

2	<i>Introduction</i>
3	<i>Five targeted actions for the Future of Food</i>
5	<i>Working dinner</i>
5	<i>Jikun Huang: How to satisfy the dragon's appetite?</i>
8	<i>Peter Bakker: A long road to food security</i>
10	<i>Session 1: Markets and People</i>
10	<i>Hugo Bethlem: Sustainability for growth - a Brazilian retailer's experience</i>
13	<i>Anuradha Mittal: Investment in agriculture, but investment for whom?</i>
16	<i>First dialogue round</i>
18	<i>Session 2: Creating space for new technologies</i>
18	<i>Amit Roy: Improving soil fertility</i>
21	<i>Anne van Gastel: Innovation for a more sustainable agricultural sector</i>
24	<i>Second dialogue round</i>
26	<i>Session 3: Towards new chain architecture</i>
26	<i>Jeffrey Sachs: A global framework for joint action</i>
28	<i>Gabriela Alvarez: Who takes the lead? - New chain architecture to take sustainability to the next level.</i>
31	<i>Feike Sijbesma: Towards tangible actions.</i>
33	<i>Final Remarks</i>
36	<i>Annex</i>
36	<i>Programme</i>
37	<i>List of speakers and participants</i>

# Introduction

This report provides an overview of the third Future of Food seminar, "From Vision to Action", which was jointly organised by Schuttelaar & Partners and IMD in Lausanne on 16-17 November 2011.

The Future of Food process - an initiative developed by Schuttelaar & Partners - explores the future challenges that will affect the global food system, as well as the steps that are necessary for making it a sustainable, healthy and fair system. In 2008, the first Future of Food seminar in Brussels focused on the global food system's many intertwined dimensions, while in 2010, the second seminar in London sought ways to achieve balance between simply exploring the possibilities and taking concrete action.

In 2011, the third seminar in Lausanne highlighted that our analyses thus far have provided us with a clear indication of the challenges and opportunities we face in making the global food chain more sustainable and that the time has come to deal with them directly. As the economies of countries such as China, India and Brazil are set to play an extremely important role in this area, the seminar focused on their roles and responsibilities.

The aim of this latest seminar was to generate strategic dialogue among key stakeholders in order to come up with a series of shared actions. At the end of the seminar, a series of action proposals were therefore handed over to Peter Bakker, the newly appointed Chairman of the World Business Council for Sustainable Development, in the hopes that they can play a role in further international activities in this area. Although these proposed actions have to be implemented on a global scale, our objective was also to highlight that working towards a more sustainable and food secure world also requires personal commitment. At the end of the seminar, we therefore invited all participants to submit their personal commitment. By sharing these personal commitments with all participants, we sincerely hope that it provides the necessary impetus to move our shared ambition forward.

As previously mentioned, this third seminar was jointly organised by Schuttelaar & Partners and IMD - and more specifically, the IMD Global CEO Center: Leading in a connected future and IMD's Center for Corporate Sustainability. We wish to thank our sponsors, BASF Plant Science and DSM, to whom we are very grateful for having helped to make this seminar possible. We thank Arie van den Brand for his leadership and energy as the seminar chairman. And we thank Thomas Malnight (IMD Global CEO Center: Leading in a connected future), Aileen Ionescu (IMD Center for Corporate Sustainability) and Gabriela Alvarez (Latitude) for sharing their views and knowledge in the seminar preparation.

The Future of Food seminar organizers:  
Kees van der Graaf  
Edwin Hecker  
Rutger Schilpzand

## Five targeted actions for the Future of Food

The participants of the seminar agreed on a top five of actions for the future of food. At the end of the seminar the actions have been handed over to Peter Bakker, designated chair of World Business Council on Sustainable Development (WBCSD). The actions are:

### 1. *Adopt an integrative approach for tackling the 'big six'*

To achieve food security, different players need to adopt an integrative approach which effectively increases the productivity and quality of products produced by smallholder farmers in emerging countries. The "big six" priorities are:

1. To strengthen access to farm inputs (fertilizers and seeds)
2. To develop infrastructure (including transport and storage)
3. To disseminate knowledge and good agricultural practices (technology transfer)
4. To improve access to financing (microfinance)
5. To facilitate market access (of local products)
6. To solve the issue of land tenure (the current "land grabbing" phenomenon has disastrous consequences for farmers)

Players must take action in their area of expertise and develop effective partnerships to tackle these common goals. Successful partnerships should be documented, and best practices should be shared across the globe using online platforms, forums, etc.

### 2. *Develop a "smallholder index ranking" of governments*

Transparent assessment is essential for understanding the evolutions of the market, and for determining whether contributions are generating the intended impact. The development of a smallholder index would enable critical success factors - used by donors such as the World Bank and the International Monetary Fund - to be used to assess whether governmental food security policies have a beneficial impact on smallholders. Across the globe, governments of nations receiving aid could be benchmarked against each other in such an index, thereby providing clarity to donors and other key players in terms of how each country performs as a result of aid and development efforts. This index would help governments to be more aware of the smallholder farmer market environment, and enable collaboration between all entities of the food chain.

The initial development of such an index is proposed for 2012, driven by a multi-stakeholder platform led by the WBCSD and endorsed by the FAO. The list of critical success factors should be ready by 2014, at which time the index should be launched.

### 3. *Mobilize industry and the public sector to advocate for more effective regulation*

The issue of food security is widely misunderstood by a majority of people. Raising awareness about market distortions and their disastrous consequences is therefore an essential step to finding solutions to these distortions. Effective legislation and education on food security issues are ways to go about this. Education can be achieved through mobilization campaigns, consumer information through new media, engagement by retailers to inform consumers and the promotion of sustainable practices. Effective legislation should cover multiple areas - from technology to an incentive system for the distribution of added value across the food chain. The WBCSD and the FAO should be among the key players to mobilize forces for advocacy for such legislation.

### 4. *Include BIC companies in sustainable global business forums*

The balance of power is shifting. With rapid economic growth in the BIC economies, consumption patterns are drastically changing in developing countries. China, Brazil and India are changing the way the world looks at the supply and demand of food. It is therefore imperative that, when the business community discusses issues such as food security, these nations not only be included in the discussions, but also encouraged to lead them towards more sustainable outcomes. Large international companies from these countries should be adequately represented in forums such as WBCSD, the Sustainability Consortium and the Consumer Goods Forum.

### 5. *121- waste reduction buddy system. Targeted multi-stakeholder approach to tackling food chain losses*

As of 2011, approximately one-third of global food production is wasted annually. This loss occurs across all supply chains, during both pre and post-harvest activities and from farmers to consumers.

In order to tackle this problem of food waste, a buddy system in which two countries cooperate could be envisaged. In order to facilitate interaction, it is essential for these partners to have a common vision. Furthermore, by pairing up a developed country with a developing one, the root of the problems faced by poor economies in most need of help could probably be successfully tackled.

To help with the implementation of such a system, a list of the top ten smallholder crops should be developed, focused on and leveraged by national multi-stakeholder platforms. Partnerships can then evolve in order to execute key changes across the entire supply-chain, generating an expected 30% reduction of food chain losses by 2020. The initiative should be carried out by universities, the private sector, governments, NGOs, farmer organizations and research institutes.

## Working dinner

### Jikun Huang: How to satisfy the dragon's appetite?



Following two decades of being an exporter of food, China has recently made the shift to becoming an importer. The question of "how to satisfy the dragon's appetite?" has therefore become a primary concern. To provide some clarity on the question, Jikun Huang - Director of the CCAP of the Chinese Academy of Sciences - explained how China has previously managed to meet its growing demand for food. "We have to understand the driving forces behind supply and demand, as well as the implications for China's food security if the country's economy continues down its current path. We also need to determine how China can contribute to a more food-secure world."

China's economy is growing rapidly. Indeed, between 1978 and 2010, China's GDP has become 20 times larger. In line with this spectacular economic growth, food consumption has increased significantly. As a result, questions and concerns such as "how will China feed itself and will it starve the world?" were already being raised in the early 1990s.

#### Major drivers of demand

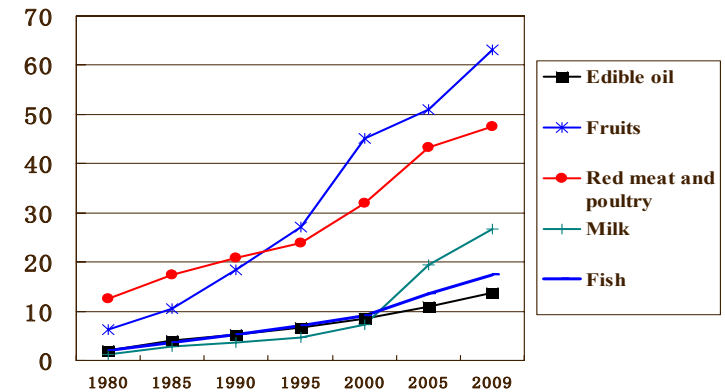
Population growth and income were the major drivers of demand for food. Over the last 30 years, the average population growth in China has been around 1.1%. In 2010 however, growth declined to 0.5%, and is set to further decrease in the coming decades. Rising income is a major driver of food consumption. This is especially true for the consumption of meat, fruit and vegetables, and less for grain. Indeed, in large urban populations, the average consumer demands more meat and less grain products.

**"China heavily invests in agriculture and green biotechnology"**

In recent years, bio-fuels have also become new drivers of demand. China has set high targets in terms of bio-fuels. By 2020, the country's production of bio-ethanol should be the equivalent of ten million metric tons and two million metric tons for bio-diesel. To achieve these targets, the Chinese government began incentive policies in 2007 - encouraging the development of bio-fuels through tax advantages and subsidies.

### Accompanied the rapid economic growth has been significant rise in food consumption

#### Per capita meat and other food consumption (kg/person)



However, the global food crisis in 2007-2008 produced a shift in China's policy on bio-fuels. Indeed, as result of the crisis, China no longer seeks the expansion of bio-fuels generated by grain, but rather through non-grain feed stocks and second generation bio-fuels. In sum, China's drivers of demand were strong in the past three decades. However, they are set to weaken in the coming years.

**"The dragon is set to feed its own appetite!"**

#### The major drivers of agricultural growth

At the same time however, the annual growth rate of agricultural GDP was approximately four times greater than that of the population growth rate. In terms of grain production, the country has seen a 74% increase between 1978 and 2009, and a 505% increase in the production of oil crops. The production of fruit (+3005%), vegetables (+453%) and meat has increased even more rapidly. The major determinants of success in production are institutional change and market reform, as well as investments and technology. China invests largely in agriculture, by means of

## Driving forces of demand for agri/food

- **Population growth** (++) → (+) **impact has been weakening...**
- **Urbanization** (+) → (-/+) **negative on food grain and positive for others**
- **Ageing** (0) → (-)
- **Income growth** (++) → (-/+) **impact will also be weakening...**
- **Biofuels:** no trade-off with food security

**Drivers of demand, in general, will be weakening in the coming years...**

budget support, tax measures and research. Indeed the country's government recently initiated a new GMO research programme with a magnitude of 3.8 billion dollars for the period spanning 2009 to 2020. However, China's future challenges lie in land, water, sustainability and small-scale farms.

### *So, how do we feed the dragon's appetite?*

China's experience shows that investing in agriculture and policy reforms is crucial to agricultural development and food security. While its meat and other food consumption are rising, China will maintain its overall food autonomy by investing heavily in technology and rural infrastructure.

While China is expected to increase its imports of land intensive products (e.g. animal feed, cotton, edible crops, sugar, dairy, etc) it will also continue to be a major exporter of labour and capital intensive products (e.g. vegetables, fruit, certain livestock products, fishery, and processed foods), thereby contributing to global food security. Overall, by investing in agriculture, China should be able to produce most of the food it needs to meet its rising demand, while also contributing to global food security.

## Peter Bakker: A long road to food security



*In 2004, shortly after TNT announced its partnership with the World Food Programme, the Tsunami hit Asia. At that time, Peter Bakker, former CEO of TNT and currently UN WFP ambassador against hunger, received a call from some of his employees asking: what are we going to do? These people were truck drivers for TNT, and they volunteered to go and help the stricken populations of Asia. As a result, TNT was one of the first parties to arrive in Banda Aceh. TNT really made a difference by managing the Medan airport ramp handling, making sure that emergency supplies were offloaded and distributed efficiently.*

### *TNT's involvement with hunger*

The aftermath of the tsunami disaster illustrates the hands-on support that a company can deliver. As one of the world's major logistics companies, TNT also assists the WFP through knowledge transfer. TNT helps the WFP lower its third-party transport costs by reviewing the WFP's existing supply chain and making suggestions for new warehouse locations. Another example is the introduction of the computer-based Fleet Management System. TNT helps to implement and train WFP staff to use this software, which provides direct asset information and cost performance figures.

**So ... What are you going to do???**



As a result, the average down-time of vehicles can be reduced from 30% to about 10%, and greatly reducing WFP's costs. Although cooperation between WFP and the business sector was a new development that required both parties to get used to each other, it ultimately shows that public-private partnerships are vital for facing future hurdles. As Mr. Bakker put it, "only companies can save the world!"

**"Only companies can save the world!"**

**The state of the world**

In January 2011, when Mr. Bakker was appointed UN WFP ambassador Against Hunger, he visited the horn of Africa and witnessed the famine there with his own eyes. When his delegation - including a western government leader - met a starving mother and son in Somalia, he asked this leader to look at the issue not from a political perspective, but rather from a perspective in which real help could be given to these individuals. Indeed, in Mr. Bakker's view, sustainability should be personal. It's not about changing policy, but about saving the lives of individuals. Sustainability should therefore be defined as the way in which more than 9 billion people in 2050 can all live well and within the limitations imposed by our planet.

Our current consumption patterns require resources that an estimated 1.33 of our planet can provide, and if we continue at this pace, by 2050 we will need the resources of three to four planets. In addition to a growing population, there are other threats to food security, including changing diets in emerging markets and competition for land use. We have an urgent mission to eradicate (child) hunger. Many things have to be done to reach that goal, and one of the most important ones is to create a global food reserve system.

**So what are you going to do?**

When CSR began, it was pioneering, idealistic and sometimes philanthropic. Effectiveness was the value driver, and pride was the new source of energy. This was CSR 1.0. The front runners are now in the phase of CSR 2.0 - whereby they link CSR to their core business. Their guide is the shared values concept by Michael Porter, and they achieve growth through new resource productivity thinking. We should all be taking this next step, which involves integrating sustainability reporting at all levels of a company and using the costs of pollution and sourcing as performance indicators.

In closing, Mr. Bakker encouraged participants to give - be it their voice, their money, their time, their CSR policy or their core business! His final question was: What are YOU going to DO?

**Session 1: Markets and People**

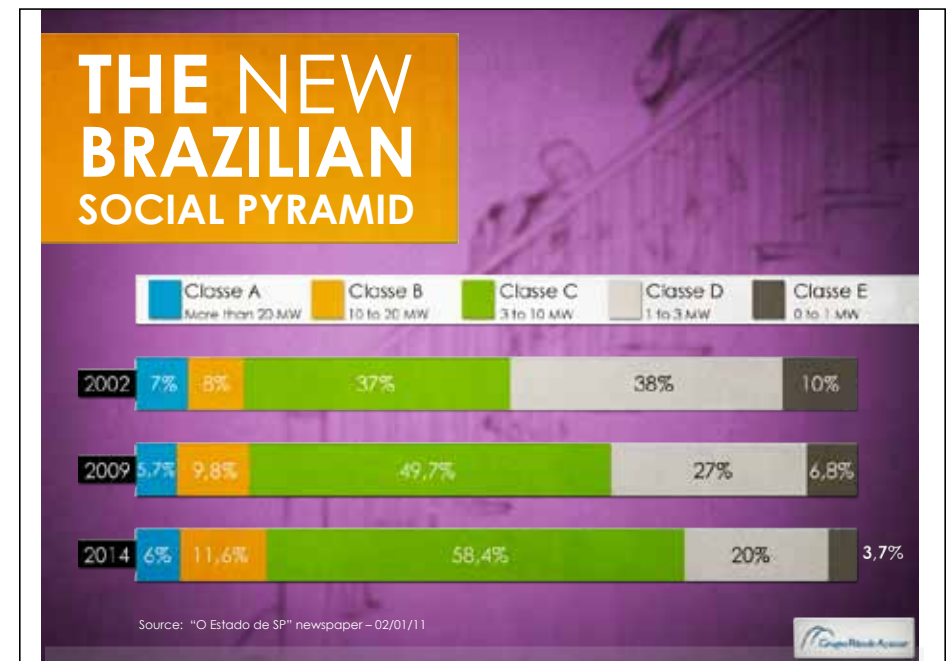
**Hugo Bethlem: Sustainability for growth - a Brazilian retailer's experience**



Corporate sustainability in Brazil must go beyond environmental protection says Hugo Bethlem, Executive Vice President of Grupo Pão de Açúcar, the largest distribution group in Latin America - with 1863 stores and annual sales of more than \$30 billion US. By integrating employee education on health and sustainability within its policy, and offering a wide range of organic products to consumers, Grupo Pão de Açúcar competes with the world's leading companies in terms of sustainability.

**A changing social pyramid**

Within the last five years, Brazil's middle class has grown to include a further forty million people, bringing it to an estimated 102 million people with \$1 trillion to spend. Within the same time frame, 28 million people have also managed to escape poverty. This boom in prosperity is enabling consumers to change and expand their food consumption patterns. Furthermore, the majority of households are lead by women,



who represent more than 50% of the workforce in Brazil. In light of all of these developments, Brazil provides a great potential to food retailers, while at the same time generating concern about how to develop conscious consumption habits, how to minimize and avoid waste and how to encourage healthier eating habits.

## “How to feed the exploding middle class in a healthy and sustainable manner?”

### CSR: beyond environmental protection

In Brazil, corporate sustainability needs to extend beyond environmental protection to address social inclusion of the poor and wealth-generating practices that can help lift people out of poverty. When looking at the People, Planet, Profit model, the main focus should be on people.

Grupo Pão de Açúcar’s sustainability strategy is based on three guiding pillars. The aim of the first pillar, Work & Employment, is to create decent working and employment conditions for employees. All 160,000 employees also receive training on sustainability. The Consumers pillar aims to educate the retailer’s clients about how to increase their consumption of environmentally friendly and healthy foods and help them to understand the origin of this food.



For instance, [www.qualidadedesdeorigem.com.br](http://www.qualidadedesdeorigem.com.br) enables clients to trace the origin of products they purchase. The group also has the intention of abandoning the use of plastic bags by January 2012. Overall, Grupo Pão de Açúcar focuses on providing incentives to all three elements of the value chain’s triple bottom line approach: people, planet, profit. Education in all parts of the value chain (producers, logistics, retailers, consumers) is therefore central to the Group’s objective of contributing to a greener economy!

## “Sustainability is first and foremost a people’s issue”

### Cooperatives in production and waste management

Grupo Pão de Açúcar participates in cooperatives at both ends of the value chain through the ethical and solidary programme “Caras do Brasil”. At the beginning of the production chain, Grupo Pão de Açúcar helps to develop and set up producer cooperatives and provides training courses. These cooperatives have a three-fold benefit: they help to develop the supply chain, they enable reliable purchasing for Grupo Pão de Açúcar and they allow consumers to have more access to healthy food. Rather than following the industry standard of payment after forty days, these cooperatives receive payment after seven days. The impact of this programme is widespread, as 150 producers, 56 organizations and a total of 40.000 people benefit from it.

At the end of the chain, Grupo Pão de Açúcar has partnered with the largest private recycling programme in the country, which relies on 215 recycling stations. In cooperation with Unilever and Pepsico, this programme enables waste to be delivered to 51 recycling cooperatives, and fosters social inclusion, increased income, conscious consumption and conscious discard. As a result 824 families benefit directly and 2472 people benefit indirectly.

## Anuradha Mittal: Investment in agriculture, but investment for whom?



*In terms of feeding the world in 2050, Anuradha Mittal, Executive Director of the Oakland Institute, outlined how business as usual is not an option. In contrast with other presentations, hers focused on the kind of investments that are needed to boost food security, livelihoods, and deal with urgent concerns relating to poverty and climate change.*

### **The problem: Land grabbing**

Anuradha Mittal's presentation outlined how hunger is not a problem of supply and demand that can be fixed merely through increased production. As the 80% increase in commodity prices in 2007-08 revealed the impact of market volatility on the poor in developing, the issue of hunger should be addressed by focusing on accessibility. Anuradha Mittal highlighted that land grabbing is one of the biggest concerns in the realm of food and agriculture today.

## **“Funds and investors from many countries are involved in land grabbing”**

The scale, rate and negative impact of land deals, which are shrouded by an extreme lack of transparency, is alarming. In 2009 alone, nearly 60 million ha - an area the size of France - were purchased or leased in this way. Large scale land investments in Africa, as exposed by the Oakland Institute, are resulting in food insecurity, the displacement of small farmers, conflict, environmental devastation, water loss, and the further impoverishment and political instability of African nations.

### **Who are the investors?**

News coverage to date has emphasised the role that countries including China and India have played in the acceleration of land acquisitions in Africa. Although Indian firms are active in countries such as Ethiopia, the Oakland Institute's investigation shows a major role of western firms, wealthy American and European individuals, and investment funds with ties to major banks such as Goldman Sachs and JP Morgan. Investors not only include alternative investment firms such as the London-based Emergent Asset Management, which works to attract speculators - including universities such as Harvard (which has maintained secrecy on such potentially unpopular activities), Spelman, and Vanderbilt - with a primary motivation of economic

access to agricultural land that will have high returns for the endowment. Many European companies are also involved, often with the support of their governments and embassies in African countries.

## **“Small farms are often more productive than large-scale farms”**

### **Are investors buying unused, available land?**

The Oakland Institute's research has highlighted a number of cases where small farmers, perceived as “squatters” are forcibly removed from their ancestral land with no compensation in order to make room for export commodities, including bio-fuels and cut flowers.

### **Don't these countries need investment for economic development?**

The Oakland Institute's investigations reveal that these largely unregulated land purchases are resulting in virtually none of the promised benefits for native populations.

### **Don't these countries need investment for job creation?**

Speculators say that investments will create jobs, but these are actually just a way for foreign investors to access cheap labour and cheap land. The idea that land deals bring much-needed employment opportunities to poor countries has served as a way for international development institutions and other leaders to justify large-scale land investment as a potential “win-win” scenario for both investors and developing countries. However, first-hand evidence from the Oakland Institute's field research in multiple African nations reveals that promises of job creation are often overstated, if not completely false.

### **Are plantations more productive than small farms?**

Another argument put forward in favour of large farms is that of their supposed higher productivity. The Oakland Institute's investigations confirm a strong body of previous research in this area, with many instances where small farms are more productive than large plantations.

### **Does investment improve food security?**

Most of the countries targeted by investors suffer from food insecurity. Though the food security argument is often put forward by governments and investors, research finds little assurance that large scale agricultural investments can improve food security. In many cases, local food farms are sold off in order to make room for export commodities, including bio-fuels and cut flowers. Indeed, many of the land leases identified are for the production of bio-fuels.

## **“Solve the issue of land tenure before talking about food security”**

### **The need for investment**

Anuradha Mittal highlighted that renewed focus on agriculture is crucial for dealing with the current crisis of world hunger, climate change, and for ensuring livelihoods of farmers while enabling developing countries to meet the Millenium Development Goals. However, she emphasized that investment in agriculture does not necessarily translate into food security or livelihoods for smallholder farmers who form the bulk of the world's poor. The issue is not merely one of increasing budget allocations to agriculture, but rather one “of choosing from different models of agricultural development which may have different impacts and benefit various groups differently.”



## **First dialogue round**

*During the seminar's first dialogue session entitled “Markets & People”, the discussion focused on education and the issue of small farmers vs. large scale farmers.*

### **Education**

There is a lot to be gained from education on food security, and farmers should not be the only ones to receive this education. Indeed, society as a whole could benefit from it - especially as the aspiration to an “American” lifestyle is still prevalent in many countries. Changing the behaviour of consumers means changing their perspective. An entire generation needs to learn how to eat and buy food consciously - for instance by not buying too much - and to limit food waste.

In Western societies, education about food should focus on reinstating its value. For people to reconnect with food, they should be taught where it comes from, who is involved in its production, as well as more general factors such as its impact on deforestation and soil. The retail sector can have a significant role to play in this educational endeavour, as can school feeding programmes. Indeed, the latter can easily combine a healthy meal with nutritional education. A school feeding initiative in Chile provides a good example.

### **Small farmers vs. large scale agriculture**

Smallholder farmers should have the possibility of increasing their food security. However, a lack of credit and information are often a hurdle in this respect. To help achieve a breakthrough in this area, new ideas and questioning are needed. When looking at what we can do to encourage farmers not to move to urban areas, we need to think about how to create more opportunities in the countryside while respecting and honouring the local culture.

When thinking about infrastructure - one of the major problems that developing countries currently face - and how to get farmers' products to market, we need to shift the question and address how the market should come to farmers. Innovation should evolve around the market and serve to close gaps in the value chain.

Something else to think about - in contrast with the mainstream belief that large-scale farming is the only way to achieve progress - is that in many African countries, small farmers have a great impact on food security and in some cases they receive support of the government through alternative policies. Indeed, small farmers who dispose of the proper technology can have equivalent or even superior yields per hectare compared to larger farmers.

The responsibility of investing in the agricultural sector is often in the hands of governments. Unfortunately, in many countries agricultural investments are rather low, and more should be done in this respect. Some countries, however, have implemented creative solutions. This is the case for Nigeria, which finances fertilizer from its oil revenues.

But ultimately, neither business nor governments can solve the problem on their own. The solution is for the public and private sectors to invest together, and involve other parties such as the WBCSD and the 'Right and Resources Initiative'. The private sector can also put pressure on governments and donors to finance the required investments. Governments need to play a critical role, most notably in the area of land rights, which are a prerequisite for return on agricultural investments and increased soil productivity. Market driven products should also be privileged, as it is important to achieve critical size.

It is also important for the business sector to start caring about smallholder farmers. Public sensitivities (for instance consumers may be sensitive about issues relating to cocoa) are a key factor to be kept on, and to put thought into its communication and examples of success.

## Session 2: Creating space for new technologies

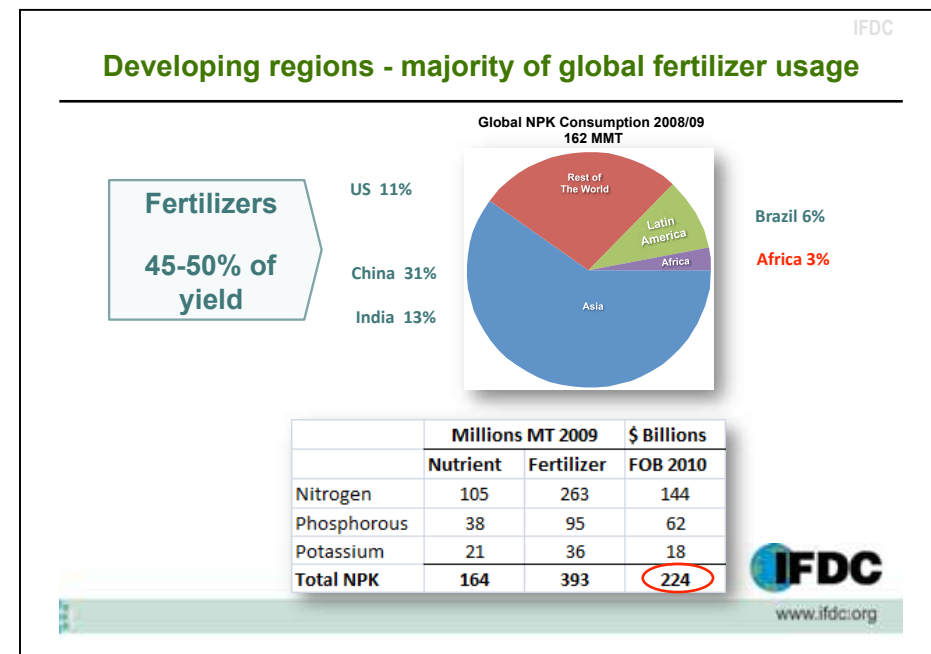
### Amit Roy: Improving soil fertility



*For many years, there has been practically no investment in fertilizer research. While the global demands for agricultural products is expected to increase, we are progressively depleting finite raw materials for fertilizers, and current methods are not helping to reduce the waste of materials. Amit Roy, President and CEO of IFDC, therefore pleads for investment in innovative fertilizer research.*

#### The need for innovation

The IFDC was established in order to develop fertilizers suitable for maintaining soil fertility for food production in the tropics and subtropics. While today it has become an international organization dedicated to agricultural development, soil fertility is still of utmost importance. Indeed, soil fertility and fertilizers (both mineral and organic) are critical to agricultural productivity. However, improper use of fertilizers can also reduce soil fertility. Because of its critical role for food production, the Indian government carried out the world's largest subsidy programme for fertilizers - with great success. In 2007-2008, at a time when energy and fertilizer prices were very high, this meant that



the country's budget expenses for fertilizer subsidy increased substantially.

Globally, intensive and extensive crop production systems have depleted agriculture's natural resource base. At the same time, with increasing urbanization and an expected global population of nearly 9.4 billion in 2050, the number of mouths to feed per farmer will increase considerably. It is therefore important to quickly undertake research on seeds and fertilizers. Since the early eighties however, there has been practically no research in fertilizer innovation. Indeed, the fertilizer industry dedicates only approximately 0.5% of its turnover to research, while in the plant breeding sector this is approximately 9%. Improving fertilizer technology must become a priority, as appropriate use of fertilizers can help reduce food security risks for small farmers and contribute to improving human health.

### **“A sustainable future for agriculture depends on technology”**

Global food production is 40% - 60% dependent on fertilizers. Research and development in this area can therefore have a major impact in addressing the challenges faced by Africa and Asia - the two regions that will see the largest increase in population. Global food security depends on a focused effort to improve soil fertility and increase the productivity of food crops.

Priorities for the future evolution of fertilizers are clear. They need to deliver soil fertility where it is most needed, to provide yield and micronutrient assurance for small holder farmers in Sub-Saharan Africa, and to generate better economical and environmental impact and more self-reliant sourcing.

### **“40-60% of global food production depends on fertilizers”**

#### **Public Private Partnerships**

The private sector must re-invest in fertilizer enhancements, while also tackling other aspects of food security. This re-investment should be done in the context of broad cooperation which effectively combines multi-disciplinary expertise with (potential) stakeholders (knowledge institutions, government and industries) and public-private partnerships. The overall objective should focus on developing the next generation of fertilizers.

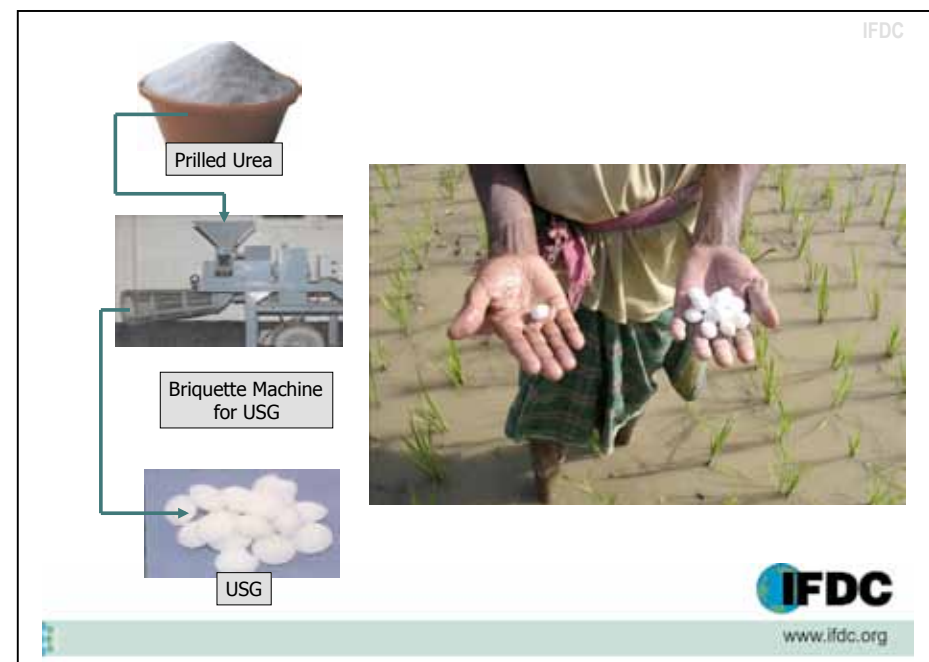
A new Virtual Fertilizer Research Center (VFRC) should pave the way for these

partnerships. This virtual research center brings together universities, public and private research laboratories and the global fertilizer industry in order to capitalise on the world's intellectual capacity to create an innovative research system.

#### **Questions for R&D**

By 2050, food demand is expected to increase by 70%, which is much greater than the increase of food production that was required during the “green revolution”. Research and development is therefore needed to address several topics, among which: intellectual property rights, multinational profits, the development of GMOs for the developing world and bio-piracy.

Currently, only 30% - 40% of fertilizers are absorbed by crops. Therefore, much of the nutrient content of current products is wasted and ends up polluting the environment. This absorption rate can be improved through better application techniques and products. An interesting example in fertilizer innovation has taken place in Bangladesh, where fertilizer was pressed into a small pill format which could be applied below the soil, directly at the roots/seeds of the plants. This increased the impact of the fertilizer, while decreasing the amounts needed, as well as the associated costs.



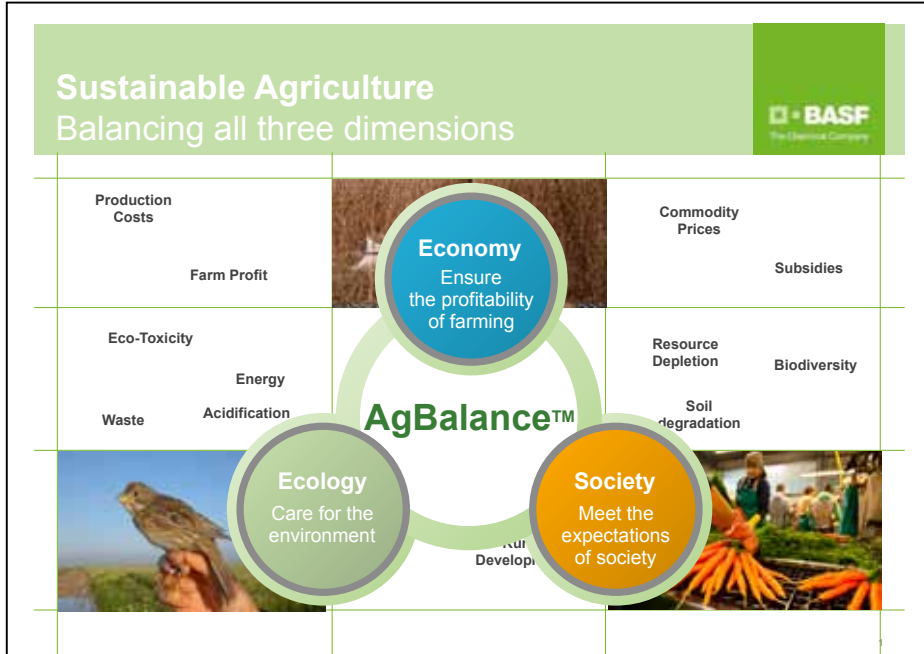
*Fertilizer innovation in Bangladesh*

# Anne van Gastel: Innovation for a more sustainable agricultural sector



During the week preceding the Future of Food seminar, BASF launched AgBalance, a holistic method for life-cycle assessment in agricultural and food value chain production processes. Anne van Gastel, Vice President Business Management Europe at BASF Plant Science, explained the method's benefits and opportunities in terms of measuring sustainability in agriculture.

AgBalance is a method designed to help evaluate the sustainability performance of agricultural products or processes in all three pillars of sustainability: ecology, economy and society. Ecological impact is assessed according to indicators such as water and land use, emissions and resource efficiency, as well those relating to soil health and biodiversity. Economic indicators include variable and fixed costs, and macro-economic indicators such as subsidies, share of agriculture in GDP and farm profits. Social impact is assessed according to indicators such as working conditions, salary, consumer attitudes and - on a more regional scale - access to land, employment, fair trade and social security. Overall, the method provides a sustainability ranking based on 69 indicators divided into 16 categories.

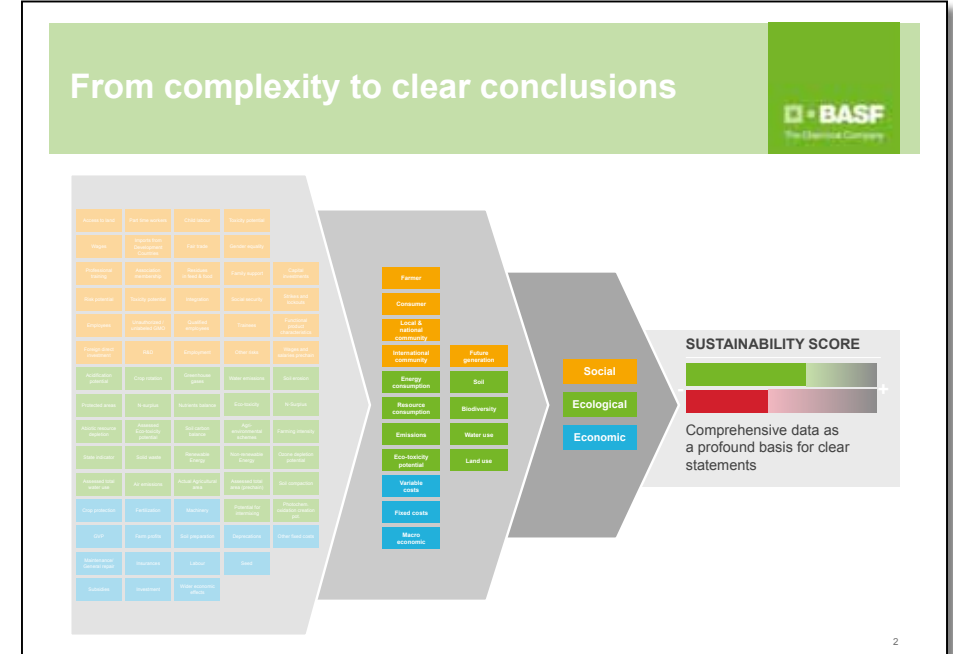


BASF has developed the AgBalance method with three main objectives in mind. The first is to increase knowledge on sustainable agriculture as guidance for BASF's own R&D. The second involves helping to design innovative and truly sustainable solutions for BASF's customers, and the third is to foster a more rational debate on sustainability in agriculture. As a basic principle, AgBalance studies will be reviewed by an independent third party, which is knowledgeable and recognized in this field.

## Exploring a variety of questions

Thanks to AgBalance, a variety of questions can be explored, including: what are the key drivers of sustainability for any given agricultural production system, which conditions have a positive or negative impact on the sustainable production of a given crop, and what crop rotation systems are most sustainable in a densely populated area with limited land availability? Providing insight on these types of questions makes it possible to measure the effect on sustainability and highlights where innovation is most effective.

AgBalance can be used to assess current practices and processes and to identify possibilities for improvement. It analyses the contribution of farming and downward processes over the complete life-cycle of products, as well as the impact of farming practices at various levels and their relationship with issues such as biodiversity or resource consumption. The method also takes into account the impact of regulation



on farming practices, products, consumer concerns and public sentiment. In addition, it also allows for comparison between different farming systems and agricultural enterprises.

## **“The AgBalance assessment tool can help innovation and public debate”**

A series of AgBalance studies are set to be conducted for a broad range of key customers and stakeholders in the food and feed value chains - including manufacturers of crop protection solutions, distributors, farmers and retailers. There may also be an interest for AgBalance analysis that extends beyond the food chain to organizations and decision makers in broader areas of agriculture or food production.

### ***New technologies and Maslow***

Since 1945, Maslow's well known pyramidal hierarchy of personal needs has gradually been turned upside down. Indeed, an increased and secured supply of food has enabled consumers to spend more on 'higher' needs and allowed for new needs to develop. The AgBalance tool is useful in determining these shifts in needs.

For instance, if a new technology does not address the unfulfilled needs of Maslow, it will have difficulties in gaining acceptance. However, sustainable development in agriculture depends on the introduction of new technologies. For these to gain acceptance, fact-based dialogue between various stakeholders in the value chain, politicians and the general public is essential. The sustainability assessments provided by the AgBalance method can contribute to this dialogue if they analyse responsible and sustainable behaviour in a holistic manner, are based on a life-cycle approach to help identify problems in the value chain, and are fact based, decision-oriented and transparent.

## **Second dialogue round**

*To secure a sustainable future for food, we need to rely on new technologies. These should aim to reduce water losses, rely on renewable energy such as the sun for poor farming communities, increase the shelf life of food through packaging or biological innovation, enhance nutrient concentration, optimise the use of fertilizers, use refined manure for green energy and recycle phosphate. During this dialogue session, the main focus was on fertilizers, the distribution of technology and how best to use available resources.*

### ***Fertilizers***

The presentations addressed the limited availability of phosphate and the benefits of research in this area. In the case of fertilizers, the main problem involves how they are used globally. Indeed, while in China a more balanced use of phosphate would be recommended, Africa - which represents only 1% of global fertilizer use - could benefit from increased land productivity if it used more fertilizer.

The use of fertilizers has an impact on the environment, including the energy required to produce them and when they wash away in the case of overuse. Scientists should therefore calculate energy losses, quantify the impact in terms of greenhouse gas emissions and communicate the results to the public. Furthermore, more real-time information about crops and soil could result in more efficient use of fertilizers. In this respect, new technologies such as nanotechnology or the use of GPS technology could be helpful.

When discussing how innovation in the area of fertilizers can be encouraged, a series of questions that arose were: How can you create incentives for investment in new technologies? As innovative companies invest in technologies when it is more efficient and more profitable, how can we promote the development of a next generation of fertilizers? Research is necessary, but what are the incentives for companies to invest? Would subsidies provide a solution? Where do you put the pressure at a political level? The Virtual Fertilizer Research Centre can definitely have a role to play in finding solutions.

### ***Distribution of technology***

Another question that was addressed when discussing new technologies was how to reach farmers when there is a lack of a proper distribution network. The adoption of new or existing technologies is complex matter which depends on factors such as a functional financing system, adequate infrastructure and education. When these factors lack, they can be improved by reducing the cost of credit. To do so, the private sector

could provide guarantees to reduce risk, which would in turn cause interest rates to drop. The problem is how to achieve this. Are banks able to go back to the old model of agri-finance (i.e. Credit Agricole)?

Once again, public private partnerships are the key to finding solutions! During the session, the partnership of SABMiller - a South African based global brewer - with FARMAfrica was addressed. Together they support smallholder farmers and improve the productivity of cassava in Sudan and South Africa. Their collaboration provides an excellent example of how the private sector, in partnership with the Dutch government, has resulted in the launch of the first commercial size cassava-based beer in Mozambique.

There are many other similar local success stories. In each case, their success depends on adaptation to the local situation. But other than communication, what is needed in order to amplify the effect of these success stories? We need entrepreneurs and leaders who are willing to take a risk, and who are well connected and organised. They are the ones most suited to warming people to an idea.

Sometimes we also need downscaling of technology rather than up-scaling. For instance, if a group of farmers collectively own a tractor and the price of diesel increases, they may not be able to keep using it. However, by resorting to doing things manually, they can save a lot of money that would otherwise have had to be spent on diesel.

Local production is also becoming a trend, with consumers who are increasingly aware of the benefits derived from local products. In addition to making innovations available to smaller-scale producers, "tailor made" solutions should also be made possible. This can be achieved through co-development, by which small farmers are included in the solution-finding process.

The issue of how to organize the best agricultural production, according to local possibilities was also addressed during this session. Participants agreed that this can be done through the development of an optimal environmental footprint, the creation of new infrastructure and the development of a new, bio-based economy.

## Session 3: Towards new chain architecture

### Jeffrey Sachs: A global framework for joint action



*"We are in a race against time, but if we systematically collect best practices, we should be able to create an African Green Revolution"*  
Jeffrey Sachs told participants in his video message.

Our global food system is subject to enormous pressure, with more than 1 billion people facing hunger - most of which are farmers. The agricultural sector has the highest impact on the environment due to carbon emissions and nitrogen pollution, and agricultural technology is undermining the globe's self-preservation system. Overall, the food system does not deliver the desired output, and if this continues it will produce a vicious spiral of poverty and instability that will in turn contribute to unsustainable food practices.

***"Smallholder farmers are the key to the solution"***

However, when looking at sub-Saharan Africa, there is good news. Indeed, the huge gap between the current levels of productivity of smallholder farms - approximately 1-1.5 tons per acre - and potential productivity levels of 3-5 tons per acre can be overcome. This can be achieved by integrating best practices in a more organized fashion, introducing proper soil nutrient management and farm practices, mechanization and water management. By focusing on the factors affecting productivity, we could achieve a green revolution in Africa in the near future. Agricultural yields could be increased by systematically collecting and sharing best practices, by deploying technology, improving access to organic and inorganic fertilizers and improving the capture of rainwater. In order to determine how much can be achieved by markets alone or with the help of public-private partnerships, a technical, financial and economic analysis needs to be undertaken. Smallholder farmers also need market access to be connected to value chains, and public goods need to be made available through public financing. By supporting farmers to form

cooperatives, economies of scale and enhanced bargaining power can be created, thereby allowing for increased market power and joint procurement of inputs.

### A race against time

As always, we are in a race against time. We need to organize ourselves to prevent people from dying from hunger. The best way to do so is to engage in public-private partnerships where businesses lend their expertise in technology and management while the public sector provides infrastructure, energy, telecom capabilities and non-market financing that enables businesses to operate in an environment otherwise unsuitable for commercial operations. There are other reasons for which we are in a race against time. These include: growing pressure from demographics - with the highest population growth taking place in poor areas such as sub-Saharan Africa - and land-grabbing ventures that neglect customary land rights and produce instability. Climate change also needs to be tackled, otherwise we run the risk of experiencing similar events to the famine in the horn of Africa.

**“We need to hurry!”**

### Platforms for effective action

The good news is that there are platforms for effective action. First of all, we need to recognize the rights and needs of smallholders and help them to access the market. Large companies can help engage these smallholders and connect them to markets and value chains.

Furthermore, the international community should live up to its promise to provide 23 billion dollars within three years for small holder farmers, which was made in 2009 at the G8 in Italy. To support this, a special trust fund - the Global Agriculture and Food Security Programme - was initiated at the IMF and poor countries were given the opportunity to enlist their national plans. However, the international community's pledge has yet to be fulfilled, and most of the excellent national plans put forward are still awaiting funding. As governments don't seem to be living up to their promises, this means that we - as civil society - need to do more ourselves. Globally, citizens have to speak out about the absurd situation that the rich world first created climate changes, resulting in unstable societies, and now spends 100 of billions of dollars on military missions in those areas to fight the instability.

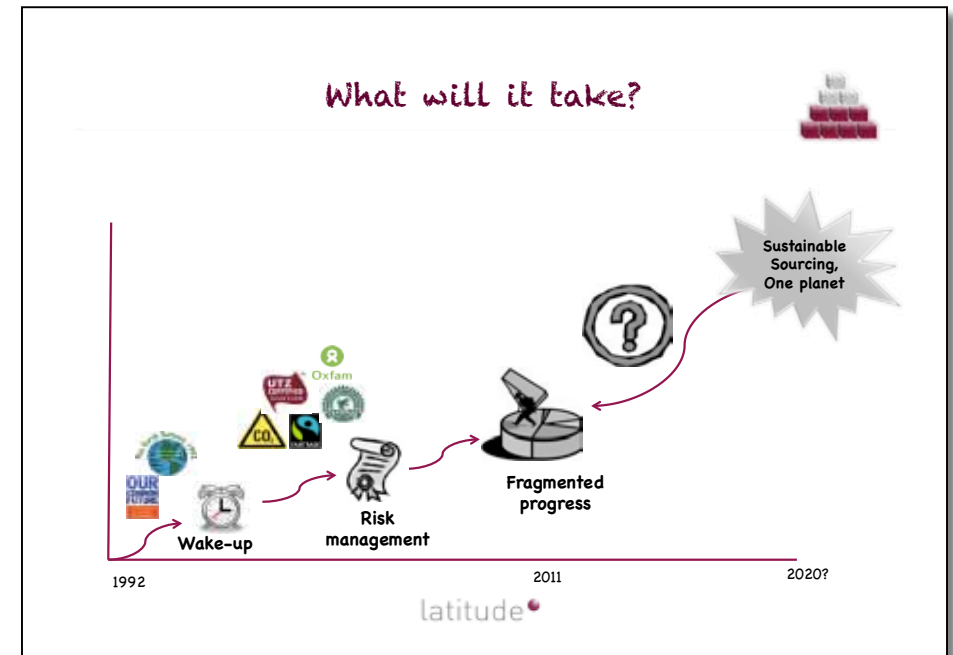
We can solve the problem of instability, poverty and hunger by investing in agriculture. This is an investment that is not only designed to help fight hunger, but also to increase our security and wellbeing.

## Gabriela Alvarez: Who takes the lead? - New chain architecture to take sustainability to the next level.



Since the Brundtland Commission defined sustainability in 1987, the issue has evolved from a wakeup call and a matter of risk management, to the current approach of many companies who set a number of concrete but separate sustainability targets. According to Gabriela Alvarez, Director of Latitude, the time has come for an integrated approach to sustainability.

A 2011 study by The Carbon Trust revealed that most of the FTSE 100 companies have between 0-5 environmental targets integrated within their sustainability policy. These range from GHG emission reduction targets (by far the most popular) to waste and water reduction goals. More than half of these companies also focus only on short-term (2 years) goals, clearly illustrating that most companies are in a phase of 'fragmented progress'.

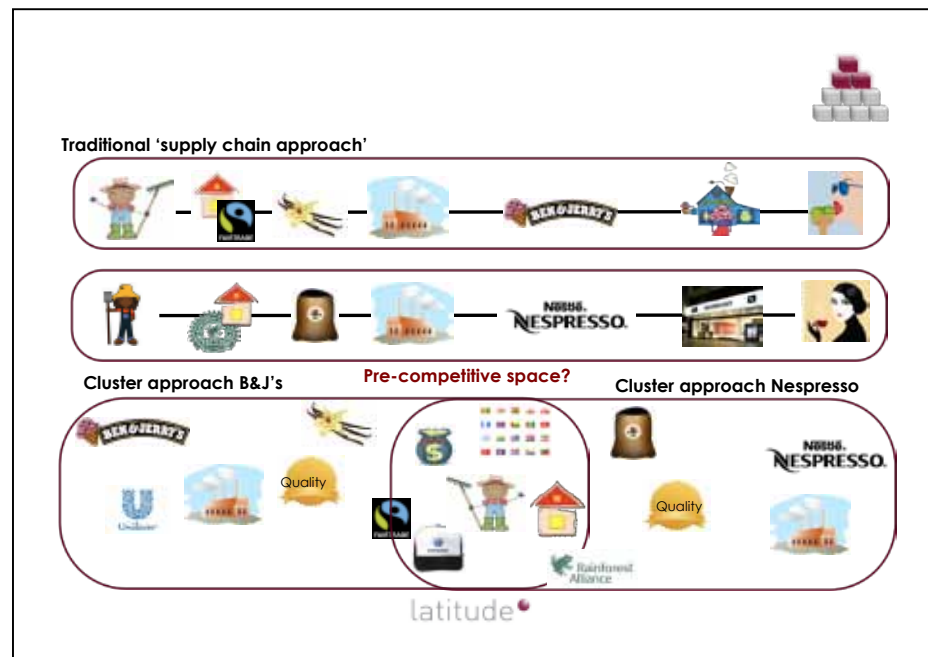


In this light, the question is: what will it take to develop a more holistic sustainability strategy? Sustainability management should be well rooted within a company's business model, with a 100% commitment, rather than simply the responsibility of a marketing department. Indeed, we should view sustainability in the same manner as quality or safety - would you be satisfied with an 80% quality commitment or a 60% safety performance?

Fortunately there are companies that are taking the lead. The Dutch retailer Ahold has announced that it intends to sustainably source 100% of six critical commodities by

## “Shift from chains to networks”

2015, while Mars chocolates has announced its intention to sustainably source 100% of the cocoa it uses by 2020. Starbucks Coffee will sustainably source 100% of its coffee by 2015, and Unilever will do the same for 100% of its agricultural raw materials by 2020.



## Beyond sustainability

As 12 out of the 15 key commodities identified by WWF as being in need of particular attention are key products for the food industry, the food sector must actively seek to be part of the solution. In addition to the above-mentioned companies, Ben&Jerry's and Nespresso are also forging ahead in sustainability. Ben&Jerry's is doing so through its linked prosperity programme and Nespresso through its shared value 'Projet d'entreprise' project.

## “A new, inclusive vision of sustainability has developed”

Both programmes are based on a cluster approach, rather than a traditional 'supply chain' model, and are designed to achieve 'progressability'. Progressability refers to a new set of elements that include, among others: income stability, a long-term market, technical and financial cooperation, competitive positioning (in cost, quality, and differentiation), skilled farmers (from a technical, economic, environmental perspective), health, and familial and societal engagement.

Progressability can evolve into a phase of linked prosperity characterised by 'connected' independence, the creation and capture of new values, and flourishing farmers, families and communities.

## From dialogue to action

To redefine the future of food and come to a holistic approach on sustainability, companies must look beyond the traditional value chain and move toward a cluster approach that creates a non-competitive space in which they can collaborate (and share resources, experiences, and costs) on sustainability issues. This also implies that companies must shift their focus from links to networks. They need to 're-insource' sustainability, meaning that it needs to be truly integrated into their business models and extend beyond current sustainability standards. Last but not least, companies must keep in mind the concept of 'it takes a village'. This means they need to apply a multi-stakeholder approach and work with key stakeholders such as financial institutions, NGOs and governments.

## Feike Sijbesma: Towards tangible actions.

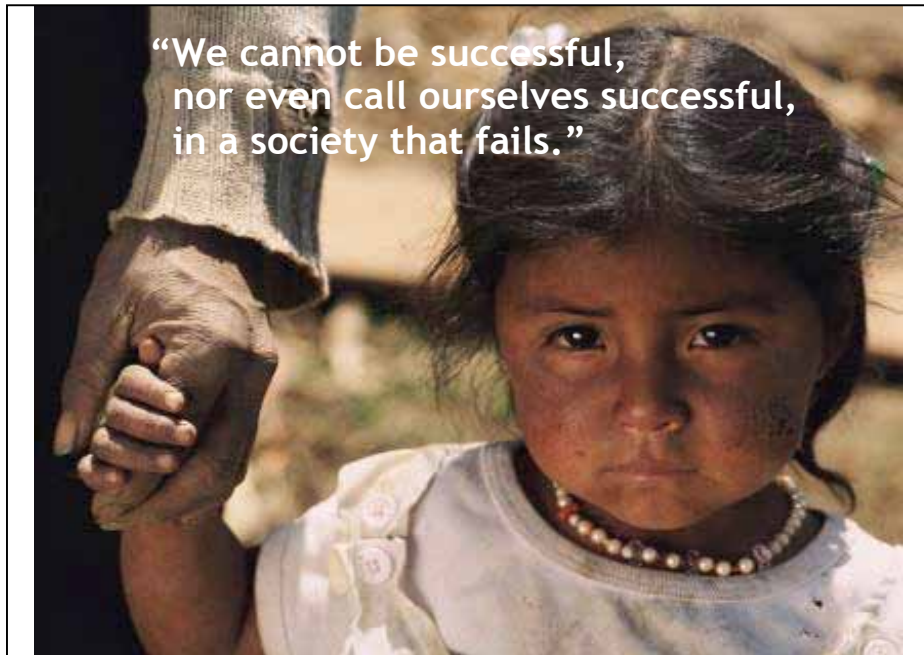


*In his plea to develop tangible actions, Feike Sijbesma, CEO of DSM, made reference to two important initiatives in the field of qualitative nutrition, which have been highlighted by UN Secretary General Ban Ki-moon. These are the SUN (Scaling- Up Nutrition) movement and the 1,000 Day partnership, which focus on pregnancy and the first years of life as critical periods for adequate nutrition. World leaders should be encouraged to partake in initiatives and decision-making that help reduce the incidence of malnutrition, according to the UN Secretary General.*

### One global food issue

Inadequate nutrition is a global food quality issue with a multitude of facets. In prosperous middle income nations, inadequate nutrition is made visible by the increase of non-communicable diseases brought on by the consumption of too many calories, often in combination with too few micronutrients. Action to tackle these issues involve awareness programmes and the promotion of healthy lifestyle changes and affordable, healthy foods and the eradication of food deserts.

In the developing world, inadequate nutrition is displayed through malnutrition - particularly in the most vulnerable groups that are women and children.



This malnutrition often results in stunted growth and social disruption. The downward spiral can be broken through innovative food fortifying products, such as MixMe and NutriRice developed by DSM, and through school feeding initiatives.

### Overall, the current situation is not sustainable.

The world population currently represents over 7 billion people and growing. Of these 7 billion people, one billion people consume approximately 45% of our global resources and generate most of the world's waste and carbon emissions, while ultimately it is the harvest of the poor that is threatened by climate change. In addition, one billion suffer from chronic hunger while another two billion have micronutrient deficiencies (hidden hunger).

**“We should break the downward spiral.”**

### Towards tangible actions

The downward spiral of food and nutrition insecurity, disease and poverty needs to be broken. To tackle the problem, actions in terms of governance, partnerships, innovation, development, climate change and lifestyles are essential. In the field of governance, it is important to improve the functioning of markets. Investment in new technologies and opportunities should be facilitated through the removal of barriers, and technology transfers should be encouraged. To improve stability, emergency reserves should be created and food speculation should be prevented. Overall, the key to tackling problems is to work together in partnerships and to avoid fragmentation. The idea of partnerships does not simply relate to Public-Private partnerships, but also to North-South partnerships.

In terms of innovation, we need focus on doing more with less. This can only be achieved through more efficient use of materials, a switch to renewable solutions and a decrease in waste production. We also need to increase crop and animal breeding yields and develop a more sustainable form of production and storage. This calls for innovative business models, such as bottom of the pyramid strategies.

In the developing world, there is a need for increased investment in infrastructure, bottom-up assessment and solutions that are tailored to local cultures. Furthermore, while activities should focus on climate abatement in industrialised countries, climate adaptation initiatives are necessary in developing countries. Last but not least, lifestyles and healthy behaviour should be addressed. People should be encouraged to consume healthier foods (fruits, vegetables, fortified foods), reduce animal product consumption in the industrialized countries and increase it in developing countries and use climate-friendly products.

### To conclude

All actions require close alignment and cooperation between all parties involved, including governments, scientists, industries and NGOs. Ultimately we have to make a difference, and together we can achieve - and will achieve - this difference.

## Final Remarks

“Corporate sustainability strategies mark a very welcome step in the right direction, but are not enough to establish a long-term sustainable food supply.” This - the opening comment in the press release sent out at the close of the Future of Food conference - provides a good summary of the seminar’s main conclusions. Indeed, there are an impressive number of sustainability initiatives under way, with established targets and objectives. However, a closer look reveals that in many fields a lot more has to be done. Indeed, according to Gabriela Alvarez, Director of Latitude and one of the speakers at the seminar, a new phase of integrated sustainability is essential. In this light, the Future of Food seminar not only helped pinpoint areas which need to be actively worked on, but also the concrete actions that need to be taken.

### *Food security and smallholder farmers*

The fact that almost a billion fellow world citizens go to bed hungry every night is something that we simply cannot accept. This was underlined by Feike Sijbesma, DSM’s CEO, when he said that “we cannot be successful in a society that fails”. Achieving food security for all is therefore one of the greatest challenges in achieving a sustainable food system. The seminar concluded in a remarkable consensus that smallholder farmers are the key to success in this area. Indeed, any efforts made to achieve a more sustainable food chain should always take these farmers into serious consideration. “Business prone” smallholder farmers - especially those in Africa - have to be supported in their struggle to produce more and better food, to reduce food loss and to bring their produce to market. All stakeholders in the food system, including international companies, governments, donor agencies and knowledge institutions, have a responsibility in this matter. It is therefore imperative that we find ways to foster cooperation between big businesses and small farmers. The role of the financial sector also demands special attention - not only as a provider of (micro) credits and as a facilitator of financial transactions, but also as a guardian against land lease initiatives that are detrimental to local farmers and local food security. This is currently not the case, as Anuradha Mittal, Executive Director of the Oakland Institute, revealed that Western financial institutions are currently actively involved in ‘land grabbing’ endeavours.

### *BIC countries*

When examining the future of food, an important factor to take into consideration is the exponential growth of the middle class in emerging economies in Asia and Latin America, and how these populations, businesses and countries handle issues such as food security and sustainability. This is especially true for Brazil, India and China (the BIC countries). In his presentation, Hugo Bethlem, Vice-President of Brazil’s biggest

retailer Grupo Pão de Açúcar, provided an overview of the spectacular growth of Brazil’s middle class and how this has prompted his company to develop an ambitious and innovative people-oriented sustainability strategy.

The other BIC speaker, Jikun Huang, Agriculture Director at the Chinese Academy of Sciences, refuted the Western concern that China’s emerging middle class could require China to greatly increase its food imports, with detrimental repercussions for global food security. He stated that as it is China’s policy to keep on feeding itself, the country has invested heavily in agriculture and biotechnology.

Today, the BIC countries are global players, and so are their international companies. This means that they must be placed on equal footing with other global players in international forums, which up to now have been dominated by Westerners. Indeed, it is essential that global business forums dealing with food reflect this new development.

### *Technology*

As China is currently demonstrating, technology is an indispensable factor in long-term global food security. This has been the case since Justus von Liebig developed artificial fertilizer, but as IFDC President Amit Roy underlined, fertilizer research has unfortunately shown almost no progress over the last 30 years. As food production is for more than 40% dependant on fertilizer, a new round of fertilizer innovation is urgently needed.

It is easy to agree upon the important role of technology for food security and sustainability. In practice however, specific technologies have to be debated, accepted and endorsed by society before they can be put to use. BASF’s AgBalance tool, which was presented by Anne van Gastel, can reveal which technology would be useful to generate added value in a given context. This context includes public sentiment, government regulation and social benefits or side-effects. As an example, BASF’s recent withdrawal of its biotechnology research from Europe illustrates the consequences of unresolved public sentiment toward this specific technology.

### *Cooperation, leadership and personal commitment*

This seminar repeatedly underlined how cooperation and public-private partnerships are essential for achieving food security and sustainability. Indeed, neither governments nor companies can do it alone. But in the end, these partnerships depend on individuals who believe in what they are doing, as well as why they are doing it. Furthermore, these partnerships also depend strongly on the leadership capabilities of those involved, and their ability to convince others to join. As the power of the individual needs to be highlighted, at the end of the seminar participants were asked to provide

their own personal commitments relating to food security. This resulted in a multitude of practical, idealistic and individual commitments which clearly show that the quest for a sustainable food chain is more than a nine to five issue.

#### **Action points to WBCSD**

It isn't easy to achieve concrete conclusions within a 24 hour seminar bringing together senior experts and decision makers from different continents, different sectors of society and different areas of responsibility. Nevertheless, we were able to come up with five clear action points as a result of our shared ambition - see the illustration on the next page. These action points were handed over to Peter Bakker, the designated Chairman of the World Business Council for Sustainable Development, because it's important to have a vision, but what the world really needs now is visionary action!

## Annex

### Programme

Chair: Arie van den Brand

#### 16 November Working Dinner

- 18:15 - 19:00** Reception and Welcome by Dominique Turpin
- 19:00 - 22:00** Working Dinner: Jikun Huang and Peter Bakker

#### 17 November Full Day seminar

- 08:00 - 08:15** Welcome and challenge of today: Arie van den Brand
- 08:15 - 10:15** Session "Markets & People":  
Hugo Bethlem, Anuradha Mittal  
First dialogue Session
- 10:15 - 10:30** Break
- 10:30 - 12:30** Session "Creating space for new technologies":  
Amit Roy, Anne van Gastel.  
Second dialogue Session
- 12:30 - 13:30** Lunch
- 13:30 - 15:30** Session "towards new chain architecture":  
Jeffrey Sachs, Gabriela Alvarez.  
Third dialogue Session
- 15:30 - 15:45** Break
- 15:45 - 16:45** From a long-list to a call for action
- 16:45 - 17:15** Feike Sijbesma Towards Tangible Actions  
Handover of the 5 key actions to Peter Bakker by video conferencing
- Closing: Arie van den Brand

## List of speakers and participants

### Speakers (in order of appearance)

First name	Organisation
Arie van den Brand	Groupe de Bruges
Jikun Huang	Chinese Academy of Sciences
Peter Bakker	WFP
Hugo Bethlem	Grupo Pão de Açucar
Anuradha Mittal	Oakland Institute
Amit Roy	IFDC
Anne van Gastel	BASF Plant Science
Jeffrey Sachs	Earth institute, Colombia University
Gabriela Alvarez	Latitude
Feike Sijbesma	DSM

### Facilitators

Kees van der Graaf	IMD
Edwin Hecker	Schuttelaar & Partners
Aileen Ionescu	IMD
Rutger Schilpzand	Schuttelaar & Partners

### Participants

Thom Albers	FrieslandCampina
Juan Carlos Ardila	Cafexport
Ian Bacon	Tate & Lyle sugars
Ton Christiaanse	VION Food Group
Amy Collins	World Heart Foundation
Oswaldo da Costa e Silva	DSM Nutritional Products
Steve Denne	Heifer
Hans Eenhoorn	Hunger Task Force
Jon Falk	Carlsberg
Jeff Furman	Ben & Jerry's
Sergio Gomez y Paloma	European Commission, IPTS
Juan Gonzalez-Valero	Syngenta

Rob Groot	IFDC
Joost Guijt	Wageningen University
Jose Lopez	Nestlé
Regina Moench Pfanner	Gain
Scott Poynton	The Forest Trust
Markus Prüfe	BASF Plant Science
Marco Restelli	Nestlé
David Rosenberg	Ecom Agroindustrial Corporation
Jens Rupp	Coca-Cola Hellenic Bottling Company
Ian Sayers	International Trade Centre
Josephine Schoolkate	IMD
Marcel Schuttelaar	Schuttelaar & Partners
Dick Toet	Unilever
Jim van Drunen-Littel	Triple Value
Ton van der Laan	Provimi
Frank van Ooijen	FrieslandCampina
Paulus Verschuren	Ministry of Foreign Affairs, the Netherlands
Joern Wagenbach	Barry Callebaut
Jim Woodhill	Wageningen University
Dirk Voeste	BASF Plant Science

### Reporters

Patricia Chiabra	IMD
David Coindreau	IMD
Elena Cristea	IMD
Oliver von Hagen	International Trade Centre
Sophie Lacombe	IMD
Elisa Vimercati	IMD

## Organisation of the third Future of Food Seminar

### IMD

IMD participates with two learning centres:

- The IMD Global CEO Centre: Leading in a connected future (LCF) focuses on moving beyond simply responding to the immediate challenges faced by businesses today, to proactively preparing businesses and leaders for the future.
- The IMD Centre for Corporate Sustainability Management (CSM) is a corporate, membership-driven research and learning platform that focuses on sustainable sourcing, energy & climate change and sustainable finance.

### Schuttelaar & Partners

Schuttelaar & Partners is a communications and advisory agency focusing on sustainability and health in the areas of food, agriculture and innovation. It provides strategic advice and communication solutions, including positioning and reporting (content and design); stakeholder dialogue; and issue and reputation management.

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