

A close-up photograph of a woman carrying a large, red, textured bowl filled with ears of yellow corn on her head. The woman is looking down, and the background is a blurred natural setting. The text 'Annual Report 2008' is overlaid in white on the top half of the image.

Annual Report 2008

WOW-VU

Centre for World Food Studies
Stichting Onderzoek Wereldvoedselvoorziening

Annual Report

2008



Centre for World Food Studies

Stichting Onderzoek Wereldvoedselvoorziening van de Vrije Universiteit

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Introduction



World food situation in 2008

In the course of 2008, signs of a worldwide recession emerged. Its causes are often related to three tightly interconnected series of events: the food crisis, the fuel crisis and the financial crisis. As indicated in Figure 1a, the sequence started a couple of years ago with a peak in food prices, jointly with a surge in oil prices (Figure 1b) and, recently, a steep fall in stock markets (Figure 1c). The United Nations and the World Bank have persistently issued warnings that the threefold global crisis is pushing millions more people into poverty. According to most recent estimates the number of undernourished due to the global economic slowdown, is now above 1 billion (FAO, 2009).

Such early estimates of increased poverty and malnutrition are indicative at best, and more comprehensive impact assessments will have to wait until sufficient survey data on employment, health and nutrition become available at household level. Nevertheless, available estimates consistently show a significant deterioration, and consequently, the target of the 2005 World Food Summit of reducing the number of hungry people by half to no more than 420 million by 2015 seems to get more unattainable by the year.

The first part of this year's annual report provides an update on the current situation following last year's food crisis. It reviews food availability, the fluctuations in agricultural prices that persist despite rebuilding of stocks, and the impact of the current global recession on the poor. Distinguishing transient phenomena from persistent shifts, we then take a longer term perspective and indicate how it translates into the Centre's research priorities, in policy analysis as well as in methodological development. Against this background, the second part of the report synthesizes the main research outcomes and activities during 2008, and offers a glimpse into the upcoming five-year period 2010-2014 for which strategic plans are currently being prepared.

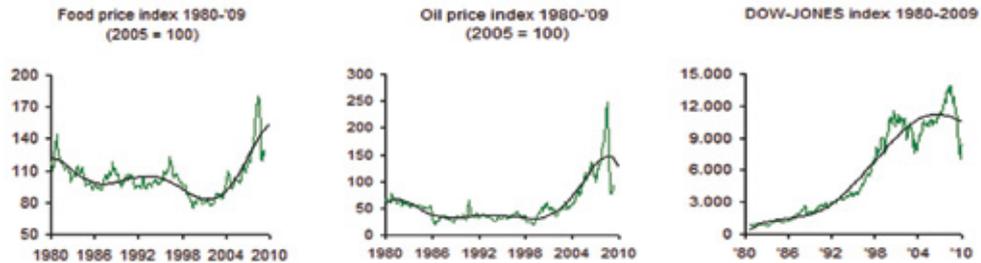


Figure 1a. Trends in the prices of food.

Figure 1b. Trends in the prices of oil

Figure 1c. Trends in the prices of stocks

Source: IMF and New York Stock Exchange Note: Polynomial trends added

Robust global food production

As shown in Figure 2, while grain harvests were poor in 2006/'07 and adequate in 2007/'08, harvests in 2008/'09 have according to most recent estimates reached levels of almost 2,300 million tons, partly in response to the favorable prices depicted in Figure 1. Remarkably, the supply response was particularly strong in Europe, partly due to favorable weather, bumper crops in Russia and Ukraine, and easing of the set-aside restrictions in the EU. Response in developing countries was, however, modest. The forecasts for 2009/'10, based on currently planted areas, are equally favorable.

Cereal production in developing countries is expected to attain a level similar to 2008/'09 and be slightly lower in developed countries. The outlook for

other products is similar and predicted to reach figures close to the bumper crop harvest levels of last year, albeit downward revisions were already made for oilseeds and should not be ruled out for other products, due to less favorable weather conditions than expected. Furthermore, the deepening recession necessarily causes falling demand for livestock and fishery products, leading to drops in prices and subsequent contraction in supply.

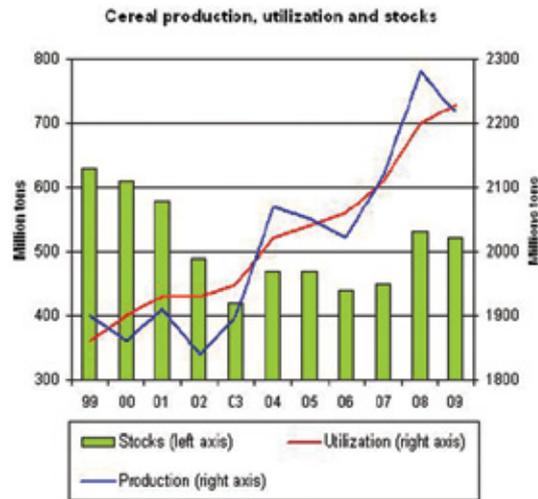


Figure 2. Trends in global cereal production

Source: FAO (2009)

This will cause a further rise in world stocks of staple food, which have already replenished significantly relative to the 2006 and 2007 levels, when they dropped to their lowest levels in three decades. At the same time, it must be noted that statistics on stocks are not that reliable, since large quantities actually reside in the supply pipeline both in factories and in transport, and that the persistent unrest in financial markets is bound to maintain volatility in food markets.

Price developments

After the price peak by the middle of 2008, before the Northern Hemisphere could harvest its bumper crop, food prices dropped swiftly, but they remain well above their 1985-2004 level. Figure 1a suggests that around 2004, the price trend has switched from mildly negative to clearly positive.

Within developing countries the patterns are smoother. Data from FAO's Global Information and Early Warning System (GIEWS) indicate that domestically the price rise of staples extended well into the second half of 2008, followed by a modest decline. Consequently, by the end of 2008 domestic staple foods would cost about a quarter more in real terms than they did two years before.

It appears that in overall, the price rise did not significantly favor food producing households, while it forced a significant number of food buying households below the poverty line. Desk studies based on household surveys in 10 countries report a rise in poverty count by 100 million people (Ivanic and Martin, 2008), and the worldwide recession has been estimated to add another 100 million to this by June 2009. These estimates are crude but they seem to be substantiated by checks on the ground (IDS, 2009).

This rise in price volatility also is of concern by itself. Among the world's poor, rising food prices hurt the net buyers and help net sellers, but price volatility hurts all, essentially because the poor lack the capacity to smoothen their income and expenditure over time. Besides factors on food markets proper, this rise in volatility can be attributed to increased speculation, as investors not active on the spot market were seen to step up their transactions on futures markets. It has been recorded that for quite a few commodities the open interest, that is the total value of contracts not closed by the end of the day, started to rise from 2004 onwards. Yet, the jury is still out to what extent this has propelled spot market prices. IFPRI tends to answer this question in the affirmative (Robles et al., 2009), while others find no conclusive evidence (Irwin et al., 2009), particularly because, overall, price rises were not associated with increases in stocks. Nonetheless, it would seem clear that high non-commercial activity on futures markets has definitely failed to dampen price volatility.

In fact, the latest projections in the OECD/FAO Outlook (OECD/FAO, 2009)

predict prices for most major commodities to remain at present levels over the next ten years, only 20 percent above the average in the past decade, which would seem to suggest that the agricultural sector will face no difficulty in meeting food, feed and energy demand. There are good reasons to question this.

Relenting demand



The combination of two consecutive good crop harvests and a fast spreading recession did indeed cause the upward pressure on prices to recede since the middle of 2008, and in the case of relatively thin markets such as the dairy market this even led to an unprecedented decline. Yet, this should not discount the fact that the present pause in consumption growth will be short-lived, and that there is significant demand pressure ready to resurface. Our Annual Report of 2007 stressed competition between Food, Fuel, and Feed becoming fiercer. The current recession will not change the fundamental drivers of this process.

First, demand pressure primarily emanated from Asia, particularly from China and India. In both countries, growth has diminished but it remains strong nonetheless, at around eight percent. Hence, while demand for luxury foods including livestock products contracted significantly worldwide due to the recession, it can be expected to pick up soon upon recovery, quickly returning to its long term trend as driven by income growth and urbanization.

Second, the biofuel policies in the EU and US are designed as long term commitments cast in formal long term regulations. Even though actual production of ethanol and biodiesel currently falls short of the output targets, growth rates of 5 percent annually over the next decade seem realistic if these commitments are to be maintained at all. It no longer needs arguing that such policies shift prices upward and are highly distortive, and that the silence from WTO circles on this issue is surprising. The total impact depends on what other countries are going to decide, about demand targets as well as production. China has been refraining from ambitious biofuel targets and largely intends to supply its plants from disposal of food stocks that are no longer edible. Malaysia and Indonesia are active in palm oil production but may be too small to become major players. Many parts

of Africa are currently being considered as potential exporters and long term lease contracts are being signed for this purpose, albeit most of the arrangements are secret (Cotula et al., 2009). From a development perspective this would seem to offer opportunities and make the continent more heavily solicited than before, but the question is how to arrive at a sufficient regulatory capacity to keep the new demand sustainable, and to let the local population benefit from this turning of the tables.

Third, restrictions on exports have emerged as major cause of price rises on specific markets, notably rice. This crop normally sells in international markets at a range of between 300-400 US\$/ton, but when a number of exporting countries in South East Asia started to hoard rice by imposing export tariffs and later also export bans, world prices quickly passed the US\$1000 mark in May 2008. As for biofuel subsidies, WTO has not exerted much disciplining pressure to prevent this, in this case presumably because domestic food security (national interest) was at stake. Even though most countries have relaxed their export bans by now, even the prospect of such restrictions reappearing in the future will exercise additional demand pressure, because it will raise the level of precautionary stockholding.

Growing awareness of upcoming resource scarcity



In November 2008, the European Commission presented a new 'integrated strategy' for raw materials, suggesting three pillars in its response to greater competition for natural resources, which it recognizes as a threat to the competitiveness of European industry: better and undistorted access to raw materials on world markets; improved conditions for raw materials extraction within Europe; and reducing the EU's consumption of raw materials by increasing resource efficiency and recycling. Only a few months later, the Commission's concerns were confirmed: China slammed export taxes up to almost prohibitive levels on a series of raw materials, such as bauxite, coke, magnesium, manganese, phosphorus and zinc, and in June 2009 the EU and the US announced their intent to file complaints at the WTO.

Hunger and the global financial crisis

The financial crisis currently hits upon developing countries whose banks are to large extent subsidiaries of major international banks that have come under stress and started repatriating their capital to ease their deleveraging. Trade finance is particularly hurt.

Furthermore, over the past ten years, workers' remittances have become an important source of capital for developing countries, growing at double digit rates, and currently estimated to exceed aid flows by a factor of two and more (Ratha et al., 2008). Yet, as unemployment is taking hold in developed countries, the World Bank projects a decline of migrants transfers to developing countries of at least 5 percent. While remittances have proved highly effective in providing a buffer against local adversity, their fall under the current global recession only adds to the negative effects of reduced exports at lower prices.

Official development aid (ODA) remains for many of the poorest countries a principal source of capital inflow. So far, donors have recognized the need to keep aid flows countercyclical, and public and private aid flows combined have proved relatively resilient under the crisis. Yet, the IMF expects that ODA for the poorest countries will drop by a quarter, only partly to be compensated by increased lending from the World Bank and IMF.

Given that the poor of this world bear no responsibility for the banking crisis, and hardly have any impact on climate and demand few resources, this takes us back to the question: what about the Millennium Development Goals where the world community committed itself to halve poverty and hunger by 2015?

Research activities at SOW-VU

Naturally, the Centre was not left unaffected by the food crisis, as media attention soared for issues it had been publishing on for decades and which now all of a sudden came into the spotlight. A number of analysts noted with barely hidden satisfaction that finally, food had come high on the international agenda. Clearly, this sudden rise in public attention carried a danger. For one, it was temporary, and the financial crisis that followed swiftly turned the spotlights to another scene, even though the fact should be acknowledged that the various summits held since have expressed their long term commitment to poverty alleviation and agricultural development. Another risk would be that investing in rural development becomes fashionable, and will result in dramatic failures, since turning it into a paradigm would be as ill advised now as was abandoning it earlier.

SOW-VU has the mission to keep a steady course in such debates. It always opts for balance, recognizing in full that in matters of agricultural and development policy the devil most commonly resides in the detail. It should at all times be prepared to supply inputs to policy issues as and when they emerge but its answers will always depend on the knowledge it has accumulated before. This has motivated a research strategy sustained over almost thirty five years to develop capacity well ahead of the actual demands from policy makers, while permanently monitoring the strengths and weaknesses of its approaches, relative to present and anticipated issues and concerns, and investing in models and methodologies accordingly. Then, once a need is about to turn into actual demand and explicit requests and calls for proposals appear, submissions can be made for applied projects. Hence, with core funding provided for five years each time, every current cycle could be engaged in preparing the basic tools for the next.

Following these lines, the next section of this Annual Report describes the main projects conducted in 2008 and synthesizes their results, while the final section sketches the main issues to be addressed in 2010-2014, the next cycle, and the methodologies prepared so far for this.

Research in 2008

The present section reports on selected projects conducted in 2008, which

are examples as to how the Centre implements its mandate 'to develop and apply scientific approaches and methods to address the world food problem within the context of overall economic development'. In practice, this goal is implemented through i) research in collaboration with national and international research institutions in the areas of food and agriculture, and poverty reduction, ii) strengthening policy formulation and planning capacity of national governments, iii) capacity building of national researchers through joint research projects and temporary secondment, and iv) advisory services to Dutch and international development organizations and participation in debates and policy dialogues on food related issues. The mainstream themes of the Centre's scientific contributions are within international and national modeling of food and agriculture, household poverty analysis, and assessment of natural resources and its impact on agricultural productivity. As common denominator they share a theoretical basis in welfare theory and public economics, with a strong emphasis on empirics and spatial representation of natural resources. These elements can be traced in the projects covering Chinese agriculture, the research partnerships in Sub-Saharan Africa, and the biofuel policies of the EU, discussed below. We also sketch some of the new cooperative initiatives, with Bangladesh on a food security project and with the Palestinian Water Authority on water issues in the Jordan River Basin. Detailed information on the research activities and downloadable papers can be found on our website (www.sow.vu.nl).

1. Prospects and challenges for agriculture in China



The Centre started its research on China's food and agriculture back in 1996, motivated among others by concerns about China's growing challenges from rising meat demand and feed imports, rural-urban income gaps and environmental pressures. Since 2007 it has been coordinating a three-year project called CATSEI (acronym for Chinese Agricultural Transition: Trade, Social and Environmental Impacts) that deepens earlier work through own field surveys and analysis of new data sets and mechanisms, and also disseminates its results to a wider audience. Other participants are the Center for Chinese Agricultural Policies of the Chinese Academy of Sciences (CCAP), the International Institute of Applied Systems Analysis (IIASA), the School of Oriental and African Studies of the University of London (SOAS), the Agricultural Economics Research Institute of Wageningen University and Research Centre (LEI-WUR), and the International Food Policy Research

Institute (IFPRI).

The second year (2008) was devoted to processing of data and surveys and to model updates, taking into account the consequences of the recent peak in food prices. Regarding world food and feed prices, the price trends follow by and large recent FAO-OECD projections, which can be characterized as modest in terms of their assumed rise in meat and biofuel demand worldwide. The Chinagro simulation results show that China's agriculture will manage to assure the country's food supply even with significantly higher per capita meat demand, albeit that it will need large imports of animal feeds. Regarding biofuels, current plans are particularly modest regarding production from domestically grown crops, and are relatively prudent regarding imports of raw materials. The simulations confirm China's sizeable potential for exports of fruits and vegetables that would, if sufficient market outlets can be found, prove sufficient to cover the raw material imports. From the social angle, a steady and significant growth emerges of pure farm income per man-year, but significant off-farm employment will be needed to prevent widening of the already large gap with the urban sector. With respect to the environment, it appears that jointly with the discharges of animal manure, overuse of agrochemicals, particularly fertilizer is an issue, especially in densely populated areas, where it may pose serious health threats to the population.

The CATSEI team presented its findings on three major occasions. First, CCAP organized a policy dialogue meeting on agricultural trade in Beijing in April 2008 ('Challenges and prospects for China's agricultural trade and trade policy'). Agricultural trade experts discussed China's attitude towards Special Products, as well as the still existing non-tariff barriers between China and developed countries and recent technological developments related to biofuels and genetically modified crops. Second, at the Nanjing Agricultural Economics Conference ('Rural reform and development: Meeting new challenges of the 21st Century') in October 2008, two sessions were devoted to CATSEI, with SOW-VU presenting the updated Chinagro scenario outcomes and its major drivers and estimations of the patterns and trends in price transmission changes from markets to farmers. Third, the project's mid-term policy conference in December in Brussels positioned the CATSEI project amidst the actual developments of 2008, viz, the rapidly increasing food-feed-fuel competition that led to turmoil in the international agricultural markets earlier in the year and the rapidly deteriorating international

macro-economic conditions due to the credit crisis. In particular, the conference attended by, among others, officials from the European Commission, the OECD and diplomatic delegations, considered these developments from the perspective of China and the European Union. Presentations were given on the international macro-economic outlook in these turbulent times, the achievements in 30 years of rural reforms in China and the food-feed-fuel competition in the international markets, followed by a roundtable with invited comments. During the various presentations, discussants and participants repeatedly underlined the importance of this collaborative effort, as it provides rich new evidence and insights as to how two major players interact in response to the challenges they face internally.

2. Sub-Saharan Africa



The Centre's activities on Sub-Saharan Africa were very diversified, covering the full spectrum from training, pilot surveys, and policy advice to completion of a continent wide and spatially explicit database and equilibrium modeling, and journal publications. This reflects our dual mandate to provide insight in the world food situation as well as to assist the most affected in finding a solution.

As mentioned in the overview section, with rising awareness of upcoming resource scarcity, Sub-Sahara African, once considered a major part of the food problem with serious handicaps in terms of climate, soils, and institutional deficiencies has now found recognition as a critical part of the solution, in view of its rich natural resource base, minerals and biomass potential in particular. This means that African policy makers should be better prepared than ever when entering negotiations and debates, so as to put this natural wealth to uses that will both benefit the population and safeguard the environment.

In this connection, two new ventures have been initiated. One is to join efforts with IFPRI and other institutions to set up AGRODEP (African Agricultural Growth and Development Policy Modeling Network), that brings together and facilitates a group of African researchers who will conduct research on growth and development policy issues in Africa and to provide an authoritative voice for Africa in the broader debate on the future of the continent. Details on institutional arrangements still have to be worked out,

aiming to formulate research proposals in the course of 2009. The Centre intends to service this program with dedicated statistical and modeling tools, to provide access to its detailed Africa data base, and to offer training and backstopping. Also in cooperation with IFPRI, a two-year project has been defined that seeks to draw lessons for Africa from China's successes in rural development and poverty alleviation. The approach will be to target a particular region, say, a coastal province, and to look from a Chinese perspective at solutions to some of its problems, combining empirical data from this region with information from China.

2a. Food aid and development

In 2008, the cooperative project with the World Food Programme (WFP) led to the update of the Food Atlas to the new base year 2005. Main results of this research include estimates of the number of people that are suffering from undernutrition and the average calorie intake per capita per day (Van Wesenbeeck et al., 2009), based on data obtained from the Demographic and Health Surveys (DHS). Our estimate of the number of undernourished for the whole of Sub-Saharan Africa is 10 percentage points lower (131 million versus 210 million) than that published by FAO (2007). This is mainly caused by the much better nutritional status of people in Central and Eastern Africa. Figure 3 shows the estimated numbers of undernourished in the total population.

Regarding food consumption, the average calorie intake for SSA is only slightly above the estimates provided by FAO, but the regional differences between regions are much less pronounced in our estimates. Again, results point to much more favorable condition of people in Eastern and Central Africa than is usually assumed. This result is not only important in its own right, but leads us to conclude that economic activity in general, and agricultural productivity in particular must have been at a higher level than usually projected. However, it is clear that external shocks, such as the international food price crisis of 2006/'07 may cause sharp deteriorations in the nutritional status of the poor. Using the Atlas data as a point of departure, we simulated the effects of observed price increases of food in Ethiopia and found a food gap of approximately 3400 billion calories, which is the equivalent of 5.2 million people on a full calorie ration. Figure 4 shows this calorie gap by province.

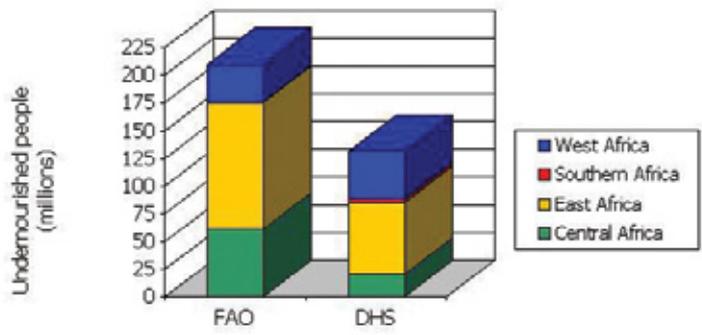


Figure 3. Number of undernourished in 2005 in Sub-Saharan Africa according to FAO and data derived from DHS

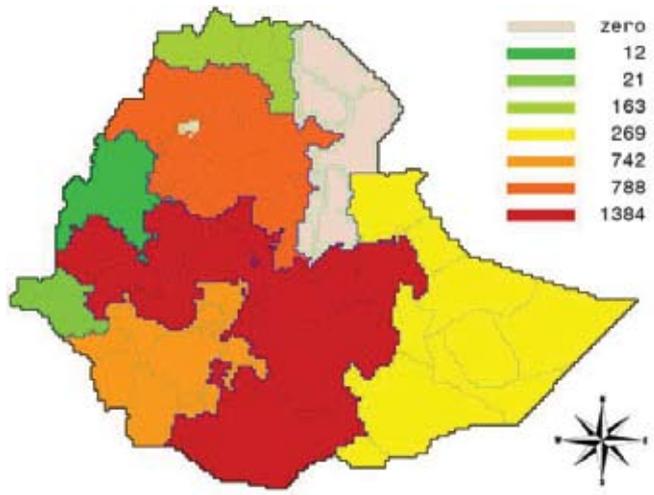


Figure 4. Ethiopia: Calorie gaps in billions of Kcal per province

These calculations show how the Food Atlas may become an operational tool that proves useful in guiding interventions by local governments and donors such as the WFP. Indeed, further cooperation with WFP focuses on further developing the Atlas as a policy tool. In practical terms, this implies that the Food Atlas will be extended to a Vulnerability Atlas that will include data on, say, sources of income, asset holdings, household size and composition, ethnicity, and health indicators, but also characteristics of the location of the household, which facilitates the definition of vulnerability profiles for households given specific shocks. This extension is envisaged for 2009/'10.

2b. Development of market chains



The food price crisis in 2006/2007 illustrated that the effects of price changes on world markets on producers and consumers in Africa differed greatly. While the consumers in the coastal areas were hit almost directly by the higher import prices, producers located further inland hardly saw any changes in the prices they received for their produce. The main cause for this discrepancy is, of course, the isolation of farmers due to lack of adequate infrastructure, made worse by official and unofficial roadblocks that drive a further wedge between import prices and farmgate revenues. Rural development requires strong linkages of the hinterland with the relatively wealthy urban consumers, especially in the land-locked Sahel zone. Only then can the region benefit from its agro-ecological conditions favorable for particular vegetable cultivation and herding, for which the more wealthy coastal areas are far less suited. To study these opportunities, jointly with INERA (Institut de l'Environnement et de Recherches Agricoles), the umbrella institute for agricultural and environmental research in Burkina Faso, and ITC (International Institute for Geo-Information Science and Earth Observation, Enschede), the Centre has started a project on the production-marketing-transport chain for tomatoes produced in Burkina Faso and consumed in markets of large coastal cities in West Africa. After lengthy preparations to initiate the trials, activities started in 2008 to understand the operational aspects of the tomato chain.

Data on the quality of tomatoes during transport were jointly collected by the ITC and INERA, using temperature sensors that were located at different places in the van. Several students recruited by INERA accompanied truck

drivers from markets in the producing area to the destinations in Ghana (mainly Kumasi) and prepared a log book to assess the costs and timing of the tomato transport. Unfortunately, due to unforeseen circumstances, INERA students could not monitor transport movements at border posts.

Field data collected on travel time, market prices and costs serve as inputs into a transport model to assess the major handicaps in terms of quality loss and “red tape” costs for the development of a tomato chain from two selected production areas in Burkina Faso to consumers in Kumasi, Ghana. Preliminary results of the simulations are that it takes approximately 9.5 hours to cross the 450 km from Ouagadougou to Kumasi, while official and unofficial stops add another 4,3 hours. Also in terms of costs, the contribution of the roadblocks of about US\$ 12 is substantial, compared to the “clean” transport costs of 7.90 US\$/MT. At least half of the stops made are classified as being “unofficial”, causing both additional delay and additional costs. For a perishable product like tomatoes, the delay causes quality losses that lead to substantially lower market prices in Kumasi. An innovative aspect of the research therefore is the combination of experimental data on temperature, radiation, and time and the quality of the tomato measured as the firmness of the fruit. A highly non-linear relation is estimated based on these experiments, and quality decay maps have been constructed that show the maximal distance from the tomato producing areas where the tomatoes will still fetch the high-quality price, under different assumptions on the departure time of the trucks from Burkina Faso (midday or evening), and for various timings during the harvesting season.

2c. Development and protection of dryland areas

The Ethiopian Afar drylands used to be reserved for pastoralists following traditional paths connecting watering points and grazing areas. Irrigation gradually developed along the embankments of the Awash River flowing through it, often depriving livestock access. Against this background a new project was started jointly with the Ethiopian Institute of Agricultural Research (EIAR), with additional support from the Afar Pastoral & Agro-Pastoral Research Institute (APARI). The project seeks to minimize the tensions between these sedentary agricultural initiatives and pastoralist communities by, for example, designing safe passages through large scale plantations and finding optimal locations for watering points and forage

stations. Yet, surprisingly, the detailed necessary information on trekking patterns and visited grazing areas for a vulnerability assessment of these routes is largely absent. The main reasons are that data collection on migration tracks is costly and laborious, while the presence of a direct observer might lead to deviations from regular routings as the herder selects the safest pathways to protect his inexperienced companion. To address these data collection problems the pilot tested a remote tracking system that continuously monitors the positional location of nomadic herders and their livestock without requiring outside observers. For this experiment a herder was asked to carry a beacon that receives its geographic coordinates from GPS satellites and transmits this information to a radar system where data are made available online. The herder carried the beacon for almost two months and thus provided unique information on his migration routes that had never been collected before. Moreover, when we combined these trekking patterns with satellite NDVI (Normalized Difference Vegetation Index) we found that the herd was indeed moving to sites with better vegetation, while temporal changes in NDVI could be related to rainfall and grazing intensity, as expected. These findings possibly indicate that these typical responses can be used to detect grazing patterns at a larger scale on the basis of satellite images alone. Further investigation and 'ground truthing' should confirm this hypothesis. The results of the pilot were published in the international Journal of Arid Environments and attracted much attention. Results were presented to the Prime Minister of Ethiopia while the provider of the beacons, 'Collecte Localisation Satellite', presented the pilot as an innovative project in a special brochure. SOW-VU was invited to present the approach at the Joint Research Centre of the EU, which is interested in conducting similar exercises at a larger scale in East Africa. A follow-up project has now been designed to distribute beacons to about 100 herders. This project should cover the main stratification components (herd composition, agro-ecology, clan territorial claims) that characterize the various migration strategies and trekking patterns in the Afar province.



Afar settlement

The pilot also included a six-week training course in GIS techniques, spatial data processing, at SOW-VU in Amsterdam in which two Ethiopian counterparts participated. The course was concluded with case studies on rangeland production functions and identification of vegetation patterns using NDVI time series. Furthermore, a study, "Dryland livestock production opportunities under climate change: the case of Afar State, Ethiopia" prepared jointly with Ethiopian counterparts was presented at the International

Conference on Land Degradation in Bari, Italy. The study simulated future rangeland production capacity in the Afar under five General Circulation Models and four emission scenarios. The study analyzes various herd mobility scenarios by gradually releasing boundary restrictions from district to region to state level. The results showed that higher rainfall under climate change has a positive effect on future rangeland production while income effects for herders are highest when district borders are removed allowing equal access to the region.

2d. Nutrient deficiency and nutrient coping mechanisms

In the recent past, the African countryside has given convincing proof of its capacity to respond to price signals as some regions in Africa managed to generate remarkable growth, in reaction to the commodity boom as well as to development in urban areas. In principle, agriculture has significant room for further expansion because of its low yields. Yet, its handicaps are many. Most crops are still grown under rainfed conditions, and the use of external inputs is low because the supply of chemical fertilizers is generally inhibited by a poor delivery and extension infrastructure and by lack of credit for cash constrained farmers. Moreover, in the humid parts of the continent, animal diseases limit the availability of livestock and hence of manure. However, more seriously, even when fertilizers are available and applied, the response is often poor, especially when the commonly made recommendation to use large doses of nitrogen and phosphate is being followed. These issues have had the attention of the Centre for a number of years and research in this field has now been laid down in the PhD thesis, 'Explorations into African land ecology: on the chemistry between soils, plants and fertilizers', approved by the supervisors but yet to be published.

First, a review of literature illustrates that crop response to nitrogen and phosphorus is highly variable across the continent and that usually only low doses lead to a satisfactory response in yields. This suggests that the availability of other essential nutrients to the plant becomes a binding constraint for further improvements. More specifically, it appears that various soil chemical interactions between the cations (calcium, magnesium and potassium) in combination with micronutrients such as zinc, iron and copper, frequently impose these binding constraints. This observation calls for spatially explicit and soil-type specific fertilizer strategies that address

the specific deficiencies and imbalances. The two case studies described in the thesis show that these soil chemical properties can be directly related to crop yields, land preferences of farmers and the spatial distribution of naturally occurring vegetation types. Second, the literature on the role of cation ratios in agriculture confirmed that their importance for crop growth and yield can be generalized well beyond the case study areas. The case study conclusions on the relationship between the availability and balance of nutrients in the soil and naturally occurring vegetation are supported by literature on tropical vegetation ecology. Finally, literature points to particular strategies for nutrient uptake linked to these key ecological factors, for example expressed in the type of mycorrhizae that are present, depending on the soil chemical properties. In sum, the findings call for an entirely different approach to achieve the objective of higher crop yields in Sub-Saharan Africa, away from broad application of large doses of nitrogen and phosphate and towards a tailor-made approach that does justice to the vast variety of limiting factors across the continent.



The enhancement of advanced fertilizer strategies not only seeks to improve yields, but may also increase food quality through the transmission of micronutrients to the human body. Following this research line, a study on human micronutrient deficiencies of the Centre will be published by FAO. The results show that there are strong indications of direct linkages between the soil micronutrients Iodine, Selenium and Zinc, and the human status with respect to these elements. For other micro-nutrients, such as Copper, Magnesium and Manganese, these linkages are likely to exist but seem to be weaker. This line of research is important as it may reveal the need for targeted micronutrient fertilization, e.g. as part of food aid deliveries.

This is indeed what is currently being explored by a task force within WFP, which looks into the quality of food aid. The basic observation is that food aid delivery should not only consist of calories and proteins but also of micronutrients, the lack of which may lead to serious diseases. This can be prevented by adding vitamins or by mixing appropriate ingredients. WFP has set up a quality index of food aid deliveries, and intends to report on it as part of the food aid statistics. Methodological comments by the Centre on the formalization of this index can be found on the WFP website.

3. EU agricultural policies in a changing environment

Analysis of the Common Agricultural Policy (CAP) and its reforms has been a semi-permanent activity at the Centre, mainly on a model for the CAP and on various contributions to the debate on effectiveness and efficiency of the agricultural and environmental policies of the EU. In this regard, the EU has adopted policies to promote biofuels so as to reduce greenhouse gases, to contribute to energy self-sufficiency and to create additional demand for agricultural commodities. The introduction of mandatory blending requirements and lavish subsidies spurred fast adoption of this technology, and it contributed to the staggering rises in food prices on world markets. Keyzer et al. (2009) show that high ratios of energy prices to food prices are needed to make biofuel production profitable without support. Yet, even if food-based biofuels disappeared, the issue remains that rising high energy prices will promote worldwide intensified use of land for energy crops, requiring huge amounts of mineral fertilizers and putting nature under additional pressure. In policy terms, this defines three major tasks. The first is replacing the current excise taxes on energy carriers by a uniform carbon tax, so as to mitigate greenhouse gas emissions in an efficient manner. The second is to prevent price fluctuations on the oil markets from destabilizing food markets, as happened in recent years. Introduction of upper limits on the use of food for biofuel could prove effective here. The third, much wider, task is to recognize that the transition to an economy based on renewable resources, at least in its initial phase, most likely will include biomass as a significant carrier of energy. Sustainable production of biomass entails the establishment of fair distribution of property and user rights over the lands, while safeguarding biodiversity and soil fertility and maintaining adequate labor standards and living conditions, also during periods that these become non-profitable following a drop in energy prices.

New cooperative ventures

Two new projects on research cooperation were launched, both by concluding a Memorandum of Understanding that specifies the deliverables and inputs of the programs. In the first project, old ties with Bangladesh have been restored, where the Bangladesh Agricultural Research Council is now the leading partner. In a step-by-step approach, starting from data inventory and collection, local food security will be characterized, to be complemented later with information from surveys conducted by BARC staff. In the second project, earlier work on the Jordan River Basin will be continued, jointly with the Palestinian Water Authority. Here the MoU specifies training sessions in the Centre's tool kit and integrated model building, complemented with internet based training to overcome travel constraints.

Plans for 2010-2014



The year 2009 is the last year of the five year period, during which the Centre is to present its plans for the next period. The discussion in the first part of this report may already signal main directions. First, the transition to a resource constrained world economy needs to orient both the research agenda, and the agenda for cooperation, in the understanding that all resources are essentially being supplied from a common pool that transcends national boundaries. This creates interdependencies through flows in rivers, oceans and the atmosphere that private trade cannot account for, and that call for dedicated institutional mechanisms extending beyond auctioning of water rights and CO2 emission licenses. Theoretical models and numerical procedures have been designed for this purpose.

In addition, new scarcities define common risks and subsequent shared interests. For instance, once life depends on a set of essential minerals that originate from a handful of countries, notably African, but with different country groupings associated to given minerals, strategic considerations come to the fore and international solidarity becomes more than a humanitarian project. International support for local social safety nets might be an ingredient but it would require adequate tailoring to local risk profiles. This is also a topic for consideration but clearly, solidarity can only be part of the answer. The basic question why some countries fail where others succeed will need major attention. Pointing in this context to governance

as the key bottleneck in resolving the hunger problem is presumably right, but lamenting about the many occurrences of bad governance will not help much. Particularly in rural areas, it is far from clear what good governance actually amounts to. With the “Chinese lessons for Africa” project as a first pilot, attempts will be made to arrive at operational mechanisms that are sufficiently adapted to prevailing conditions and rely on self organization when possible, and on planning when needed.

Furthermore, the recent crises have made it very clear that we should, besides our regular search for better policies, also deepen our understanding of processes of failure and collapse, so as to anticipate their impact and contribute to prevention. In this regard, analytical tools were constructed to depict domino effects resulting from epidemics and other kinds of contagious spreading of say, pollution, refugee flows, and of course, bankruptcy. Prevention measures include the creation of safeguards such as corridors, bounds, and buffer stocks.

At a more general level, the policy related work the Centre will be engaged in cannot be expected to operate in a neat experimental environment. There is growing awareness in the profession of the major limitations of classical econometric techniques for dealing with non-experimental design when it comes to predicting and evaluating the impact of policy interventions. To this aim, new techniques are being proposed that mimic the experimental setup of randomized trials in non-experimental situations. These are to become part and parcel of the Centre’s statistical toolkit.

Finally, the various crises, resource scarcity and food topping the international agenda also has its repercussions within the Netherlands, where ministries intend to engage closely with research institutes operating in their field, and also expect more co-operation among these institutes themselves. While maintaining its mandate towards helping the poor worldwide, the Centre will assume its responsibility in this domain as well, and actively participate in the shaping of such new constellations.

- Cotula, L., S. Vermeulen, R. Leonard and J. Keeley (2009) 'Land grab or development opportunity? Agricultural investment and international land deals in Africa', IIED/FAO/IFAD, London/Rome.
- FAO (2007) *The State of Food and Agriculture, 2007*. FAO, Rome.
- FAO (2009) 'More people than ever are victim of hunger', FAO, Rome.
- Hillbruner C., R. Egan, J. Gerald and D.R. Friedman (2008) 'Seasonality, household food security, and nutritional status in Dinajpur, Bangladesh'. *Food and Nutrition Bulletin* 29(3):221-31
- IDS (2009) 'Accounts of crisis: poor people's experiences of the food, fuel and financial crises in five countries', Institute of Development Studies, UK.
- Irwin, S.H., D.R. Sanders and R.P. Merrin (2009) 'Devil of angel? The role of speculation in the recent commodity price boom (and bust)', Southern Agricultural Economics Association Meetings, Atlanta, Georgia, February 2009.
- Ivanic, M. and W. Martin (2008) 'Implications of higher global food prices for poverty in low-income countries'. *Agricultural Economics* 39(s1): 405-16.
- Keyzer, M.A., M.D. Merbis and R.L. Voortman (2008) 'The Biofuel Controversy'. *De Economist*, 156: 507-527
- OECD-FAO (2009) *OECD-FAO Agricultural Outlook 2009-2018*. Paris: OECD.
- Ratha, D., S. Mohapatra and Z. Xu (2008) 'Outlook for remittance flows 2008-2010'. *Migration and Development Policy Brief 8*. Washington, DC: World Bank.
- Robles, M., M. Torero and J. von Braun (2009) 'When speculation matters', IFPRI, Issue Brief 57, February, 2009.
- Savy, M., Y. Martin-Prével, P. Traissac, S. Eymard-Duvernay and F. Delpeuch (2006) 'Dietary diversity scores and nutritional status of women change during the seasonal food shortage in rural Burkina Faso'. *Journal of Nutrition* 136:2625-32
- Van Wesenbeeck, C.F.A., M.A. Keyzer and M. Nubé (2009) 'Estimation of undernutrition and mean calorie intake in Africa: methodology, findings and implications'. *International Journal of Health Geographics*, 8: 37.

Staff

List of staff members

The following staff members were working at the Centre by the end of 2008:

Bart van den Boom	Economist
Michiel Keyzer	Economist/Director
Rian Kriesels	Secretary
Bo Liu	Economist
Max Merbis	Economist/Deputy director
Vasco Molini	Economist
Maarten Nubé	Nutritionist
Saket Pande	Economist
Ben Sonneveld	Agronomist
Kees Traas	Administrator
Wim van Veen	Economist
Roelf Voortman	Ecologist
Lia van Wesenbeeck	Economist
Precious Zikhali	Economist

Board and Advisors

The Board

Prof.dr.ir. R. Rabbinge Prof.dr. E.H. Bulte	Chairman Wageningen University; upon nomination by the Minister of Foreign Affairs
Prof.dr. M. Lindeboom Prof.dr.ir. G. Meester	Department of Economics, VU University Ministry of Agriculture, Nature and Food Quality
Prof.dr. H. Verbruggen	Department of Economics, VU University

The Scientific Advisory Committee

Prof.dr. A.J. Dolman	Department of Earth and Life Sciences, VU University
Prof.dr.ir. P.P.S. Ho	Centre for Development Studies, University of Groningen
Ir. R.P. Lapperre	Ministry of Agriculture, Nature and Food Quality
Prof.dr. R. Ruben	Centre for International Development Issues Nijmegen
Prof.dr. E.M.A. Smaling	International Institute for Geo-Information Science and Earth Observation, Enschede
Dr. T.N. Srinivasan	Yale Growth Center, Yale University, New Haven, USA
Prof.dr. H.A. Verhoef	Department of Earth and Life Sciences, VU University
Prof. dr. P. van der Zaag	UNESCO-IHE Institute for Water Education Delft

The Scientific Advisory Committee convened at December 22, at their annual meeting. The meeting started with a overview of the world food situation and presentations on ongoing projects and research. First, most recent simulation runs for China were shown against the background of the global food-feed-fuel competition; second, the impact of biofuels policies of EU and US was discussed and finally, it was shown how adult body mass index may serve as measure for health and nutritional inequality.

Accounts and result for 2008

Key figures of SOW-VU's Balance per December 31, 2008

Assets	
Fixed assets	€ 46,161
Current assets	€ 479,491
Liquid assets	€ 399,783
Total Assets	€ 925,435
Liabilities	
Capital	€ 327,257
Provision for personnel risks	€ 50,197
Current liabilities	€ 547,981
Total Liabilities	€ 925,435

Key figures of SOW-VU's Operating Account 2008

Expenses	
Research activities	€ 1,166,887
Specific material expenses on research	€ 229,049
Institutional costs	€ 62,348
Total Expenses	€ 1,458,284
Earnings	
Subsidies:	
- Ministry of Foreign Affairs	€ 702,283
- Ministry of Agriculture	€ 150,000
- Vrije Universiteit	€ 322,372
Other income	€ 272,714
Total Income	€ 1,447,369
Result	€ -10,915

Publications and activities, 2008

The Centre's research output is split into academic (refereed) and professional publications, followed by a selection of other activities related to education and capacity building efforts. Downloadable publications can be found at the Centre's website <http://www.sow.vu.nl>.

Academic publications

- Dasgupta, P., R. Saha and M. Nubé 'Changes in body size and nutritional status of Middle-Class Bengali boys of Kolkata, India, 1982-2002'. *Economics and Human Biology* 6(1): 75-94.
- Boom, G.J.M. van den, N.N. Nsowah-Nuamah and G.B. Overbosch 'Health Care Provision and Self-Medication in Ghana'. In: E. Aryeetey and R. Kanbur, eds. *The Economy of Ghana: Analytical Perspectives on Stability, Growth and Poverty*, pp. 320-346, proceedings of the conference 'Ghana at the Half Century' Oxford: James Curry.
- Dasgupta, P., R. Saha and M. Nubé 'Changes in body size and nutritional status of Middle-Class Bengali boys of Kolkata, India, 1982-2002'. *Economics and Human Biology* 6 (1): 75-94.
- Keyzer, M.A., 'Wereldvoedselvoorziening'. In: T. Dietz, F. den Hertog and H. van der Wusten, eds. *Van natuurlandschap tot risicomaatschappij. De geografie van de relatie tussen mens en milieu*, pp. 85-93. Amsterdam, Amsterdam University Press.
- Keyzer, M.A., contributions to mathematical reviews: 'Learning Competitive Equilibrium' by Sean Crocket, Stephen Spear and Shyam Sunder, *Journal of Mathematical Economics* 2008:651-671; 'An interior-point algorithm for computing equilibria in economies with incomplete asset markets' by M. Esteban-Bravo, *Journal of Economic Dynamics and Control* 32, 2008 pp. 677-694; 'Financial dynamics' by David Carfi and Giovoanni Caristi, *Differential geometry – Dynamical systems* Vol. 10, 2008, 71-85.
- Keyzer, M.A., M.D. Merbis and R.L. Voortman 'The Biofuel Controversy'. *De Economist* 156: 507-527.
- Klaver, W., M. Nubé 'The MDG on poverty and hunger: How reliable are the hunger estimates?' In: M. Rutten, A. Leliveld, and D. Foeken, eds. *Inside Poverty and Development in Africa: Critical Reflections on Pro-poor*

- Policies 7: 273-302. African Dynamics Series. Leiden, The Netherlands: Brill.
- Liu, J., S. Fritz, C.F.A. van Wesenbeeck, M. Fuchs, L. You, M. Obersteiner and H. Yang 'A spatially explicit assessment of current and future hotspots of hunger in Sub-Saharan Africa in the context of global change'. *Global and Planetary Change* 64(3): 222-235.
- Mazzucato, V., G.J.M. van den Boom and N.N.N. Nsowah-Nuamah 'Remittances in Ghana: Origin, Destination and Issues of Measurement'. *International Migration* 46(1): 103-122.
- Molini, V. and G. Wan 'Discovering sources of inequality in transition economies: a case study of rural Vietnam'. *Economic Change and Restructuring* 41: 75-96.
- Molini, V., M.A. Keyzer, G.J.M. van den Boom and W. Zant 'Creating Safety Nets Through Semi-parametric Index-Based Insurance: A Simulation for Northern Ghana: Abstract'. *Agricultural Finance Review* 68(1): 223-225.
- Norkin, V. I. and M. A. Keyzer, On convergence of kernel learning estimators. In: L. Sakalauskas, G.W. Weber and E. K. Zavadskas eds. *Continuous Optimization and Knowledge-Based Technologies*, pp.306–310. Neringa, Lithuania. ISBN 978-9955-28-283-9.
- Nubé, M. 'The Asian Enigma: Predisposition for low adult body mass index among people from South Asian descent'. *Public Health Nutrition* 12(4):507-516.
- Pande, S., M.A. Keyzer, A. Arouna and B.G.J.S. Sonneveld 'Addressing diarrhoea prevalence in the West African Middle Belt: social and geographic dimensions in a case study for Benin'. *International Journal of Health Geographics* 7:1-17.
- Nubé, M. and R. Voortman 'Human micronutrient deficiencies: Linkages with micronutrient deficiencies in soils, crops, and animal nutrition'. In: L. Amoroso and B. Thompson, eds. *Food Based Approaches (FBAs) for Combating Micronutrient Deficiencies*, Rome, FAO.
- Qiu, H., J. Huang, M. Keyzer and W.C.M. van Veen 'Policy options for China's bio-ethanol development and the implications for its agricultural economy'. *China & World Economy* 16:112-124.
- Sonneveld, B.G.J.S. et al., 'Following the Afar: using remote tracking systems to analyze pastoralists' trekking routes', *Journal of Arid Environments*, forthcoming.

Professional publications

- Moorman, L., M.D. Merbis and W.C.M. van Veen, Report on the CATSEI Mid-term Policy Conference 'International workshop on F3 (Food-Feed-Fuel) competition: perspectives from China and the European Union', Brussels, 15 December.
- Molini V., R. Rabellotti 'Microfinance and Development: two Latin American case studies' jointly written with Roberta Rabellotti' SEMEQ WP n. 06/2008.
- Sun, L., W.C.M. van Veen, X. Zhang, J. Huang, H. Qiu 'China's Economic Growth outside the Farm Sector: Plausible Trends towards 2030', CATSEI Project Paper.

Working papers

- Keyzer, M.A., M.D. Merbis, R.L. Voortman 'The biofuel controversy' WP 08-01, 23 pp.

Conference, seminar, workshop

- Boom, G.J.M. van den, organiser ASEMWATERNET Lisbon Mid Term Conference, presenting highlight Work Package, LNEC, Lisbon, April, 29-30.
- CATSEI Mid-term Policy Conference 'International workshop on F3 (Food-Feed-Fuel) competition: perspectives from China and the European Union', Brussels, December, 15.
- Keyzer, M.A., participant 'Scoping Workshop on Biofuels', EASAC and KNAW, Amsterdam, March, 27.
- Keyzer, M.A., Invited participant congress: 'Agriculture, Development, and the Poor: Emerging Challenges, Stakes, and Opportunities'. Organized by International Food Policy Research Institute. Royal Museum for Central Africa, Tervuren, Belgium, May, 13-14.
- Keyzer, M.A., keynote speech 'China and the Competition for Food, Feed and Fuel Worldwide' at the international conference 'Rural Reform and Development: Meeting New Challenges of the 21st Century', Nanjing Agricultural University, IFPRI, Cornell University, National Nature Science Foundation of China, Nanjing, China, October, 12.
- Keyzer, M.A., presenting "Food, feed, fuel and fiber: international prospects with special reference to China and the EU", CATSEI Conference, Brussels, December, 15.

- Merbis, M.D., presenting 'Food Aid Programme – Governance and Social Security Organization in Europe' at 21st Annual Stakeholder Meeting on Food Aid Programme for the Most Deprived Persons, DG Agriculture, Brussels, July, 15.
- Pande, S., presenting poster 'Complexity based robust hydrologic prediction' at the European Geophysical Union General Assembly, Vienna, April, 17 Geophysical Research Abstracts, Vol. 10, EGU2008-A-03053.
- Pande, S., presenting poster 'A Comparison of an ensemble method with a complexity based method in streamflow prediction using a nearest neighbor predictor: finite sample size performance for different basin sizes' at the American Geophysical Union Fall Meeting, San Francisco, December, 15-19. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract xxxxx-xx.
- Sonneveld, B.G.J.S., presenting poster 'The impact of climate change on crop production in West Africa: an assessment for the Oueme River Basin in Benin' at the European Geophysical Union General Assembly, Vienna, April, 18 Geophysical Research Abstracts, Vol. 10, EGU2008-A-03783.
- Sonneveld, B.G.J.S., presenting 'Following the Afar: using a remote tracking system to analyze pastoralists' trekking routes' at 2nd Workshop on Livestock and Rangeland Monitoring Systems (LIRAMS), JRC/IPC, Joint Research Centre, Ispra, May 7-8.
- Sonneveld, B.G.J.S., presenting 'How good is GLASOD?' and 'Land degradation and livestock production opportunities under climate change: the case of Afar State, Ethiopia' at 5th International Conference on Land Degradation, Mediterranean Agronomic Institute of Bari (MAI-B), Italy, September 18-22.
- Veen, W.C.M. van, presenting 'The impact of increasing feed, meat and bio-fuel demand on China's agricultural economy: Simulation of regional effects under alternative scenarios until 2030' at the international conference 'Rural Reform and Development: Meeting New Challenges of the 21st Century', Nanjing Agricultural University, IFPRI, Cornell University, National Nature Science Foundation of China, Nanjing, China, October 12.
- Wesenbeeck, C.F.A. van, presenting 'Plattelandsontwikkeling: het belang van de stad' at 'Het Afrikacongres 2008' of the Ministry of Foreign Affairs, February 13.
- Wesenbeeck, C.F.A. van, M.D. Merbis, presentation of world-wide application of the Food Atlas Project, WFP, Rome, April 29-30.

Wesenbeeck, C.F.A. van, workshop 'Theories on development and social transformation: A Geographical Perspective' at Understanding Development Better Conference, DRPN, MDF consultants, Vice Versa and ISS, Ede, August 27-29.

Wesenbeeck, C.F.A. van, presenting 'oorzaken en gevolgen hoge voedselprijzen' at Wereldvoedseldag, Utrecht, October 16.

Wesenbeeck, C.F.A. van, presenting 'Operating a modeling consortium, lessons and initiatives for AGRODEP, and Areas for Possible Partnership with SOW-VU' at Planning workshop on the African Growth and Development Policy (AGRODEP) Modelling Consortium, Dakar, November 6-8.

Lectures

Keyzer, M.A., lecture. 'De toekomst van de wereldvoedselvoorziening' at IIS cursus 'Van natuurlandschap tot risicomaatschappij', UvA, March 25.

Keyzer, M.A., speaker at 'docudebat 'We feed the World'', VUpodium, September 4.

Keyzer, M.A., Lecturing on Global Food Problems at Zheijiang University, October 20.

Merbis, M.D., speaker at 'Hunger Amidst plenty: Understanding the Global Food Crisis', first session of the Real World Economics debates, XminY, CREA Theater, October 13.

Merbis, M.D., speaker at discussion 'Food at whatever cost?', Wereldwinkel VU and Studentenpastoraat vE90, October 16.

Merbis, M.D., speaker at 'Nood zoekt Brood. Wereldvoedselcrisis', 18th Cre-Des congres, Groningen, December 16.

Molini V., 'SDA- Bocconi Executive Training Programme in Japan and Korea' Bocconi University Milano, January.

Wesenbeeck, C.F.A. van, 'Poverty alleviation in Asia and Africa: how realistic are the MDGs?' at lecture series 'Poverty and Development in a Comparative Perspective', AMIDSt, UvA, November 14.

Advisory Work

Keyzer, M.A., R.L. Voortman, 'Biofuels and scarcity of nutrients', Ministry for Development Cooperation, The Hague, March 6.

Keyzer, M.A., International Consultation for the Strategic Agenda for the Dutch Ministry of Agriculture, Nature and Food Quality, Landgoed

Voorlinden, Wassenaar, October, 3.
Keyzer, M.A. and M.D. Merbis, 'Sustainable protein chains', Ministry for Development Cooperation, The Hague, November, 27.
Keyzer, M.A. and M.D. Merbis, 'Future of the Common Agricultural Policy', Ministry of Agriculture, Nature and Food Quality and Ministry for Development Cooperation, The Hague, March, 20.
Keyzer, M.A., M.D. Merbis and C.F.A. van Wesenbeeck, participation in expert meetings for and refereeing of 'Agriculture, rural economic development and food security', Ministry for Development Cooperation and Ministry of Agriculture, Nature and Food Quality, September.
Merbis, M.D. and M. Nubé, Evaluation of 'Assessing the Quality of Food Aid Deliveries', World Food Programme, Rome, December.

Traineeships / visiting researchers

Mr. Kidane Gebremeskel. Ethiopian Institute of Agricultural Research. Six-week training in spatial data management and data analysis. September 1- November, 16.
Mr. Mohammed Nuru. Afar Pastoral & Agro-Pastoral Research Institute (APARI). Six-week training in spatial data management and data analysis. September 1- November, 16.
Dr. A. Jordaan. Faculty of Economics. University of Pretoria. Training in spatial data analysis and preparation of the Incomati project proposal. April-June, September-December.
Visit of Mr. T. van Banning. Deputy permanent representative for the FAO/WFP, Rome, Italy. 2008.

SOW-VU and the media

Keyzer, M.A., interview 'Food safety in China' 24timer, Danish newspaper, Ms. Lene Winther Chief Correspondent.
Keyzer, M.A., interview radio program Desmet Live: 'De Kwestie: Hoge voedselprijzen en voedselschaarste wereldwijd?', Radio 5, March 19.
Keyzer, M.A., interview. 'Eten genoeg voor 24 miljard monden', De Volkskrant, p. 13, April 19.
Keyzer, M.A., interview. 'Eigen maag eerst. Is er wel een voedselcrisis?', Het Parool, pp. 36-37, April 26.
Keyzer, M.A., interview. 'Akkers van goud', Nederlands Dagblad, April 5.
Keyzer, M.A., interview. 'Neoliberaal beleid IMF oorzaak voedselcrisis', de

- Volkskrant, p. 8, May 23.
- Keyzer, M.A., interview. 'Thema Voedselcrisis'. Internationale Samenwerking. August.
- Keyzer, M.A., interview. 'Lage prijzen, lege magen', de Volkskrant, p. 8, August 29.
- Keyzer, M.A., interview. 'Wat doen we met ons voedsel?', de Volkskrant, Kennis p. 7, August 30.
- Keyzer, M.A., interview radio program Radio Kassa: 'Wat kunnen wij doen tegen honger in de wereld', September 9.
- Keyzer, M.A., interview Radio 1 Journaal, September 11.
- Keyzer, M.A., interview. 'Hoge voedsel- en energieprijzen zijn nodig voor de vooruitgang', Agrarisch Dagblad, September 11.
- Keyzer, M.A., interview and discussion. Llink tv-special on Food Crisis, Channel 2, October 18.
- Keyzer, M.A., interview. 'Te hyper over de Pieper'. AD. Zaterdag, November 29.
- Merbis, M.D., interview. 'De aardappel als recept tegen honger', De Gelderlander, October 16.

Education

- Sonneveld, B.G.J.S., external examiner of Mrs M. Seta. (2008) Department of Natural Resources Management. International Institute for Geo-Information Science and Earth Observation (ITC) Enschede, The Netherlands.
- Sonneveld, B.G.J.S., external examiner of Mrs T. Tarun (2008) Department of Natural Resources Management. International Institute for Geo-Information Science and Earth Observation (ITC) Enschede, The Netherlands.

Refereeing

Economics and Human Biology
Food and Nutrition Bulletin
International Journal of Occupational and Environmental Health
Mathematical Reviews
Public Health Nutrition
World Development

Memberships of boards and committees

- Keyzer, M.A. Chair, External Review Board, INRA-DERG Rennes, France, 'Proposition d'unité mixte de recherche'.
- Keyzer, M.A. Extraordinary professor at the Centre for Chinese Agricultural Policy (CCAP) of the Chinese Academy of Sciences.
- Keyzer, M.A. Member Board of Academic Advisors (BAA) of the Center for Chinese Agricultural Policy (CCAP).
- Keyzer, M.A. Member of the Editorial Board of De Economist.
- Keyzer, M.A. Member of the Universitaire Toetsings Commissie (UTC; scientific advisory committee of the board of the University), VU University.
- Keyzer, M.A. Member of the Review Committee for proposals ESR/NWO, National Organisation for Scientific Research.
- Keyzer, M.A. Fellow Tinbergen Institute, NAKI, AIID.
- Keyzer, M.A. Member Koninklijke Hollandsche Maatschappij der Wetenschappen.
- Nubé, M, Member Task Force on Assessment, Monitoring, and Evaluation, UN-SCN (United Nations Standing Committee on Nutrition).
- Wesenbeeck, C.F.A. van, Member of the 'Onderdeelcommissie' of the Faculty of Economic Sciences and Business Administration (FEWEB), VU University.
- Wesenbeeck, C.F.A. van, Research fellow Tinbergen Institute.
- Wesenbeeck, C.F.A. van, Member of the program preparation commission of Global Food Systems (NWO/WOTRO).

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