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Agriculture in China: Between self-sufficiency and global integration

Imprint

Agriculture in China: Between self-sufficiency and global integration

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The genesis of this publication

In the summer of 2009, we were sitting in front of the house of a farmer in Southern China – all the while suffering in 40 degree centigrade heat, and, as if that weren't uncomfortable enough - 90 percent humidity. We had been served by a female farmer with her child on her back (we, in this case, had been comprised of a group of European NGO representatives and a much larger group of Chinese members of NGOs). We had just departed from the experimental plots of the Sun Yatsen University, which were a two-hour car ride from Guangzhou. These plots, we were told, were prime examples of Chinese ecological agriculture.

Over the course of the following days, we had, with fervor and excitement, discussed the situation of agriculture in various parts of China, as well as the most troublesome challenges and problems. We had very quickly recognized that both sides had an enormous demand for information on the situation in the respective regions of the world. This insight became first seed which had germinated into the publication before you.

In China, for many years, the agricultural crisis (or, better put, the crisis of the rural society) has been discussed, however not in any official capacity. After the failure of first large-scale development programs like the "Go West" campaign became imminent, the government of Hu Jintao and Wen Jiabao declared back in 2004, that the development of the rural regions of the country would be top priority in their policy-making.

According to the 2011 census, today urban population accounts for nearly 50 percent of the total population. In 1982, it was only a fifth of the population which resided in urban areas. Although rapid urbanization is a declared aim of the Chinese government, a high percentage of urbanites are rural migrants, and urbanization does not match the current high-speed industrialization. The integration of the rural population, the labor market and pressing infrastructure issues are all putting the cities under pressure. To add to those stressors, the continuous loss of farmland as a direct result of urbanization processes and environmental destruction have resulted in an alarming low man-to-land ratio. Therefore, the new 12th Five-Year-Plan (2011-2015) puts a special emphasis on the farmland reserves and social management of the rural society (like improving public services, education, rural health systems, "civil behavior"). On the other hand, the dictum of establishing a "New Socialist Countryside" intends on pushing urbanization forward.

A very special development during the last years was seen in an increasing number of urban NPOs began to discuss rural topics and create their own programs. Surprisingly, this development seems to be important enough to have gained its inclusion into the new Five-Year-Plan. It is mentioned that, in order to "build a harmonious society" and to "strengthen public security", it is necessary to mobilize community volunteers and strengthen grassroots autonomous organizations– to finally handle internal contradictions of people properly. The NPOs' activities focus on a wide variety of topics – from "green food" to rural compulsory educational programs and sustainable agriculture.

These activities – combined with the global relevance of Chinese agricultural trade – are not yet systematically discussed. There is little knowledge on neither the growing export activities of Chinese "ecological food" and other food products into the EU nor on China's agricultural engagement in Africa. Both of these situations affect us directly and indirectly. The global integration of Chinese agricultural companies is also not yet being addressed systematically.

In order to provide an overview of these developments with a focus on topics which could also be relevant for European NGOs and the Western civil society, we commissioned this brochure in 2010 (this English version is mainly a translation of the German version). This brochure also serves another goal: Only on the basis of consolidated and shared knowledge is a sustainable and perpetuated dialogue and exchange possible.

The necessity of such a dialogue within a civil society and the resulting cooperation is, again, highlighted by study *"International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD, 2008)"*. Over 400 authors reflected critically on the international agricultural trade and called for a global change – the development of sustainable agriculture in order to fight global hunger. Small-scale farming and ecological agriculture play a central role in these concepts.

This study is intensively discussed amongst Western NGOs. In order to initiate a dialogue with Chinese representatives of NPOs, basic information on the Chinese situation is necessary. Topics might include fundamental questions of ecological agriculture, international trade agreements, certification of food, control of food safety and/or consumer rights.

This brochure hopes to contribute to this exchange and provide basic information. A second step, logically, should follow: the provision of a Chinese-language publication for Chinese NPOs on the European agricultural trade policies, and the situation of agriculture in general and the ecological agriculture in particular. Only then will the dialogue be enabled to gain momentum.

We would like to thank Eva Sternfeld for her input, and would also like to extend our gratitude to the University of Duisburg task force group "Food in China" for their collaboration. We also wish to thank Bryan Thomas for his assistance in proofreading and editing this publication.

Nora Sausmikat
Essen, August 2011

Agriculture in China

Introduction

Agrarian China

Economically, China became a superpower within less than three decades. With two-digit growth rates, it became the world champion in exports, accumulated billions of US Dollars and Euros of foreign currency reserves and nurtured companies that are increasingly investing abroad. China's mega-cities look not only like the metropolis' of the world but seem to surpass them with their skylines, infrastructure and glamor.

For about three decades there has hardly been any attention abroad for what is going on in rural China. Behind and beyond the breathtaking ascent into becoming one of the strongest economic powers, which is nurturing fascination on one side and fears on the other, there still is a vast agrarian China. In the past, the perception of communist China was shaped by the 'peasant leader' Mao Zedong and the rural mass movements, carrying forward the revolution. There was the 'Great leap forward', the first attempt to industrialize the country starting from its rural base at the end of the 1950s, when millions of people in the rural areas died of hunger. There was the 'Cultural Revolution', when a whole generation of urban youth were sent into the villages for reorientation/reeducation, supposedly learning from the peasants how to build the new China.

But all of this is history. Long before the export-oriented industrialization made headlines worldwide, and long before China's economy rushed from one record to the next and the urban jungles grew ever higher into the skies, it was the fundamental change in agriculture at the end of the 1970s, the first of the "Four modernizations", which brought the departure from Maoism, production brigades, people's communes and collectives and introduced the first field trials of market oriented development, private entrepreneurship and the aspiration of "getting rich" individually.

This development was very successful too: Agricultural production grew by five percent on average every year, and the country can feed its 1.3 billion people, more or less (see Part 1). At the same time, the export of agricultural products is increasing, Chinese agro-companies are investing in Africa, Brazil and Australia (see Part 4). But the limits to growth are drawing closer. The scarcity of land and water resources are restricting productivity increases, damages to the environment leave their impact on agriculture, and millions of people are migrating into the mega-cities looking for employment. The gaps in income and development between the urban and the rural China, which, in some areas, look very much alike regions in rural Africa or India, are growing tremendously (Part 2).

While the economic role of agriculture with a proportion of around 10 percent of GDP has been receding, its social and political weight is still considerable. Half of the population lives in the country side, and 40 percent of the work force is employed in the rural areas. The increasing differences in living conditions, the environmental damages by industrialization and the difficulties of many small-scale farms, to earn enough from agriculture, created a conflict potential which is being increasingly articulated in demonstrations, protests and confrontations: Six years ago the Ministry for Public Safety reported 87,000 "incidents with large groups", most of them in rural areas. Thus the "three rural questions" ("San nong wenti") appeared back on the political agenda – the agricultural development, the rural areas and the rural population.

Not only locally, but globally as well, the relevance of the agricultural sector has increased (Part 4). China's appetite for oil and fertilizer is beginning to have

impacts worldwide as does its demand for agricultural products. Does this mean higher prices for us in Germany, when the consumption of grains, milk or meat in China grows? How dramatic are the consequences for poorer countries and populations who are dependent on food imports? The agricultural policy of China has direct impacts on other countries like 'Land grabbing' and 'Offshore farming'. The agricultural production in China contributes increasingly to climate change, especially through the rapidly growing livestock industry.

"The agricultural policy of China too has direct impacts on other countries like 'Land grabbing' and 'Offshore farming'. And the agricultural production in China contributes increasingly to climate change."

This publication aims to highlight the widely unknown successes in China's agricultural development, but also the problems therein as well as any consequences it might have. What has been achieved? What is the situation of agriculture in China today? And what does it mean for the future? Will genetically modified food, for example, make its breakthrough in China? (Part 3) Is the competition for Europe's agriculture growing fiercer, like it has in the past for Europe's industry and labor force?

One peculiar focal point is the role of civil society organizations, farmers associations and consumer and environment groups (Part 5). Many developments, contexts and debates are similar to those in Europe. One such group's mission is to find plausible solutions to the various threats from industrial agriculture and the search for alternative, sustainable development concepts. There are also common interests and matters of concern, like, for example, the issue of genetic engineering, which serve as starting-points for these organizations. Another important interface is the ongoing reform of the European agricultural policy (CAP). "Global Europe", in the agrarian sector, with its aggressive export orientation of the European agro-industry, does not only determine the future for farmers and consumers in Europe – but also in China. An exchange of information and experiences can only be helpful. This publication wants to point to some such areas and starting points.

The People's Republic of China ...

... is with 9.33 million square kilometers the second biggest country in the world next to Russia and nearly 28 times larger that Germany, but less than 15 percent of the land can be used for agriculture,

... has only 10 percent of the agricultural area and six percent of the water resources of the world, but more than 20 percent of world population,

... produces 30 percent of the world's rice harvest, 20 percent of maize, around 37 percent of fruits and vegetables and half of the pork.

... exported in 2007 one third of the export volume of the European Union and imported nearly half as much as the EU, making it the fourth largest trader in agricultural goods on the world market.

... is one of the countries with the highest fertilizer input per hectare, but within a short period of time also became the country ranking third regarding ecological agricultural production.

... has among the developing and threshold countries the most ambitious program for genetic engineering for agriculture.

Part 1:
Field trials for economic reforms

China's contemporary ascent began three decades ago with far-reaching reforms of the communist production system dominated by collectives in rural areas. The high productivity of the predominantly peasant agriculture which followed served in not only securing a steady supply of food for a growing population, but also in supplying various agricultural commodities, thus laying the foundation for the industrial upswing. But further growth of agriculture had already begun to show tell-tale signs of limitation.

The village of Daqingfa lies in the Hebei province, a two-hour drive southwest of Beijing in the middle of the vast and endlessly flat Northern Chinese plains. In the past year, around those very same plains, there emerged a kind of hilly landscape: Waves of high, long earthen walls displaced the maize fields, and a multitude of new greenhouses- where during the winter months the farmers grow cucumber, tomatoes or sweet pepper for the market in Beijing- dot the landscape. Thick mud walls on three sides keep the temperature constantly warm, and looking upwards, one sees a huge roof made of bamboo sticks and plastic sheeting. Even in winter, when temperatures are as low as zero degrees centigrade, heating is not needed because of the intense sunlight, and water is delivered free of cost from the community well. In addition, paved roads have been constructed collectively, an undertaking organized by the village

The Father of China's Hybrid Rice*

When Dr. Yuan Longping (head of Hunan province's Hybrid Rice Research Center), was young, he dreamt of rice grains as big as peanuts, rice stalks as tall as trees. He went on to become the first scientist to crack the secret of hybrid rice, which had increased yields considerably. In 1979, China's patent on the hybrid rice developed by Yuan was the first agro-technology patent registered to China in the US. By the start of the new millennium, Chinese farmers were using hybrids in more than half of their rice area. China now offers it to Africa to increase production.

Still, the development of hybrid seeds is one of the pillars of agricultural research in China. Concerns abound, however, as these hybrid seeds often need considerable amounts of water and fertilizer to perform. This could make the already existing ecological problems more pronounced.

* See Deborah Brautigam 2010, p. 246

committee. To reduce costs, a number of farmers began using biological pesticides. In addition to keeping pests at bay, this improves sales, since the government introduced a certification system for "Green food". New stone houses are proof of the increasing prosperity in the village.

The Golden 1980s

"The lethargy of the past years was gone" – the situation, as described by Chen Guidi and Wu Chuntao as it relates to rural areas after huge collective production units had practically been dissolved over night three decades ago, and each family received a piece of land according to the number of members in the household. "In many fields one could see three generations working jointly, with the prospect for a better future".[1] Ever since this return to family farming, China's agriculture jumped forward with growth rates of four, five, and up to even six percent a year.

With this ending of the collectivization in agriculture, which was pushed through by reform-oriented economists around Deng Xiaoping in 1978 (two years after the death of Ma Zedong), the agricultural sector became the first trial field for the "Four modernizations",[2] forming the pilot and the foundation for the reforms in the industrial sector later on. More than 250 million family farms, often smaller than one hectare, replaced the production brigades. The village committees, a kind of village self-governance, replaced the collectives, which earlier on had not only regulated the whole agricultural production according to the plans, but also organized health provisions and education, supplied household goods and conducted marriages and conflict resolution. Within a few years after the introduction of this Household Production Responsibility System, the number of peoples' communes shrunk from more than 50.000 to just 249, and large state-owned farms operated on just four percent of agricultural land, employing close to five million people.

"In 1978 the agricultural sector became the first trial field for the 'Four modernizations', forming the pilot and the foundation for the reforms in the industrial sector later on."

Initially, the families, who had not become owners but more or less secured tenants, had been contractually obliged to produce specific products according and had to deliver a fixed quantity for a fixed price to the state or to municipalities. Everything beyond what had been outlined in their contracts belonged to them. Step by step, these restrictions were removed, the lease period became longer and the supply of seeds, tractors and fertilizer improved. Today, most of the peasant farms produce for the market, retaining the income for themselves. They produce what promises the highest profit – food and commodities for the industry, meat or fish from aquaculture. The production increased, the supply situation improved, the number of rural markets shot up, the supply became larger and more diversified. After the earlier years of "Chi bao", the meager supply situation, when large sections of the population hardly had enough to fill their stomachs, now the time of "Chi hao" had come- a time of good, rich food.

To get as much as possible from their small fields, farmers intensified production. Instead of the traditional methods which had utilized organic fertilizer and their own seeds, most farmers began to purchase chemical fertilizer, pesticides and high-yielding seeds. There are hardly any other countries which use this technology package of the "Green Revolution" like China. Today, China's agriculture uses one third of the world wide production of nitrate fertilizer – per hectare double as much as the world average – and also dominates in the usage of chemical weed and pest killers. Thanks to two harvests per year, yields of rice with 8 tons and of maize and wheat respectively with 10 tons range well within world comparison.

At present day, China is the largest wheat producer and the second largest maize producer in the world. Its farmers produce around one third of the world's harvest of rice and half the world's pork meat. After the accession to the World Trade Organization (WTO) in 2001, exports grew as well, especially into neighboring countries. In 2007, China was already the fifth largest exporter of agricultural products, with a growing proportion coming from ecological agriculture.

With new user-rights for individual families, the technology package of the "Green Revolution", with its high-yielding seed, agrochemicals and irrigation, and market opportunities in cities which boast rapidly growing middle classes and prosperity, significant decreases in both malnutrition and poverty had been achieved, especially in the eastern and southeastern parts of the country with the most fertile soils, the best conditions for cultivation and the biggest demand. The proportion of people living on less than 1.25 US Dollars per day had dropped from almost 90 percent in 1981 to 60 percent within ten years, and further down to

1 Chen Guidi & Wu Chuntao, cit. by Walden Bello 2009
2 The other three sectors were the industry, the military and science and technology

30 percent in 1996.[3] "For a while it seemed as if honey and milk were flowing for the Chinese farmers."[4]

Additionally, small and medium-sized industrial enterprises were supported by the state to "leave agriculture but stay in the countryside", thus slowing down the migration into the cities. Towns, villages and groups of agricultural enterprises started factories, manufacturing units or construction companies labeled as Township and Village Enterprises (TVE), small entrepreneurs, the "specialized households" emerged, selling or renting out machinery, offering technical advice for irrigation, pest control or transport services. Within just a few years, incomes in rural areas grew significantly, even if some regions, enterprises and companies benefited more from the new opportunities than others (see part 2). Observers called these times the "Golden years" for farmers.[5]

Threat to food security

A dramatic slump in grain production a decade ago set off alarm bells at the central government in Beijing. After doubling the wheat production since the beginning of the 1980s to more than 120 million tons in 1997, it dropped to less than 90 million tons in 2003. The combined grain harvest went down from 512 million tons in 1998 to 430 million tons in 2003. One of the reasons was, that in the traditional grain growing regions in the northern Chinese plains, more and more farmers switched over to lucrative products like fruits and vegetables, to raw materials like cotton or oil seeds or the keeping of livestock, and grain production went into a subsequent decline.

"Grain problems cast their shadows", the economist Xiwen Chen wrote in the summer of 2004.[6] This is not to say that an immediate shortfall was imminent, or that exorbitant increases in price could have fueled the discontent of urban consumers, because the government had, in the meantime, managed to build up huge reserves of grain and had enough foreign currency reserves to buy grains on the world market any time it wanted. "But we have to think about our capacities to produce grains", Chen clarified.

"Food security", as a sufficient supply at stable and low prices, is of great political importance. Expenses for food total more than one-third of the average shopping budget, so rising prices can quickly lead to anger. It is therefore official policy to not import more than five percent of basic foods. The government has also decreed that cultivated agricultural land should not drop below 120 million hectares, a red line, which is already very close with modern-day figures (2009), around 121,7 million hectares.[7] "We should strengthen the fundamental role of agriculture", Sun Zhengcai, minister of agriculture, both stressed and underlined in his policy for food security, "for such a populated country like China it is an important task to secure the food of its citizens."[8] The price increases for rice, maize and wheat on the world market as recently as four, even three years ago, caused partly by financial speculation, underlines the threats caused by too strong of a dependence on imports.

"We should keep strengthening the fundamental role of agriculture. It is always the first task for such a populous country as China to solve the problem of feeding its more than a billion citizens. It decides the development and stability of our nation".

Sun Zhengcai, Minister for agriculture

Around ten years ago, the government began to shift its focus once again to the agricultural sector, after having focused primarily on export-oriented industrialization in the 1980s and 1990s, initially in the coastal regions of Shenzhen (not far from Hongkong) and Shanghai, and later on in other regions(like the capital, Beijing). Higher prices for grains and subsidies for fertilizer and machinery were introduced to motivate farmers to grow more grains once again. Additionally, there were deep cuts in the jungle of fees, taxes and charges, which had mushroomed over the years, putting a heavy burden on farmers.

This new policy meant a substantial increase in government spending for agriculture, rural areas and rural populations. The budget for agriculture of the central government increased threefold between 2000 and 2006 to nearly 317 billion Renminbi.[9] Investments in infrastructure projects like irrigation and drinking water supply moved up on the agenda, as did improvements in health and education systems and the construction of bio-fuel plants. China is one of the few countries where the proportion of expenses for agricultural research as part of GDP increases, targeting conventional agricultural technologies as well as bio and gene technologies. As a result of increased spending and investment, the

3 Shenggen Fan et al, 2010
4 Chen Guidi & Wu Chuntao, page 25
5 Walden Bello, 2009
6 Xiwen Chen, 2006
7 See minister for land and resources, www.asianews.it, dated 11. November 2010, accessed on 24. November 2010
8 People's Daily, 21. September 2009
9 Approx. 34 billion Euro, Duncan Freeman u. a., page 9

development of the agricultural sector had been driven forward.

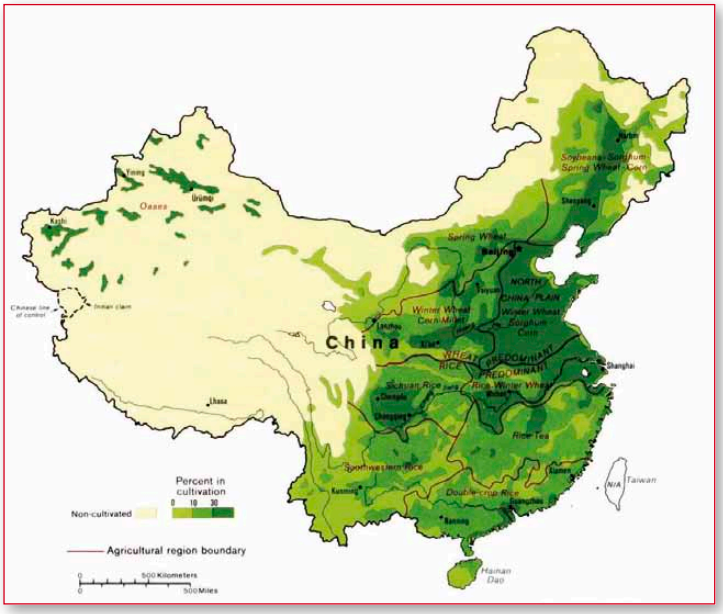
Grain production during this period of development moved once again from one record to the next. Farmers, cooperatives and state companies reported increasing harvests. According to the State Grain Information Center, in 2008 grain production reached the very same levels of the year 1998, with 511.5 million tons, and only one year later it rose again to an astonishing 528 million tons. If China wants to stick to the target of importing not more than five percent of its needs of basis foods, it will need to grow to 540 million tons by 2030.

To reach this production target, the province of Jilin, for example, in the northeast of the country, promises to contribute, using slogans like those often seen in the earlier socialist times. The region- with fertile soils, plenty of water and large agricultural units, is the second most important producer of grains: Governor Hang Changfu promised two years ago to increase, within a five-year span, the production of maize, rise and sorghum by 5 million tons to 30 million tons as Jilin's contribution to the national strategy of food security. Billions of Yuan now funnel into new, large-scale infrastructure projects like the diversion of water from the Nenjiang river to improve and expand irrigation, into the development of new seeds and into further mechanization of grain production.[10]

But "after five years with record harvests it will become difficult to increase grain production continuously", warns the report of the National Development and Reform Commission.[11] The possibilities for an intensification of production and expansion of cultivatable land, comparable to that seen in previous years, are reaching their limits in many regions. The production of industrial raw materials competes ever-increasingly with the production of grain, which is less attractive for the farmers. There also exists threats from climate change, which are difficult to assess.[12] "Agricultural foundation is still quite weak and needs strengthening", admits the state plan for a secured grain supply.[13]

Limits to growth

The enormous push which agriculture experienced in China during the past three decades is even more astonishing as the country, where 20 percent of world's population lives, commands less than ten percent of



The most important agrarian regions

the world's agricultural lands. Furthermore, the largest part of the land that is suitable for intensive agriculture is concentrated within a few regions, found mainly in the eastern third of the country. Vast areas in the north and in the northwest, like the provinces of Xinjiang or Inner Mongolia, are mainly suited for extensive cattle herding, given their rich grasslands. Yunnan or Sichuan in the Southwest, by contrast, are hilly and forested. Water, too, is scarce: Per capita, there is just one third (or perhaps even less) of the world average available. And this, too, is very unevenly distributed: In the subtropical South, rainfall is high and there are huge rivers like the Yangtze. Here in the "rice bowl", climate and irrigation make it possible to plant and harvest two to three times during a typical year. The Northern Chinese plains, which are the most important areas for growing wheat and maize, are much cooler and drier and suffer repeatedly from droughts or floods. Though irrigation has expanded somewhat since the 1960s, water scarcity remains a problem that is steadily increasing.

With the growth of industries, expanding cities, new suburbs and factories, roads and other infrastructure have increased and are eating into the fertile lands. At the same time, the soil suffers from chemical overkill. Zhen Weifeng, from the Agricultural University in Beijing, recently published a study showing that soils have become more acidified due to too much fertilizer.[14] To compensate for the loss of fertile land, the push for new agricultural land in other regions and

10 China Daily, October 28, 2008
11 The Guardian, March 5, 2009
12 See Jinxia Wang et al, 2010
13 State Grain Security Plan for 2008–2020 Period, cit. Global Times, August 2009, www.business.globaltimes.cn/comment/2009-08/461201.html

14 Uwe Hoering 2010

the translocation of farmers is increasing, even if many of the areas are not well suited for intensive agriculture. The development costs are high, the agricultural season short, and the agro-ecological conditions difficult to manage.

To compound the environmental impact, the demand for water in both cities and industries, as well as the amount needed to satiate a more prosperous urban lifestyle is increasing. Water, however, is becoming more and more polluted. In 2007, for example, Tai Lake in the Eastern Chinese city of Wuxi "blossomed". Tons of waste water from farms and factories caused an explosive multiplication of algae. The lake became green and muddy, the supply of drinking water for two million people had been affected. Since many irrigation systems are not well maintained, and therefore defunct, many farmers and cooperatives pump more and more groundwater to irrigate their fields, thereby lowering the ground water level dramatically.

Another cause for worry is the impact that climate change may have on agriculture. Abnormal fluctuations and extreme weather conditions are becoming increasingly common. But it is still too early to predict which regions in future may benefit from more rainfall or might suffer from drought and desertification. With these uncertain perspectives, flexible adaptation strategies are needed to adjust cultivation methods and crops to possible changes and challenges.

Part 2:
Rural space as an area of conflict

Mao Zedong and the start of the massive support for ecological agriculture in the village Liuminying (2004)

Many rural areas (especially those in the interior) missed the modernization and industrial upswing. Not only poor living conditions, but also environmental destruction and the eviction of farmers' families from their land caused widespread anger. With new laws and programs, the state is attempting to narrow the gap between mega-cities and rural regions and defuse discontent.

Each year, before the Chinese New Year (around the end of January or at the beginning of February), there is a mass exodus from the cities. Millions of people, working in the cities and industries, at construction sites, factories, or as house maids, return for two weeks to their homes in the countryside to visit their relatives. They prefer the migration to the life in their villages, although the wages are low and the working conditions harsh. The migrating labor forces – an estimated 150 to 200 million people – normally have no access to the health and social security systems, their children can't go to school, and they are not allow to settle in the cities (see *Hukou system*). This mass-movement is a symptom of how the situation in the rural areas and the agriculture has continuously deteriorated since the 1980s. In many regions there simply is not enough work or money to make a living, in stark contrast to the amenities of progress which the cities promise. Many rural households in modern day receive most of the income from their relatives working in urban areas.

Hukou system

To control the migration into the cities, the government introduced, in 1958, the differentiation in "rural" and "urban" households, the Hukou system. For 80 percent of the population this meant that they needed an official permit for moving their household into a city. Otherwise, they did not receive ration cards for food, neither housing nor employment, no access to hospitals and schools, could not officially marry, etc. Since 2003, the regulations, which even allowed the police to deport them back to their home village, were relaxed step by step.

Neglecting the rural regions

But it is not solely because of these millions of laborers from the rural areas that Chen Guidi and Wu Chuntao, whose stories about rural China opened a window to the situation beyond the mega-cities a few years ago, argue that industrialization "has been brought about on the shoulders of the peasants". After beginning rural development at the end of the 1970s with reforms like the *Household Production Responsibility System*, since the middle of the 1980s, the rural areas and the agricultural sector, whose proportion of GDP went down from 40 percent in 1970 to 11 percent (and thusly its economic relevance), were neglected in favor of the export-oriented industrialization. Investment and support measures from the state were concentrated in the cities, on infrastructure like dams and harbors, and in the various industries. Tax income from the rural areas was spent on urbanization and the development of industries. Additionally, local and regional administrations raised extra charges and fees – often arbitrary, like the charge for pigs – which became a burden for the family farms. Products from modern industries outcompeted small- and medium-sized enterprises in the rural areas where many jobs were lost. "The positive sides of the Household Production Responsibility System have been taken away one by one", Chen Guidi and Wu Chuntao cite a peasant from the Anhui Province, where the reforms started in 1978.[1]

During the same time, the situation in the health and eduction systems deteriorated. Before the reforms, this had been the responsibility of the people's communes. After that, local administrations and municipalities had been called upon to take over. But the financial means for these tasks were more than inadequate. Just one fourth of the national budget for basic education and public health facilities was funneled into the rural areas in the year 2002, where more than half of the population lived. And not only social services, but transport and communication infrastructure as well lagged behind the development in the boom regions. In 2004, every second village had no access to safe drinking water.

On top of this came the threats to the living conditions in rural areas from the impacts of industrial development. Huge dams, producing electricity for cities and factories, caused the eviction and relocation of millions of people and the loss of forests and agricultural lands. And there was widespread environmental pollution which was difficult to control.[2] Livestock factories produced millions of tons of slurry that saturated both soil and water. Hundred of thousands of people, it is estimated, were poisoned by the application of pesticides in agriculture. Nearly one fourth of the surface water is, according to a report in the Hong Kong *Asian Times*, so polluted, that it can not be used for industrial purposes let alone for agriculture.[3] Heavy metals cause cancer and affect, in some regions, agricultural products to such an extent, that they can't be sold anymore.

In the case of environmental damage by industry, the affected population receives hardly any compensation, and if so, it is often laughably inadequate. For example, when the *Zijin Mining Group*, the largest gold mining company in the country, caused a chemical accident which killed nearly two million kilograms of fish in the Zijin River, it paid three Yuan per kilo as compensation – altogether less then 1 Million US Dollars.

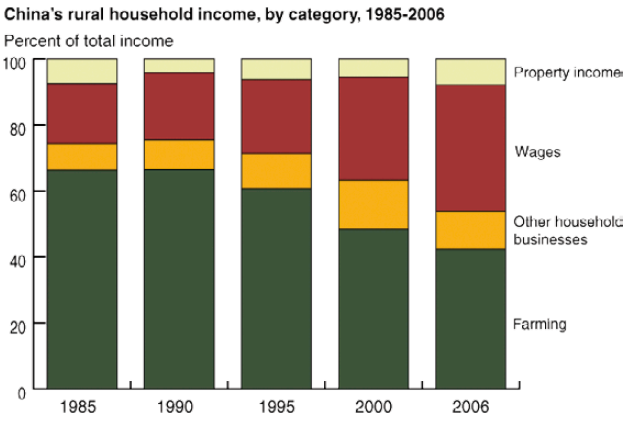
Pawn sacrifice

But agriculture was not only sacrificed to industrialization, as Chen Guidi and Wu Chuntao complain, but also to the economic liberalization occurring consequentially. After the accession to the World Trade Organization WTO in 2001, China reduced the barriers for imports of agricultural goods in exchange for access to the world market for its own manufactured products. Import quotas were changed into tariff quotas, and the state trade monopolies restricted. The tariffs for agricultural products today are among the lowest in the world – with very few exceptions.

Wheat and rice are two of the few exceptions. In spite of the far-reaching trade liberalization, the grain trade especially is still regulated by the state. Measures such as import restrictions or export bans limit price increases and accompany the efforts to bring about food security from their own production.

Soy beans, however, are another matter entirely. For this crop, used as cattle feed and for various foods, import tariffs were cut from more than 100 percent to less than 3 percent. Imports from Brazil and the USA replaced the internal soy production almost completely. At the end of 2008, for example, the commercial trade with soy from the Heilongjiang Province, one of the most important regions for growing soy, came to a standstill because the import price was lower than the support price paid by the government. Regional differences grew because agrarian producers closer to the coast benefited more from the new export chances than those further inland. Agriculture has been "sacrificed to the national trade policy" observed Zhang Xiaoshan

1 Chen Guidi & Wu Chuntao, page 26
2 See Elizabeth C. Economy, 2004
3 www.atimes.com/atimes/China/LH10Ad02.html



Source: Economic Research Service calculations based on China's National Bureau of Statistics (NBS) estimates of rural household "pure" (net) income.

from the Institute for Rural Development of the *Chinese Academy of Social Sciences* (CASS), "China is almost naked" regarding protection against imports of agricultural products, he said.[4]

Additionally, small family farms come under pressure from the rapid expansion of agroindustries. Still, the growing demand for meat, a sign of increasing prosperity, is met mainly by supplies from small producers. But the lucrative market is dominated more and more by large industrialized producers, animal factories, big slaughter houses and processing industries. Health conditions and prescribed quality standards, which the state is demanding in the name of food safety, speed up this process because small producers are largely unable to fulfill them.

According to the UN Food and Agriculture Organization, FAO, in 1985 there were more than 150 million small farmers complementing their agricultural activities with a few chickens, earning a small additional income or improving their diet. In 2005, more than half of them had been displaced by intensive chicken breeding with a tendency towards fewer and larger private companies. With supermarkets around every corner and alternative incomes, for example, from migrant laborers in the cities, rearing chicken makes hardly any sense anymore.

The same development can be observed regarding beef and milk: Here, sales are growing continuously, but not for the benefit of small farmers or nomadic cattle holders in Inner Mongolia, whose traditional extensive ranching is under pressure from settlement programs and fencing of range lands. Instead, the beneficiaries are state companies like the *China National Oils, Foodstuffs and Cereals Corporation* (COFCO), China's biggest food exporter and importer, and big private companies or foreign multinationals like Smithfield (the American market leader for pork) which take over the whole supply chains.

"In 2005 differences in income in China were among the largest world wide."

As a result of these developments, rural incomes after the fast increase in the 1980s remained, in the following years, far behind those in the urban areas. While in 2004, the average yearly income in the rural areas was 2,900 Yuan against 9,400 Yuan in the cities, the difference increased in 2009 to 11,000 Yuan, with an average income in the urban areas of 15,700 Yuan[5]. At the same time, the differences in income grew in the urban as well as in the rural areas and are, since 2005, among the largest in the world. According to recent estimates, there are 825,000 people in mainland China with assets of more than 10 million Yuan,[6] and in 2006, there were 20 billionaires listed in *Forbes Magazine* who successfully implemented the encouragement by Deng Xiaoping, that "some should become rich first". At the same time, in 2005, in spite of the all of the prosperity, there were still 208 million people living on less than 1.25 US Dollars a day.[7] Many rural regions could not participate in the industrial upswing and the increasing prosperity of the urban populations.

4 Uwe Hoering 2010

5 China Daily, April 2009
6 Http://german.china.org.cn/china/2009-04/17/content_17623617.htm
7 Shenggen Fan et al, 2010

'San nong wenti'

The renowned expert for rural development, Wen Tiejun from Renmin University in Beijing, made the point ten years ago that the difference between rural and urban structures has to be overcome to achieve a sustainable solution for the problems in the rural regions. The social problems, he said, are the result of economic and regional disintegration. The political leadership took this concept of an integrated solution, solving the problems of rural development on the economic as well as the social and institutional level up with the slogan of "*San nong wenti*", or the "Three rural questions". In the 11th Five Year Program (2006–2011) the Communist Party formulated new guidelines, which are supposed to promote the social balance by reducing the prosperity gap between rural and urban areas and to support a sustainable development.

Who owns the land?

Since the reforms at the end of the 1970s, the land question in the rural areas seems to be clearly established: the land itself is collective property, but each family has user rights, which are limited to a specific period of time, typically 30 years. Thus land tenure became an important safety net for the rural population – and at the same time an essential factor of internal political stability. Wen Tiejun, agricultural scientist at the Renmin University in Beijing, summarized it like this: "Thanks to the present system of collective property, China experienced three decades of rapid economic growth, and different from most large developing countries there are hardly any landless poor."[8]

But this seems to change rapidly. Along with the economic development, the hunger for land increases. Cities are expanding, new industrial zones popping up, and infrastructure is eating into the rural areas. Agricultural enterprises and companies expand because of the growing demand both inside the country and abroad, and also to satiate the hunger for profits. Interest groups with deep financial resources and political backing consequently encroach further and further into the rural regions looking for land.

But it is rather unclear who is allowed to sell land or give permission for changing the land use pattern, for example, from agricultural to industrial use and under which circumstances this may happen. The legal situation is complicated, responsibilities and procedures in the case of eviction or transfer are opaque at best, and rules for compensations unspecified. To protect the economic interests of the peasants, the state promoted a number of legislative initiatives. In March 2003, for example, the *Rural Land Contract Law* had been enacted, which prevents that, after the lease period of, say, 30 years, the land will automatically go back to the collective administration or that the size of the plots is continuously adjusted according to the number of household members, which would create more land security for the family farmers. But implementation of and compliance with such initiatives often is insufficient.

The number of farmers who lost their land due to urbanization and industrialization is estimated to range between 40 and 50 million, and is steadily growing each year by two million.[9] Research shows that the family farmers receive between just five and ten percent of the transaction price of their lands, while influential village chiefs, members of local administration, various brokers and some village committees (not to mention the urban speculators and construction companies) share amongst themselves the lion's share and became wealthy.[10]

There are therefore frequent protests against the loss of land. The low compensation for the loss of access to land especially is one of the most relevant reasons for discontent of farmers. Accordingly, Liang Jiyang, researcher at the *Chinese Academy of Sciences* and adviser to the government, recommends restricting the possibilities to evict farmers from their land. One example, he mentions for such a reform, is the more precise definition of "public interest", justifying the cancellation of lease contracts. And farmers should be fully compensated instead of local institutions or influential people reaping enormous profits.[11]

Conflict management

In October 2008, the Central Committee of the Communist Party of China adopted a comprehensive reform proposal to achieve better transparency when transferring land use rights, to prolong the lease period to up to 70 years and to secure that the agricultural lands are not shrinking further. It is expected that this will help to control the worst impacts of urbanization, illegal eviction and confiscation of land without proper compensation. Theoretically, farmers could benefit from rising land prices by leasing out their farms when migrating for work to the cities. Families who transfer their

Conflicts*

Five years ago, the Ministry of Public Security reported 87,000 "incidents involving larger groups", most of them in rural areas. Political activists feel that the real figures, in the meantime, are even higher. Repeatedly, the conflicts have to do with land use rights, arbitrary dispossession, environmental damages caused by industries or cities damaging agriculture and health, but also with the discrimination against agriculture and rural populations, and corruption and arbitrary authority. The various protest manifestations range from peaceful petitions to assemblies, from road blocks, tax strikes and protest marches, to violent confrontations with the security forces, which become especially difficult if the mostly uncoordinated and unorganized protests begin to spread and to connect amongst each other.

* Source: Anja D. Senz 2007

8 Financial Times, February 19, 2008
9 OECD 2007
10 OECD 2007
11 Xinhua, March 8, 2008

user rights to agrocompanies automatically become shareholders of that company.[12]

But the land question is not just linked to issues of justice or livelihoods of families in the rural areas. It is also an issue of how to develop agriculture, of further modernization, of productivity increase and efficiency, of profitability and food security. In the debate about the land issue the voices are becoming more vocal advocating a comprehensive privatization of land ownership in rural areas. The World Bank and various foreign organizations as well as Chinese commentators and economists, many of them trained in the US, claim that this will not only protect farmers best against the loss of their land use rights and that they would benefit most from land transactions. Too, it would promote the land transfer to the most productive uses and therefore accelerate agroindustrial developments.

But the reforms initiated in the last years did not yet eliminate the collective ownership and introduce comprehensive private ownership of land. Obviously, there are fears on the side of the government that the loss of access to land would push the migration to the cities beyond control and therefore social problems and tensions could increase. If the farmers lose their land, it might create a "ticking time bomb" situation, Wen Tiejun warns.[13] Chinese economists expect that even without a complete privatization, the reforms will contribute to a consolidation of the small farms, which will be allotted to the farmers from the collectives, and therefore bigger and more efficient farms will emerge. This will allow for modernization and further industrialization of agriculture, which should result in higher production and productivity as well as in higher income and therefore assist in reducing the income gap between urban and rural areas, which was created by the export-oriented industrialization and opening up the local market for imports of cotton or soy beans after China's WTO accession in 2001. At the same time, the reforms shall restrict the possibilities of changing agricultural lands into building lands or to other uses, thus protecting the remaining agricultural land as the foundation of food security from further erosion.

Within the framework of the policy of a New Socialist Country, formulated in the Spring of 2006, the government promotes investments and political reforms in the rural regions. The main aims are the sufficient supply of grains and other agricultural products, a steady increase in income and a harmonious development of rural societies by a "participatory democracy" (see box). The objective should be to "keep safeguarding the material interests and democratic rights of the farmers", Sun Zhengcai, minister for agriculture, announced and "to develop a modern agriculture with Chinese characteristics".

The objective should be to "keep safeguarding the material interests and democratic rights of farmers" and to "develop a modern agriculture with Chinese features".

Sun Zhengcai, Minister for agriculture

With a whole set of measures, laws, and decrees, the government wants to reduce the legal and economic disadvantages of the rural regions:

- With a reform of taxes and charges, the financial burden shall be reduced, thereby systematically making obsolete the high-handedly introduced fees which were previously permitted. At the same time, the financial means for the rural regions had been increased and special programs in support of less developed provinces formulated.
- In 2002, the State Council had declared that migrants are "members of the working class" too, and should be treated equally. In 2008, special economic zones like Shenzhen began to relax the constraints of the Hukou system. Migrants were partly covered by the social security system and their access to education and health facilities improved.
- With elections at the village level, there is a step forward in democratization, improving the accountability of local cadre and the transparency of administration. Observers still complain that these new rules are often manipulated by members of the party or the government and that they are restricted to the lowest level of administration.[14]

After two decades of tilted support for export-oriented industries, for a few years now, the other half of China – agrarian China – is moving once again into focus, caused by political and developmental considerations alike. Armed with numerous initiatives, the government in Beijing is trying to reduce the discrimination against the rural regions and to promote agriculture. But with the agroindustrial modernization, there is a development happening now which implies fundamental changes for the family farms. Whether and how they will assert themselves in the future against the overwhelming competition from urbanization, industry and industrial agriculture for land, water, labor and government support remains uncertain.

12 On the other hand, the new law could strengthen patriarchal structures because land use rights are normally registered in the name of the husband supposed to be 'head of household', as Nora Sausmikat observed.

13 Uwe Hoering 2010

14 Walden Bello 2009

Five central objectives of the policy of a "New Socialist Countryside"

- Speeding up the development of rural infrastructure such as roads, electricity and water supply, schools and clinics, and sanitation systems.

- Improving access to public services, especially education and a cooperative health care system, social security system for farmers and a rural pension system.

- Efforts to raise farmers' incomes- this will include enhancements for the development of agricultural production capacity, encouraging the development of village and township enterprises, and speeding up the migration to urban areas. The plan assumes a transfer of 25 million rural workers to urban areas.

- Improving the capacity for increases in grain production, amongst others with direct subsidies, and improve irrigation.

- Deepening institutional reforms, including setting up of rural self-governance mechanisms, and development of farmers autonomous organizations such as cooperative economic organizations and professional associations.

(Source: OECD)

Part 3:
Food security – food safety

While poverty and hunger have been reduced significantly and food security has been achieved more or less, food safety becomes increasingly a problem leading to occasional public protests. This could open up chances for a bigger role of ecological agriculture.

"Industrial agriculture solved the food problem", says Zheng Fengtian, agricultural scientist at the Renmin University in Beijing.[1] He is proud that China proved the forecast by Lester Brown from WorldWatch Institute, who had warned in the middle of the 1990s, that the huge food needs would cause a catastrophe for the rest of the world wrong. China performed the herculean-sized feat of increasing agricultural production and pushing forward industrialization and urbanization side by side. "But the costs have been high", Zheng Fengtian admits.

"Industrial agriculture solved the food problem. But the costs have been high".

Zheng Fengtian

On one hand, the costs, Zheng Fengtian mentions, are the damages caused by industrial agriculture. Slurry from meat factories and sludge containing heavy metals, which is used by farmers as fertilizer, poison both water and soil. The intensive use of water makes more new dams, huge canals and deeper wells necessary. China is on the way to pay heavily for its success with a loss of its basic resources. Meanwhile, these costs are reaching into the lives of the consumers.

The consumers wake up

In September 2008, the scandal of polluted milk products made headlines worldwide. Processors like the huge company *Sanlu* sold milk containing melamine (which had been added to give the milk the appearance of being a higher quality than it actually was). At least 53,000 children fell ill, and four babies died. For several months, the authorities ignored the scandal to protect China's image during the Olympic Games.

The melamine scandal was, in all likelihood, just the tip of an iceberg. Fraud by food processors like rotten meat, seafood contaminated by radioactivity, bleached rice or residues of pesticides used in agriculture, or antibiotics used in livestock production are wide spread – and in the meantime, these issues and those like them often became issues of public debate and concern in export markets.

In March 2010, *Greenpeace China* reported that some supermarkets sold rice contaminated with genetically modified (GM) varieties.[2] Huang Dafang, a member of the Committee for Biological Safety at the Ministry for Agriculture, rejected these findings – "we have never

1 International Workshop on Food and Sustainable Agriculture, Renmin University, Beijing, March 12 to 15, 2010, see An Xin 2010, Uwe Hoering 2010

2 China Daily, March 16, 2010

heard from such cases" – but admitted that the methods for testing foods and tracing their sources should be improved. Officially, genetically modified rice has not been released to the market. But even in 2005, *Greenpeace* uncovered the illegal cultivation and sale of GM rice in Hubei, one of the leading provinces for growing rice.

"Regarding nutrition, China is in crisis", the Swiss newspaper NZZ cites Wen Tiejun, agronomist at the Renmin University in Beijing, "people become more aware that their food doesn't come from farmers any more, but from commercial companies interested only in profits."[3] Terry Yu, founder of the successful biological food stores "Lohoa City", with shops in Beijing and Shenzhen confirms, "that the biggest problem for China's food industry is that the consumers don't trust the supply chain anymore, nor do the processors trust their suppliers – nobody trusts each other."[4]

Because of the scandals and the negative impacts on agroexports, the government has made food safety one of its top priorities in recent years, and taken action to improve it. In 2006, for example, a law concerning the quality of agricultural products was passed, and in 2009 a law on food safety also went into affect. Minimal standards and detailed recommendations are intended to reduce the input of pesticides, promote integrated pest management and regulate the practices in livestock keeping and aquaculture.

"Green food"

As early as the 1990s, China began to introduce a three-layered certification system to strengthen the consumers' confidence in their food.[5] Today, more than 180,000 products- from beer to rice, chips to spices, and tinned food to soft drinks- carry one of the different "Eco labels". More than 1,000 key companies in the food industry were rated as "green", according to a report in *China Daily* in early 2010.[6] And consumers are ready to pay significantly higher prices for "green food". Chinese and foreign supermarket chains have realized the opportunities the new middle classes in the cities provide – being as money-focused, quality conscious and confused by food scandals as they are. In the section for biological food of the *Carrefour supermarket* in Beijing's Guangqumennei Dajie, posters explain the origins of fruits and vegetables from farm to shelf.

At present day, around one fourth of the agricultural lands have been certified as *Wugonghai*, a label which was introduced in 2002 and confirms that the product does not contain any contaminants and therefore poses no threat to health upon consumption. Even more strict is the "Green Food" label (*Lüse Shipin*), which has been in existence since 1992: it certifies products which are cultivated with lower doses of chemicals, but does not exclude the use of pesticides altogether, or genetically modified crops. The area of cultivation and the quantities are already much smaller than products certified as Wugonghai. And just a very small proportion is certified as "Green food AA", which corresponds broadly with the strict criteria of ecological farming, but as a purely Chinese certification system has been recognized internationally only by a few buyers.

"As long as consumer groups and media don't play a more active role in consumer protection the control mechanisms will not work."

One of the problems is, that such regulations and certifications are insufficient in practical terms. One indicator is that in early 2010, again, milk powder was sold which was contaminated with melamine. For most of the products, certification simply confirms what should be self-evident, declaring that they don't pose any health hazards. Controls are mostly restricted to the final products. There have, however, been several reports about faked labels and products, and there are huge loopholes in the controls of the production conditions, farms, and processing units. One major problem is the vast number of processing units, of which 78 percent have less than ten employees, and the numerous small suppliers, that make it extremely difficult to control the origins and production efficiently. An UN-report on food safety in China has outlined that the system is too complicated and incoherent, and manpower and financial means are insufficient.[7] Observers therefore fear that as long as consumer groups and media don't play a more active role in consumer protection, control mechanisms will not work.

3 Die Führer essen grün. In: NZZ Folio 03/10
4 Cit. by Joshua Frank, Interest in organic food on the rise in China. www.latimes.com, August 8 2009
5 See for example Eva Sternfeld 2009
6 'Stephen Scoones & Laure Elsaesser (2008) even put the figure at 4,600 companies, which received the "Green Food Label" by the end of 2006.
7 Globe and Mail, October 22, 2008

Ecological agriculture ...

In spite of the floods of labels, ecological agriculture in China is still in its infancy, even if it is growing fast; Australian agronomist John Paull even feels an "ecological agrarian revolution" advancing.[8] The impressive figures about certification disguise the fact that the number of genuine ecological farmers is still low and an organic farmers' movement is just beginning. Just two to four percent of agricultural lands are certified according to the criteria of IFOAM, the *International Federation of Organic Agricultural Movements*, and therefore fulfilling international standards.[9] Most of their products are being exported – mainly rice, tea and herbs, vegetables and mushrooms, pumpkin and sunflower kernels, and oils. In 2007, their proportion of agricultural exports reached seven percent with a value of 2.1 billion US Dollars and an annual increase of 40 percent.

So far, mainly large farms are implementing the idea of an "ecological agriculture", not necessarily to feed China better, but to benefit from the price premiums and export opportunities provided. China's first "eco-village", *Liu Min Ying*, established in the 1980s, is considered today to be one of the richest villages in the capital region. It grew into a large-scale company, supplying supermarket chains and diversifying into eco-tourism and training. *Chaoda Modern Agriculture*, one of the largest Chinese companies in ecological agriculture, produces on 30,000 hectares. The supermarket chain Carrefour, with more than 130 stores, has its own "Quality Line", promising to control every step from farm to shelf. Direct contracts between individual farms or cooperatives eliminate middlemen from the value chain. Several state-owned enterprise belong to the big producers and exporters as well. Low wages compensate for the higher labor intensity of ecological agriculture. The premiums, which range from 10 to 50 percent for "Green Food", and can be much more for true ecological products, are pocketed mainly by the traders and the large companies, especially the profits from exports.

But for independent farmers, the conversion is difficult. While, in spite of the "green revolution", there are many areas (especially in remote regions) where the industrial agriculture and its negative impacts on soil and water are yet not problematic, and therefore, the preconditions for ecological farming still favorable, it is difficult to built upon these because support from the state is widely lacking while the industrial agriculture is favored with subsidies and various support systems. Many farmers are too poor or have barely any meaningful access to urban markets. Or the cooperatives, supplying inputs and developing market strategies for them, determine what kind of product they cultivate and how to do this. Even for successful farmers in the vicinity of urban conglomerates, the risks of organic farming are high and certification challenging, as Zhou Jiuxuan of *Pesticide Eco-Alternatives Center* (PEAC) in the Yunnan Province explains. "It is really difficult to find appropriate answers when farmers ask us whether ecological or sustainable agriculture will improve their incomes."

It is not surprising that ecological agriculture is put to the test when it comes to the question of whether it will be able to feed China or not. At the seminar on "Food and Sustainable Agriculture" at the Renmin University in Beijing in March 2010, participants from USA, India, Ethiopia and other countries in Southeast Asia discussed, along with Chinese agronomists and social scientists, their experiences with biocomposting, closed input chains, conservation of agro-biological diversity, biological pest management and environmental damages and exhaustion of resources due to industrial agriculture – with the crucial concerns from the Chinese side, whether and how ecological agriculture can increase productivity. Skepticism prevailed. And one of the participants summarized, that the only real/practical solution might be "to make modern agriculture ecological".

8 John Paull, China's Organic Revolution. In: Journal of Organic Systems 2007 2(1) 1–11

9 According to Stephen Scoones & Laure Elsaesser (2008) in 2006 there were 2.1 million hectares certified according to the standards of IFOAM, making China third behind Australia and Argentina, 1.1 million hectares were in the process of conversion.

… and gene technology

Like ecological or sustainable agriculture, "green" genetic engineering projects itself as a solution for the problems in agriculture – as a crucial contribution to food security and for adaptation to climate change.[10] Different from ecological agriculture, it commands a much more powerful scientific, economic and political lobby. High-ranking politicians like Liu Yandong, a member of the State Council, speak out for a "bioindustry as a pillar of national economy". For China's agricultural development strategy as well as for the industrial competition with more advanced countries, bio- and gene technology are of central importance and relevance.

"Our goal is to promote bioindustry through intensified R&D in life sciences and biotechnology, and to speed up the industrialization of biotechnology and development of bio-economy. We should catch up with the world leaders in biotech R&D by 2020, and build bio-industry as a pillar of the national economy."

Liu Yandong, member of the State Council

Commercial release of genetically modified crops

As far back as 1992, genetically modified tobacco was approved, until 1996, when an estimated 1.6 million hectares were cultivated with it. Cultivation had then been halted due to the introduction of labeling of GM crops in Japan, the main export market.

In 1997, the approval for commercial use of Bt-cotton followed, which contains the gene of a bacteria (bacillus thuringiensis) to protect the plant from the bollworm. In 2008, Bt-cotton was grown by around 7 million farmers on 3.8 million hectares. One third of the seeds had been sold by the US-American seed multinational Monsanto. Two thirds are provided by the Chinese company Biocentury Transgene, which had been granted licensing privileges on Bt-seeds developed by the government-owned research institution CAAS.

Furthermore, genetically modified peanuts, pawpaw, tomatoes and sweet pepper were approved (as well as poplar) but the cultivation area is small, if there is any commercial use at all.

According to the World Bank, China has the most comprehensive program for agro-biotechnology amongst the emerging economies, with many of its successes having produced "global impacts". The implementation in the area of industrial raw material is already very advanced: Commercial utilization for example of tobacco and other crops like tomatoes and potatoes started as early as the 1990s. With an acreage of 3.8 million hectares (2008), around three percent of agricultural lands, China ranks sixth among the producers of genetically modified crops, almost exclusively cotton. (see box)

Several public institutions, like the *Chinese Academy of Agricultural Sciences* (CAAS) and agricultural universities like the Huazhong University in Wuhan, capital of the central Chinese province of Hubei, are busy doing research. There is close cooperation between the Chinese government and the US, like in the case of the *US-China High-Level Biotechnology Joint Working Group*, BWG, set up in July 2002. In July 2008, the State Council earmarked three billion US Dollars for the research of new biotech plants. According to the news agency Xinhua, the project aims to "identify genes with high commercial values and with intellectual property rights belonging to China, and to develop high-quality, high-yielding and pest resistant GM plants."

This goes along in trending towards the development of a strong biotech industry, which shall be competitive internationally. Foreign companies like Monsanto, a world leader in the supply of GM seeds, which had initially been more engaged in the research and breeding of high-yielding varieties and the provision of seeds, have since been permitted to expand their engagement into the area of agro-biotechnology. In November 2009, Monsanto opened up its own research center for biotechnology in China, in cooperation with Chinese research institutions like the Huazhong University. The Chinese-US-American joint venture *Origin Agritech Ltd.*, with its headquarters in Beijing and the third-largest seed company in the country, recently (and proudly) presented itself as being the first company in China to have developed GM-maize domestically. Observers forecast that "China is on its way to a dominant position in products and services" and consider the country to be "on the ascent as a biotechnology giant."

The advance of gene technology does not stop short of basic foods like rice. In December 2009, the Ministry of Agriculture declared that two genetically modified rice varieties – *Hua Hui 1* and *Bt Shanyou 63* – passed the security check and could be released for commercial cultivation within two or three years. This gives a push to the hopes of the proponents of gene technology

10 Proponents of "green" genetic engineering often prefer to refer to it as biotechnology, obscuring the difference between natural biological processes like, for example, using yeast in brewing beer, while gene technology refers to the transfer of genes between different organisms like plants or bacteria.

on one side, to the fears of its opponents on the other side: the breakthrough for genetically modified crops into the mass market of basic foods. Similarly, research and the use of bio- and gene technology on fish and livestock is progressing rapidly.

"China has the most comprehensive program for agro-biotechnology amongst the emerging economies – with global impacts of many of its successes." World Bank

Debates about the future of agriculture

But the clean bill issued for GM rice by the Ministry of Agriculture sparked a broad discussion amongst scientists and in the media. The news agency *Xinhua* queried whether this is reason for "hope or for fear", and critics denounced the promises of the proponents of agro-biotechnology as exaggerated and recalled the dangers to health, environment and agriculture.

According to civil society organizations like Greenpeace and Third World Network, working in China, the country would become dependent on foreign multinationals as in addition. For both of the rice varieties, for example which received the final "okay" in December 2009, there are at least 11 foreign patents. In case of a commercial release, payments would then be due to the patent holders, among them, *Monsanto* and *Syngenta*. Higher prices for seeds could negatively impact the farmers calculation to grow rice and prices for consumers. This could mean lower production of rice and anger on the side of the consumers, responding immediately to rising food prices.

Scientists like Xue Dayuan, from the Ministry of the Environment, who played a leading role in formulating China's policy on biological safety, recommend that the government should be very cautious. The contamination of rice varieties growing wild (which are an indispensable gene pool for breeders) by GM rice could threaten food security. "If GM rice is not regulated reliably, the consequences could be unimaginable", he warned. Though China has regulations about biological safety, implementation remains weak. In Xinjiang province farmers began to cultivate Bt-cotton long before it was officially released, reports Xue Dayuan. And in several cases, Bt-cotton has been cultivated without proper labeling.

Solid export interests could also block the cultivation of genetically modified crops. Important trading partners like Japanese and Korean importers demand thorough labeling. And as in Europe, reservations against genetically modified foods are strong.

So, whether in the end, the genetic engineering industry will celebrate, or the concerns about the high-risk technology will prevail, is still an open question. But for Xue Dayuan, the immense funds flowing into the research on biotechnology are a reason to worry. Such a concentration on gene technology could further reduce the already low attention to and concern for the improvement of traditional breeding methods and agricultural cultivation practices. And as a result, this would slow down and endanger the development of ecological alternatives.

Agronomist Zhou Li: The ministry is being too hasty

What do you think of the Ministry of Agriculture's recent decision to issue bio-safety certificates to two strains of GM crops?
Zhou: China has its own reasons for taking such swift action. But the Ministry of Agriculture is still being too hasty in issuing the certificates, as there are not enough experiments to prove GM food's safety.

Will GM plants increase farmers' income?
Zhou: GM plants can only cut costs through large-scale planting. Individual farmers in developing countries can't bear the burden of growing investment costs.

Is GM food a necessary choice for China's agriculture?
Zhou: in China, biodiversity conservation, regionalized agriculture, small-scale family farms and other ways that have been proved effective haven't received enough financial support, and their potential to increase production hasn't been made good use of.

Besides, China still has great potential to use conventional breeding, irrigation and water conservancy, and other agricultural infrastructure.

These, instead of GM food, are the most important methods to ensure food security and safety. Before we have used these methods in the best way possible, it's too early to say that GM technologies are the only solution, even putting aside the issue of GM safety.

Field experiments for rice cultivation in Guangzhou area

Part 4:
China's agriculture "going global"

In spite of a growing demand and proving skeptics like Lester Brown wrong[1]*, China can still feed itself, at least more or less. But commodities like cotton or feed like soybeans have to be imported to supply the industry. This not only drives up the prices in the world markets but also Chinese investors into neighbouring countries in the region, to Africa and even to Latin America. At the same time, for exporters like the European Union, the Chinese market becomes more attractive.*

China is considered to be one of the countries of origin of the soybean. For thousands of years it has been cultivated, and whether processed into soy sauce or as tofu it is the embodiment of Chinese cooking. But today, most farmers have ceased to grow soy altogether. Instead, the country imports three quarters of its needs and has changed after a period of a few years from an exporter to the world's biggest importer. When China opened its borders for imports after its accession to the *World Trade Organisation* (WTO) in 2001, farmers from Brazil (where former natural forests had been converted into huge monocultures with genetically modified soy) and from the USA dominated the market. And it is not just soy, mainly used as feed in the rapidly growing intensive animal industry, that had begun to be imported *en masse*. Many other agricultural products are imported, from milk to rubber, palm oil, or hides and skins. "We are dependent on land and water resources in other countries", admits Zhang Xioashan from the research institute *Chinese Academy of Social Sciences* (CASS).

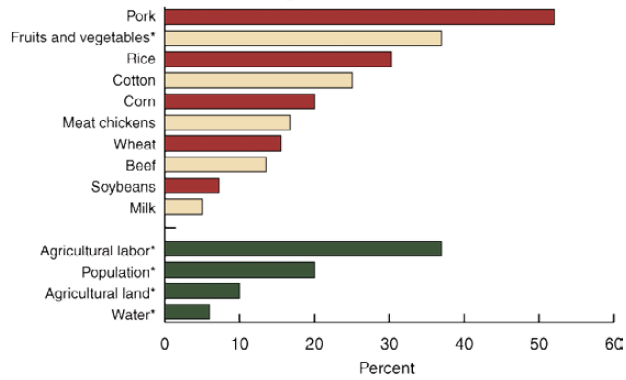
Foreign Trade

Such a statement seems to be unjustified, looking at the foreign trade balance. While the imports of agricultural products had increased more than threefold to 65.2 billion US Dollars between 2000 and 2007 (that is, since the accession to the WTO) and China became the fourth largest importer of agricultural commodities, their proportion decreased continuously to 6.8 percent of all imports. Naturally, difficulties in paying the import bill do not exist given their enormous reserves in foreign currencies. And in the same period of time, exports grew strongly as well. With 39 billion US Dollars in 2007, China became the fifth largest exporter of agrarian products: mainly pork, chicken, fruit, and fish.

There is also no dependency found when looking only at the food sector. Not only are staple foods like wheat and rice often produced far beyond the internal demand, but meat, fish, fruits and vegetables are also found in abundance. Both milk and milk products (increasingly in high demand in recent years thanks to a government

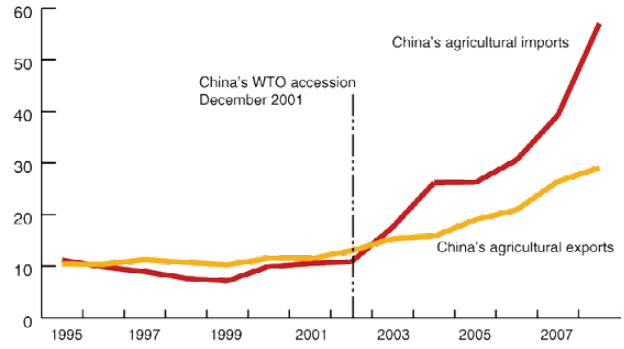
1 Lester Brown, Who Will Feed China? 1995 (Worldwatch Institute)

China's estimated world shares of agricultural production, 2005



*Source: Food and Agriculture Organizaion data.
Source: Economic Research Service calculations based on USDA data (except where noted).

China's agricultural imports outpaced exports after WTO accession



Source: Economic Research Service calculations based on China customs data.

school milk programme) are some of the exceptions. The gap between internal production by China's cows and the demand for dairy products is bridged by imports, mainly from New Zealand and Australia.

"We should keep strengthening the fundamental role of agriculture. It is always the first task for such a populous country as China to solve the problem of feeding its more than a billion citizens. It decides the development and stability of our nation".

Sun Zhengcai, Minister of Agriculture

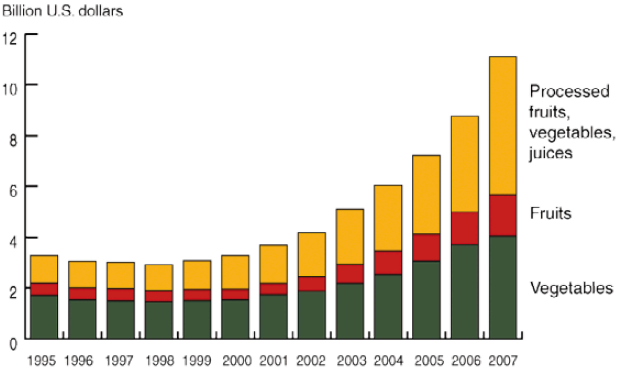
Ian Neeland even believes that "China could become Asia's farm and kitchen"[2]. The Australian agroeconomist, living and working in China, teamed up with *Syngenta*, the Swiss agribusiness and seeds multinational, to grow hitherto unknown products like sweet corn and iceberg salad in Shanxi province. China's main customer is *Kentucky Fried Chicken*, but the Australo-Swiss joint venture has aimed at high value markets in the region too, like Japan and South Korea. In these export markets, China can succeed with products that are labour intensive like organic products, or products which have a high financial yield per acre like vegetables, salads, herbs and spices or fruits. The exports into the countries of the region are already large enough to out-compete local farmers, resulting in angry protests.

Different from staple food, there is an increasing dependency on imports of commodities. Industrialised agriculture not only needs feed, but also fertiliser and oil. To reduce this dependency and to promote the further expansion of agriculture, the state supports the development of a national agroindustry. The state-owned oil company *Sinochem*, mother of the largest Chinese fertiliser company *Sinofert,* showed strong interest in taking over the Canadian fertiliser producer *Potash* and was prepared to pay between 40 and 60 billion US Dollars.

Secondly, the demand for agrarian commodities is being driven to ever new heights by industrial growth: Today, China is the largest buyer on the world market of cotton for the textile industry, which is imported to a large extent from the USA and increasingly from Africa. To supply their booming car industry, China had already surpassed the USA in 2002 as the world's largest consumer of natural rubber, and demand for the year 2020 is estimated to reach 11.5 million tons per year, equal to 30 percent of world wide production. A growing proportion of this is imported from neighbouring countries like Vietnam.

For other plantation products like soybeans, corn, palm oil and rubber, which require both land and water in large quantities, observers expect a continuously growing trade as well. Both limited growth and a scarce natural resource base in China itself will lead to a growing virtual import of land and water from other countries around the globe for its own economic develop-

China's exports of horticultural products grew rapidly after 2001*



*Date of China's WTO accession.
Source: Economic Research Service calculations based on China customs statistics.

2 Financial Times, 30. September 2003

ment. Conflicts are unavoidable: Japanese soy dealers, for example, have already complained about difficulties in procuring enough soybeans because China is sweeping the market and pushing up prices. As a response, Japanese companies began to invest in Brazil and Africa to grow soybeans for their internal markets.[3]

"As long as government policies are supporting the concept of food security by China's own agriculture, there is hardly any danger that the demand of 1.3 billion Chinese will drive up world market prices for food and will buy up the life saving rations of poorer countries or people."

Chinese Farmers in Africa

As China's global expansion not only stirs up the markets for industrial and consumer goods but also pushes up prices for raw materials, time and again stories of huge land deals circulate. Reports about alleged concessions for one million hectares in the Philippines and for large estates in Mozambique, Indonesia, Papua New Guinea, Zimbabwe and in the Northeast of Brazil had been made known; also, rumours about hundreds of thousands of Chinese labourers and hundreds of Chinese villages in Africa, where construction workers settled after their contracts ended had spread. Looking at the limited resources of land and water and the well known financial power and entrepreneurial appetite of Chinese companies, such news, whether reports or rumours, are only too plausible.

Looking back in history, China's engagement in the agricultural sector of other countries is not entirely new. Since decades, the government channelled development aid into agricultural projects, especially in Africa, and often for growing rice. But most of them paled in comparison with projects financed by Western donors. As soon as the Chinese experts left and the money flow dried up, they collapsed.

More successful was the support for state farms like the *China State Friendship Farm* with 3,600 hectares, which was set up in Zambia in 1990. Deborah Brautigam, in her book about China's engagement in Africa[4], estimates that at the turn of the Millennium, in Zambia alone there were between 15 and 23 state owned or private Chinese farms, producing mostly for the local market. The *China State Farms Agribusiness Corporation* (CSFAC), which started and ran many of these enterprises, had more agroinvestments in Tanzania, South Africa, Gabon, Togo, Ghana, Mali, Guinea and Mauritania. "They were in the first wave of Chinese 'going global' in agriculture!", Brautigam writes. Ironically, Chinese investors benefited from Structural Adjustment Programmes and privatisation of African state enterprises, pushed through by Western donors and international financial institutions.

With the *Forum on China-Africa Cooperation*, which first took place in October 2000 in Beijing, there was additional élan introduced into the cooperation with Africa. At the third meeting, again in Beijing, China's President Hu Jintao promised to send experts to train five million Africans every year and to build ten agricultural demonstration centres, a figure which grew quickly to 30. It seems as if agrotechnology and seed development were employed to balance the wide spread worries about China's advance in mining and trade. The aid was closely connected to large Chinese agrocompanies, often state owned like the *Shaanxi State Farm*, which recently leased 10,000 hectares of land in Cameroon to grow rice and other products.[5] They are expected to run

3 Financial Times, 4. Oktober 2010

4 Deborah Brautigam, The Dragon's Gift: The Real Story of China in Africa. 2010, p 255

5 http://farmlandgrab.org/16485 vom 20. Oktober 2010

the demonstration centres, started with government funding, and take over later. The reduction of custom duty for African agroexports to China is another incentive for Chinese investors.

But these ambitions were soon met with resistance, like in Mozambique, a country with a huge potential for irrigated agriculture. The story goes that China promised a loan of 800 million US Dollars for the modernisation of agrarian infrastructure, the construction of a dam, irrigation systems, and to dispatch at least one hundred experts. Furthermore, the country received the first of the demonstration centres President Hu Jintao had promised earlier. Mozambique wants to increase rice production fivefold. How much of this is meant for export to China is not known. In spite of such generous support and promising perspectives, the project was skipped after massive protests.

And this was not the only flop. Last year, a project of the CSFAC with an investment of 10 million US Dollars in Ghana was shelved after a change in government.[6] CSFAC-manager Xu Jun lamented, that the "unstable political situation is the greatest challenge for Chinese companies which want to invest in Africa."

Like with other investment deals into agriculture, also known as "land grabbing", it is difficult to clarify which reports about Chinese negotiations and agreements are correct, which projects are just rumours or vague ideas, and which have really materialised. ZTE *International* for example, one of the largest state owned Telecom-companies in China, is reported to have acquired 10,000 hectares of land in Sudan for cultivating wheat and corn. It is also reported, that it is investing in Ethiopia and other African countries into agriculture, into feed factories and the production of oil seeds. Chinese investors might be planning to acquire 6,000 hectares for rice and cassava in the Nigerian state of Edo, where they want to set up processing facilities for ethanol, starch and noodles. In Tanzania, Beijing concluded an agreement with the government, that Chinese companies shall invest in aquaculture and cattle farms.

Apparently, in August 2007 there had existed a contract by a Chinese investor with the Democratic Republic of Congo (DRC) for 100,000 hectares of oil palm plantations, and in November 2008, an agreement with Uganda for a huge Free Trade Zone close to Lake Victoria, which also would include agriculture. There are more reports about plans for more large scale concessions in Zimbabwe and Angola, but little of this is fixed, believes Brautigam. She estimates that in 2007, there were just around 300 companies with an investment volume of 1.2 billion US Dollars engaged in the agricultural sector in Africa, a fraction of the investments and activities in the energy sector or in mining. And as a result of her research, she claims that the hundreds of thousands Chinese labourers and hundreds of villages don't exist.

The numerous conflicts with land users, strikes of employees and swaying governments seem to have taken their toll on the enthusiasm of investors as well as on the government in Beijing. "It is not realistic to grow grains in far away countries, especially in Africa or Latin America. There are so many hungry people in Africa. And the grains have to be transported by ship to China. The costs and the risks are very high", said Xue Guoli from the Ministry for Agriculture.[7] And in Beijing, officials deny any knowledge of a government plan in the summer of 2009 to give stronger support to investors for acquiring land in Africa and Latin America.[8]

Aid for Africa's agriculture

In March 2009 the *Chinese Academy of Agriculture* (CAA) undertook a project called "Green super rice for the poor in Asia and Africa", that is supported by the *Bill & Melinda Gates Foundation*. In seven African countries the cultivation of high yielding varieties, which are purported to resist drought, floods, bad weather and various pests, are to be promoted. CAA, which cooperates in this project with several international organisations like the *Africa Rice Center,* expects that the production of rice could increase by 20 percent and the food availability for 20 million poor farmers improve.

The grass is greener on the other side

Some critics, upset by Chinese investments, have talked of "vultures" circling above Australian farms. Like in neighbouring New Zealand, Chinese investors are showing a growing appetite for cattle farms and dairy companies. This engagement is not at all a recent develop-

6 http://farmlandgrab.org/14825 vom 12. August 2010

7 Cit. by Stephen Marks, China and the great global land grab. Pambazuka News, December 11, 2008

8 Duncan Freemann u.a., China's foreign farming policy. 2008 (Brussels Institute of Contemporary China Studies) p 11

ment. As early as 1987, investors from Wuxi, a town west of Shanghai, bought a sheep farm of 4,400 hectares, two years later the *China State Farm Agribusiness Corporation* acquired 43,000 hectares in Queensland.

In China's next door neighbourhood it is not the high value consumption goods like milk or beef which attract investments, but staple foods and raw materials for industries, feeds and agrofuels. They stand side by side with a growing trade in agricultural products – in both directions. Favourite destinations are the small and rather poor neighbours like Burma, Laos, Cambodia and Vietnam. For them, China is already their most important economic partner. Relations between them reach back decades, though not always without conflicts (like in the case of Vietnam). Furthermore, they belong to the immediate sphere of economic, political and strategical interest of China.

In Cambodia, at the end of 2006, every second of the 26 economic land concessions with foreign ownership with an area of 188,000 hectares belonged to the Chinese. Most of them seem to be plantations with fast growing trees like acacia and eucalyptus, with oil palms, cassava, sugar cane and rubber. For the improvement of irrigation, China supplied a loan of 240 million US Dollars in support of Cambodia's ambitious plan to become one of the leading rice exporters.

In Laos, China's government encourages, among others, agroinvestments into rubber production. As in Africa or other countries, reliable data are difficult to come by, but there are estimates that around 150,000 hectares have been provided for private companies at low rates and with lease periods of 30 to 50 years.

Often, one finds Chinese provincial governments as the most prominent amongst investors. Under the "Going Out" programme, intended to reduce the growing income disparities between the industrialised eastern provinces and the northeast, the central government opened up spaces for them for their own economic activities. Within less than a decade, some of them emerged as the biggest trading partners, investors, and donors for neighbouring Asian countries. Expansion of export markets and access to resources often go hand in hand with infrastructure development.[9] Part of this engagement is comprised of concessions for more than 400,000 hectares of land, which the northeastern province of Heilongjiang, most probably the largest grain producer in China, negotiated with neighbouring Russia. The agreements reached cover investments into agriculture, cattle farming and processing. The city of Mudanjiang, located in the southeast of the province, acquired agricultural areas of nearly 150,000 hectares in Russia, an increase of 42 percent over the year before.[10]

As in Mozambique, however, China's search for land and water has been met with resistance. One of the first large-scale projects in *offshore farming* was the Memorandum of Understanding, which Fuhua, a company owned by the provincial government of Jilin, signed in June 2007 with the Philippine government for leasing one million hectares of land for growing rice, maize and sorghum. After strong opposition and a successful mobilisation of civil society groups, farmers' organisations, churches and the media, which received widespread international support, the government in Manila retreated.

Even in the authoritarian states of the former Soviet Union there is growing protest. When Kazakhstan's President Nursultan Nazarbayev announced in December 2009 his intention to lease out one million hectares of land for soybeans and rapeseed to China, there were massive demonstrations. "They borrowed 13 billion US Dollars from China", Bolat Abilov from the opposition party Azat complained, "now they want to repay this with our land". Shortly afterwards the government denied any such plans.

"Global Europe" in China

It is not surprising that the European Union, as the most important trader of agricultural products in the world, is keen to expand its trade with China. The growing demand for high-value food on one side and the obvious natural limits to agricultural growth in China on the other are drivers of high expectations.

Gerd Müller from the Ministry for Agriculture in Berlin, for example, hopes that "against the background of the booming Chinese market there are tremendous chances for Germany" to sell milk, butter and other animal products. Referring to the scandal with polluted milk in China, he boasts that German milk is known to be "of high value" and "safe". But many areas have been occupied already by others. Australia and New Zealand supply milk, the USA corn and poultry, and Brazil supplies cattle feed. As far as grains from Europe are concerned, there is hardly any demand, at least not yet.

Though the EU-China-trade of agricultural products increased by 82 percent in four years to five billion euros in 2007, the breakthrough, which the EU with the export promotion strategy "Global Europe" envisages, is not in sight. The European Union exports mainly processed products like alcohol, including champagne, and

9 Julia Bader, China's Impact on its Neighbours' Political Systems, Deutsches Institut für Entwicklungspolitik, 1/2010

10 http://farmlandgrab.org/13438, May 29, 2010

some less important raw materials, valued at 1.6 billion euros (2007), with a trade deficit of 1.8 billion euros in 2007. The proportion of exports to China comprised just 2.2 percent of EU agricultural exports, where imports from China had a share of 4.4 percent. Imports were mainly cashmere wool, fruits, vegetables and nuts.[11]

Regarding investments into the agrarian sector and its up- and downstream segments of seeds, marketing and research, others are way ahead respectively, among them many US-American companies. In 2008 the world's largest meat processor, the US-company *Tyson Foods*, announced a cooperation agreement with the private *Jinghai Poultry Industry Group*. In the case of pork, which is an essential part of 'good food' with a consumption increase of 100 percent within ten years, the US-market leader *Smithfield* is building a new unit, huge enough to house half a million animals. Several international animal genetics companies have set up breeding stations in China, and seed Multinationals like *Monsanto* collaborate closely with the government and universities.

Although so far, the booming demand for milk has not benefitted German milk farmers, it has helped European companies like Nestlé. The Swiss food conglomerate had started the boom with a study that proposed a milk-feeding programme for schools. Today Nestlé is an integral part of the milk industry, with more than 20 processing units and a huge research centre, the first one of its kind outside of Switzerland. The growing demand for milk also helped French *Danone* to expand, in a joint venture with *Mengniu Dairy*, China's largest milk processor.

Therefore, a study commissioned by the EU is optimistic. Because of "huge opportunities" in the agrarian sector in China, EU exporters and importers should "become more active in China", especially in the market segment of organic products. This scenario is based on the purchasing power of the huge middle class, the agricultural situation in China and the "comparative advantages" of the European agroindustry, especially in the production of a variety of processed food and because of advanced experiences with sustainable land management, organic production methods, agrotourism,

11 European Commission, Monitoring Agri-trade Policy. China: Out of the Dragon's den? No. 01–08 May 2008

Competition between food and fuel?

As part of the comprehensive plan to reduce the emissions of greenhouse gases substantially[1], there are proposals by the government to substitute 12 million tons of crude oil per year with agrofuels. Because energy plants like jatropha, palm oil, cassava, maize or sugar cane would compete with the domestic production of food, observers expect that the demand will mainly be met by imports. In as early as 2007 the state owned *China National Offshore Oil Corporation* (NOOC) concluded an agreement for the production of agrofuels to be supplied from huge plantations in Indonesia. *Nanning Yongkai Industry Group*, which is one of the largest private companies in China, signed a contract for the production of ethanol in the Philippines.[2] It is predicted that ZTE *International* has plans to invest 1 billion US Dollars into oil palm plantations of three million hectares in the DRC- and China is already the biggest importer of palm oil.

1 In June 2007 China declared a national programme on climate change. One year later the law E10 prescribes a ten percent proportion of ethanol, the production is subsidised.

2 See Duncan Freeman u. a., pp 16 ff.

regional marketing and geographical certification.[12] European agrocompanies are advised to look for niche markets with high spending power, to take advantage of low production costs and to invest into their own factories, enabling them to supply Asian markets, and to strengthen service offers for organic farming and land management.

On the other hand, there are complaints about trade barriers like SPS-regulations,[13] bad infrastructure, the lack of protection for intellectual property rights, and the existing land user rights as an obstacle for agribusiness investments. It seems as if there is still a long way to go until "Global Europe" can attain more than just a foothold in China's prospering agroindustry.

12 Nariman Rutten, Michael van der Meer (eds.), Study on the Future Opportunities and Challenges of EU-China Trade and Investment Relations. Study 6: Agriculture. 2007 www.development-studies.en/en-china%20competivesness.php

13 Sanitary and phytosanitary regulations, which the EU too likes to use as trade barriers against unwanted competitors.

Part 5: Self-organization and interest representation of Chinese farmers and consumers

Nora Sausmikat

Before the background of the anticipated increase of imports of industrially produced ecological food products into Europe, one must ask how this problem is discussed inside China. A gaze into the Chinese "alternative scene" and the self-organization (interest representation) of farmers and consumers seems to make sense. Partly supported by the state, partly tolerated, but always neatly controlled and regulated, a diverse community of civil society groups and organizations developed.

Since the end of the 1980s, we have witnessed an ever-increasing self-organization of the society, materializing in non-governmental associations, confederations, interest communities, or registered organizations. Until present day, this development experienced many exceedingly complicated processes, which had been characterized mainly by the increase of control and the creation of regulatory instruments. The topics addressed are as numerous as the conflicts and interests which exist: they range from domestic violence to environmental protection, from health risks through contaminated food or soil contamination to care for disabled children. In the area of environmental protection in particular, many avenues intersect with agriculture. The quality of water, air, and soil directly influence the production of food. Critical consumer groups, as well as rural organizations, pick up the production topic and the overall process of rural transformation. New approaches to sustainable agriculture and the development of rural areas are also emerging, while disputes over land and seemingly arbitrary administration remain topics of concern.

These social agents vary in their approaches, perspectives and statuses. It is also necessary to mention that the possibilities for self-organized actions or the establishment of organizations are much more restricted in China than in Europe or the USA.

We have to differentiate between rural and urban networks and organizations, between advocacy groups and (state-sponsored) charity or development projects, and finally between agrarian projects and education on agrarian topics. Most of the associations or groups are one-point organizations focused on one sole concern. Most are locally organized, and some are internationally connected.

Within the following text, I would like to describe the following three forms of self-organization:

- Rural self-organized production organizations
- Urban consumer associations or individual activists
- Consumer/producer networks

Generally, it shall be mentioned that the Chinese government also cares for all three fields – *agriculture*, *food safety*, and *consumer*.

- Since 2001, a new rural development plan has been undergoing a constant revision process and the two last Five-Year-Plans have put rural development and reconstruction high on their agendas.
- The government decreed several new laws on food safety – the latest in 2009. Since then, this law has also witnessed several dramatic revisions – the last release came from the news agency Xinhua from August 19th.[1]
- Consumers were regarded as a target group for education. Inefficient energy consumption (air conditioning, climate-controlled shopping centers) and high-carbon lifestyles prompt the government to

1 Chinese vice Premier orders stringent supervision of food safety, in: news.xinhua.com/english2010/china/2010-08-19/c_13451357.html.

organize regular education campaigns and appeals for sustainable consumption through state-consumer protection associations.

A question of definitions

To begin with, we must recognize that in China citizen participation and self-organization are completely different from that of the European situation. Similar to Russia, Kazakhstan, Uzbekistan, or other "transformation countries", funding is derived primarily from external sources like the World Bank, the UN, or European or US-American foundations. To alter this situation, many Chinese foundations have been installed, but still, most of the projects and initiatives are given life from and sustained by foreign donors.

Without going into detail concerning the term "movement", it must be highlighted that we cannot speak of a consumer protection movement in the strict sense of the meaning. Social movements develop under the conditions of social change and are therefore inseparable from those conditions.[2] A social movement, as part of the civil society, implies indeed a direct connection to the normative concept of the public sphere as formulated by Habermas. For Habermas, the public sphere is the precondition for an existing civil society. This has to be, as Habermas formulates, not only protected by law, but also "has to be kept alive by a vital citizens' society." He points to the fact that the public spheres need to be used by the New Social Movements in a defensive or offensive way to defend or radicalize its very normative nature. This notion states that the cause of a social movement is the possibility to establish a topic of overall social relevance and defend the public sphere and participation structures.[3]

For this reason, it is not possible to speak of a Chinese consumer protection movement. We can, however, understand that the activities underway in this area are caused by social change which created "agency-networks"- networks which act out of advocacy for certain topics or groups. They rely not on the public spheres and participation structures known in the West – but on the internet.

Self-organization of farmers

Since the beginning of the last century, Chinese reformers and intellectuals were forced to deal with the so-called "peasant question". But only after the Cultural Revolution, rural China became the real focus of policies. Until that point, the rural society had itself with the fight for survival: after the disruptions of the 19th century, peasants had to face brutal warlords and later on were confronted with the escaping Red Army. Although the "peasant revolution", the land reform, the class classifications, and the forced collectivization made the "poor and lower peasants" into allied forces of the communists and the "morally better class", the real interests of the farmers played a minor role. The "household responsibility system", the return to the household husbandry, as well as the provision of jobs by "township village enterprises" (TVE) made the 1980s into the "golden years" of the peasants. During the 1990s, state policies once again turned away from rural development and focused on urban development.

Only the mass protests of the late 1990s forced the central leadership to focus once again on rural questions. Farmers started to organize themselves informally, with prior reasons having been the attempt to stave off poverty, to fight the agrarian tax, corruption, and irregularities of the village elections. It is also important to note one other pivotal reason for the protests: massive environmental pollution. Spontaneously-formed village groups avoided formal organization, the creation and naming of leadership and their positions, and the creation of written constitutions and bylaws. Yu Jianrong has researched these groups for many years and has identified several conflicts of interest, mainly between the local governments and the farmers themselves. According to him, during the last 20 years, the conflicts have become more intense, and the arguments more violent. Party secretaries have been taken hostage, or their houses were demolished. Mass demonstrations have occurred, only to be defeated by the army. The increase of poverty was certainly one of the main reasons for the clashes. The conflicts with the local government also played an important role. Yu argues that the local elite no longer mediate between the central government and the farmers, but it is the state that has to mediate between the farmers and the local elites.[4]

At the beginning of 2004, the book, "The Situation of Chinese Peasants" (中国农民调查), written by Chen Guidi and Wu Chuntao and bearing the Lettre Ulysses Award, had been published. The book supplies us with

2 Joachim Raschke, Zum Begriff der sozialen Bewegung, in: Dieter Rucht, Roland Roth (eds.), Neue soziale Bewegungen in der Bundesrepublik Deutschland (New Social Movements in the Federal Republic of Germany), Bonn (1991), p. 32.

3 Georg Kamphausen in Günter Endruweit, Gisela Trommsdorff, Wörterbuch der Soziologie (Dictionary for sociology), 1989, S. 81, Jürgen Habermas 1992, pp. 445–447.

4 Yu Jianrong, Let the farmers speak for themselves, in: China Development Brief (www.eteeem.net/node/142.htm), 1.7.2003, S. 5. Original: The political crisis in rural China (2002).

an interior perspective on the rural society and also documents both the arbitrariness and brutality of the state employers and security forces. It also describes the misery of the rural population, the corrupt system and the brutal anarchy which are so evident far away from Beijing. In the foreword, the authors justify why the focus had been set on the province of Anhui: Anhui stands out in that it is the culmination of all aspects of the agrarian reforms conducted within 12 provinces throughout the last 20 years. To choose Anhui was very logical: The village annals document the first "peasant parliaments". Rebellions had been tradition, and during the 1970s, the first de-collectivization began here. The abuse of state force, crimes against humanity, and a corrupt understanding of law and order are all topics of this book. The organized resistance was followed by murder, collective liability, and manslaughter.

This book is only one example of a variety of political storybooks which had been published during that time. These books clearly exemplify the shadow-economy and cronyism. The first reaction of the government was the abolition of the agrarian tax and the prohibition of illegal fees. Unfortunately, this also caused a worsening of the situation, because now, the money for rural infrastructure projects like schools and hospitals was simply no longer available. Therefore, the main requests, which were identified as solutions for the rural crisis, focused on "political rights" for the rural population as well as the right to organize. These requests have been upheld until today, since, at present day, the establishment of independent rural-interest groups is no longer permitted.

The self-organization of farmers remains a complex problem, because the farmers find themselves trapped between powerful clan associations and the local government. On the one hand, the legitimacy of the local governments is steadily diminishing, and the central government is trying to enforce their power. This movement is proving to be counterproductive, since it creates new opportunities for corruption and resource-depredation. On the other hand, clan associations and rural gangs try to adjust the village business according to their needs. Urban intellectuals like Yu Jianrong demand the liberalization of the self-organization of the peasants themselves – similar to something akin to a "peasant association".

Organic field experiments for a "Duck-Rice Ecosystem"

Agrarian production units

Still in existence are some agrarian production units. To coordinate the small- often individually organized family enterprises, the state enforced a new law in 2007. This law was meant to unify rules for cooperatives and rural enterprises in the hopes of creating a better market assessment. Formally, we have to differ between two rural production units: the "specialized farmer cooperatives" (SFC) and the "farmers specialized associations" (FSA). The former are registered by the Chamber of Industry and Trade and occupy the status of legal persons. They are allowed to provide machines and human capital. They are also directly involved in business and resemble the Western cooperatives in relation to production, marketing, and processing. The latter have to be registered with the Ministry of Civil Affairs and face problems similar to those of so-called "Non-Profit Organizations". They retain little capital, rely on membership fees, and are confined mainly to technical consulting and information exchange.[5]

Nevertheless, these two terms are too generalized for many heterogeneous organizations. Inside the FSAs, very large associations are organized, which provide technology and information for thousands of members, as well as very small associations. Also, the memberships are heterogeneous: large and small forms, producers and trade companies, with part- and full-time farmers. Among the SCFs, land cooperatives, which lease

5 Yamei Hu, Zuhui Huang, George Hendrikse and Xuchu Xu, Organization and Strategy of Farmer Specialized Cooperatives in China, Erasmus Research Institute of Management (ERIM), 2005 (www.erim.eur.nl).

land, are also registered. Also registered are even cooperative enterprises.

But the new "Farmer Cooperative Law", for the first time, created a unified legal basis for self-organizing. Until then, registration procedures were very unclear and complex. Similar to non-profit organizations, a mother-in-law unit of the state has to shoulder responsibility and vouch for the organisation.[6] Above all, the ministry requests the mother-in-law institutions to control and surveillance the organizations.[7]

Despite these rigid regulations, the number of registered organizations has risen enormously. According to Chinese statistics, 14 percent of all rural households are either organized in cooperatives or associations. According to Yuan Peng, from the Rural Development Institute (RDI) of the Chinese Academy of Social Sciences (CASS), there are more than 240,000 registered SFCs with 21 million rural companies.[8]

According to the Ministry of Agriculture's "Research Center for Rural Economy", 40 percent of these organizations are "fake": they only aim for subsidies of the government.[9] Yuan Peng highlights, in addition, that it is absolutely unclear how many of them are "real" cooperatives.[10] There are indications that many of these organizations are controlled by powerful and rich farmers- they pocket the subsidies and obligate the farmers to grow marketable products. Tang Xiaoshan, of the Rural Development Institute (RDI), also warns that supermarket chains like *Walmart*, which are said to be willing to contract more than one million of farmers, and *Carrefour*, which plans to cooperate with more than 300 associations, could influence the clearance and "scope for independent farmers". Therefore, it seems to be necessary to create democratic administration and the securing of the interests of farmers.

Another problem is that many small-scale farmers do not have enough knowledge and experience to organize or manage an association or cooperative in the way that would benefit them. Non-governmental organizations therefore request that the government enforces the new law strictly. Even three years after enactment of the law, the new regulations did not benefit small-scale farming enterprises or collectives. Some NGOs already started to offer advanced training to foster the establishment and management of organizations.

Alternative economic models for agriculture

The massive environmental problems caused by the excessive use of fertilizers and pesticides, as well as the loss of biodiversity, and the economic suffering of small-scale agriculture has lead to an increasing requirement of alternatives to the ruling growth model in agriculture.

One organization which dedicated its work to such a task is the Hong Kong-based NGO, "Partnership Community Development" (PCD). They vote for a change in the system of agricultural production and support like-minded reform measures. The PCD was established in 2001 and works very closely with the Chinese Academy of Social Sciences. According to their website, they describe their special approach:

"During the past decade, China has experienced an ever widening rich-poor and urban-rural divide. This gap is exacerbated by the power of globalised commercialisation and consumerism. All over the world this alarming reality is unmistakably illustrated in the everyday life of vulnerable and disadvantaged rural populations; in particular, those who suffer not only from material deprivation, but also from discrimination and marginalisation in their society and culture. PCD has been very much aware of this development trend. Over the past years, our programme has adopted a strategic approach that is people-centred, environmentally conscious and respectful of local cultures, and which reflects critically on values and practices enshrined in the mainstream development model."[11]

In 2005, they presented their book "The earth in deep thoughts" in which they described their work in Sichuan, Yunnan, Guanxi, and Guangdong. A key focus of their work is the re-integration of returned migrants. In 2008, during the financial crisis, the government persuaded migrants to return to their home communities and establish small enterprises. This call did not receive very much reverberation and turned out not to be a realistic policy. Migrants returned, but this return lead to an increase in the rural workforce – with advantages and disadvantages. 61 percent of the returned migrants who had been affected by the financial crisis were under 30 years of age. Overall, 16 percent – or 23 million – of the rural migrants became unemployed because of the economic crisis (data from 2009). Critiques highlighted that the returned migrants, in most cases, lacked the agricultural knowledge necessary to facilitate their involvement in agricultural businesses. Above that, they lack their own land titles. To com-

6 http://www.worldbank.org.cn/english/content/fpa_en.pdf, p. 24.
7 Ibid. Nevertheless, similar to GOs there is the possibility to register as a company – with all advantages and disadvantages.
8 See the report of An Xin 2010.
9 "Nongmin hezuoshe mianlin tiaozhan (The challenges for rural cooperatives), in: China Development Brief, No. 42, 2009, p. 1.
10 International workshop on food and sustainable agriculture, Renmin University, Beijing, 12.–15.3.2010.
11 www.pcd.org/hk/eng/aboutus04.html.

pound the issue, other employment opportunities were missing entirely. Therefore, advanced training and vocational education is necessary to enable the returned migrants to engage in agriculture. NGOs are being hired for this task at an increasing rate – the main reason being general mistrust on the side of the donors. They fear that the money is being misused by local officials.

Yet another type of project, in collaboration with NGOs, is designed as a development program and works at the intersection of environmental protection and alternative agricultural models. The Yunnan Pesticide Eco-Alternatives Center (PEAC) works in conjunction with a university and supports ecological, sustainable agriculture. Their declared aim is to sustain a healthy environment while simultaneously advancing rural incomes. They borrow from international debates and discuss in their specific environment the internationally asked question how "countries from the global south" can assure food security and sustainable livelihoods in globalized economies. They prefer to cooperate with local governments in order to sensitize these administrations to the problem at hand, and additionally allowed access to important and essential resources or permissions.[12]

A very similar approach is followed by the "Center for Biodiversity and Indigenous Knowledge" (www.cbik.ac.cn). The center was established in 1995 and specializes in the research of indigenous knowledge of local ethnic groups and rural communities and aims to apply it to sustainable agricultural methods. The center also tackles other topics, like women and food security, and conflicting relations between sustainability and market economy. Despite their very active role within the agricultural sector, they also want to play the role of a governmental think tank. For this purpose, together with a broad network of different institutions and organizations dealing with sustainable agriculture, they, for example, translate articles originating from other countries of the Global South.

Finally, it is important to mention the numerous experiments and projects led by the agricultural expert Wen Tiejun (for Wen Tiejun's background, please see my info-box in chapter 3 of this brochure). Wen initiated several rural projects, which hoped to develop new forms of agricultural cooperatives and ecological farming. In 2003, he founded the James Yen Rural Reconstruction Institute in the county of Dingxian in the Hebei Province, the former experimental base of Yan Yangchu during the time of the Republic of China.[13] This institute established training centers in the countryside, health centers, and cooperatives in order to estab-

12 Nora Sausmikat (ed.), 2010, p. 18.

13 Yan Yangchu has been member of the rural reconstruction movement (a reform movement which aimed for the creation of a new and prosperous countryside) during the 1920s. He led literacy campaigns and agricultural training, promoted village hospitals, and girl schools, and founded a radio stations Among the 80 radio stations which existed in China during that time, his *Dingxian* station was the only one which exclusively addressed the rural population. The Dingxian Experiment ended in 1937 with the war of resistance against Japan.

lish new forms of community institutions. The main goals of Wen Tiejun's projects are threefold:

- To become more independent, farmers/peasants shall establish village cooperatives for production and marketing.
- To promote ecological agriculture by abandoning the use of pesticides and chemical fertilizers.
- To promote cooperation with consumer associations to help them market their ecological products.

Since then, the graduates of the first training period, which all stem from rural families, have founded more than a dozen rural cooperatives in their home villages. In addition, Wen organized networks to support these cooperatives, i. e. urban consumer units. He had been a much sought-after government consultant between 1999 and 2005. However, his projects were targeted by local authorities. His activities aimed to mobilize the farmers, which some of them also criticized. At present, he presents his ideas on a more academic level and pursues his initiative in a much smaller way.

Finally, a few single activities of the aforementioned *Institute for Agriculture and Trade* (IATP) fall under the category of promotion of an alternative model of agriculture. They support small farmers' initiatives and family-run farms with consultancy, training and advocacy. Their China program is extremely diverse and they claim to search for solutions to the fundamental question of alternative trading systems in the subject areas of food security, water pollution and pesticides.

Pollution through the IT-Industry

On April 26th 2010, the *Green Choice Alliance* – now embracing 34 organizations – which is under the administration of *Friends of Nature*, the Institute of Public and Environmental Affairs (IPE) and Green Beagle, published a report about pollution caused by the IT-Industry.[1] Following the report, 40 percent of the agricultural landscape in the Pearl-River-Delta was found to have been contaminated by heavy metals. The report relies on facts which had been published by the local nature conservation authority. In cooperation with the local nature conservation authority, pollutants were identified and domestic and foreign IT-corporations had been asked if the identified businesses were, in fact, their suppliers. The commissioner for environmental protection of the city Shenzhen emphasized that strict sanctions will be carried out against the corporations in question. So, the *Green Choice Alliance* offers not only an information service for consumers, but also in close cooperation with governmental authorities, effective environmental management.[2] Fußnoten in den Kasten

1 Contact to Green Choice Alliance is possible at gca@ipe.org.cn. Download of a German version under http://www.eu-china.net/web/cms/upload/pdf/materialien/asienstiftung_2010_schwermetalle_ausser_kontrolle_inhalt_vorwort.pdf, the Chinese version can be find under http://www.ipe.org.cn/uploadFiles/2010-04/1272299453947.pdf.

2 China Youth Daily, 调查发现IT 行业重金属污染珠三角40%农田遭污染，3. 5. 2010。

Consumer Protection

Like the state-governed production organization, the Chinese government, quite early on, took responsibility for the development of organic certificated products. In 1994, under the roof of the environment bureau SEPA, the government established an *Organic Food Development Center* (OFDC). Non-governmental initiatives that were concerned with sustainable consumption and the changing of consumers' attitudes came into being shortly thereafter.

The first NGO initiative that directly addresses the consumers was started by the Chinese NGO *Global Village Beijing* in cooperation with the State Environment Protection Agency (SEPA) in 1998. Their *Citizen's Environmental Guide* was the first official handbook on eco-friendly behavior. It included suggestions on how to act against environment polluters and gives advice concerning a lifestyle which is environmentally suitable. In 2002, the German-sponsored Chinese Educational Institution (CESDRRC) drafted the *Organic Food Consumer Guide for Beijing*, which outlines consumer behavior and eco-friendly and healthy food. This brochure also contains a list of shops, restaurants, and farms which sell, make use of or produce such appropriate food products. Not long after, informational materials like *Organic Trends*, *Organic Food Directory*, the *Water Saving Guide* and the *Energy Saving Guide* were published.[14] The environmental NGO *Friends of Nature* also regularly publishes articles about food safety and consumer initiatives. The now very influential *Society of Entrepreneurs and Ecology* (SEE) was founded in 2004 and, amongst other activities, supports NGOs which advocate eco-friendly production.

In 2007, the *Green Choice Alliance* was founded.[15] It is a union of 21 organizations and is the first non-governmental consumer unit working on sustainable

14 Similar handbooks were published by the Water Saving Office of the water administration of the city of Beijing and by the state consumer association.

15 In 2005, Global Village of Beijing and CESDRRC already founded a Green Choice Alliance which focused on environmental friendly behavior educational campaigns. 2007, IPE took over the name, established a big alliance and broadened the activities.

products. From information about socially and environmentally detrimental consequences of consumer goods, consumers are being motivated to decide consciously on which products to buy. End-producers and traders are paying attention to the production methods of their suppliers. Independent audits (i. e. by the company Zhendan) are carried out and "green" (and respectively "black") lists of products and corporations are published. Zhang Lina, principal of Zhendan, underlines that the independence of the audits is guaranteed, especially through cooperation with auditing corporations which boast exceptionally positive reputations (like Conservation International, a department for sustainable forestry of Greenpeace, and also governmental certification departments)[16] – a rather remarkable combination of Institutions and Organizations.

Other environmental initiatives also provide their input on the issue of the consumer topic. For example: In 2005 – long before the successful Olympia-commercial of the government – the initiative "Green Hanjiang" had appealed to the public to avoid using plastic bags. During the last few years, many NGOs have begun to focus on waste management. Of course, the behavior of the consumer certainly plays here an important role. Nevertheless, these topics deal most of all with the consequences of non-sustainable consumption.

Finally, the melamine-scandal in 2008 put the food industry in the focus of attention of consumers. This ordeal not only raised the consciousness of healthy and sanitary food, but also of the right to be given information. Activists like Zhao Lianhai and the non-governmental association of lawyers, *Gongmeng,* got involved and stood up for a compensation of victims. However, they didn't make the problem of food production and food control itself a subject of discussion.

The government (in this case) not only reacts irascibly to the criminal machinations[17], but also to the resistance of the persons affected. Zhao Lianhai was – on inadequate grounds[18] – taken to court in March 2010 and sentenced to two and a half years in prison. The lawyers association (*Gongmeng)* was threatened with closure and its co-founder, Xu Zhiyong, was temporarily arrested. Even Greenpeace, which tests products for residues of pesticide, scouts out genetically engineered

products and puts pressure on supermarket chains and their suppliers through publication, experienced firsthand how narrow the limits of action still are. In Guangzhou, in the South of China, such actions led to the decision that forced Greenpeace to give up their work at the location.

News about even more cases of contaminated products shows, unfortunately, that single protests are not enough to change the current situation. In February 2010, there had been reports from 10 Chinese provinces that melamine contaminated milk products had once again been found in supermarkets. That is why, meanwhile, there are discussions in internet forums about the fundamental problems of production-, control-, and marketing systems.

The real movement for consumer protection, which deals with sustainable consumption and the changing of behavior of the consumers themselves, takes place not in an organized manner, but outside of consumer organizations through sensitizing individuals to the importance of a healthier environment. Organized consumer groups are still in an early stage. In comparison to Europe or the USA, initiatives for strengthening consumers' rights and information are much less widespread. But this sector in particular has to be strengthened if campaigns against the industry are to one day prove effective.

The main conflict in China is between the central government, local authorities and business corporations. There has certainly been a significant development regarding the awareness of good, safe food. The enthusiasm for "green food" in China's cities shows that

16 See Wang Hui, "绿色选择，我购酷"- 震旦纪发布绿色选择数据库和互动平台 (I vote green so I am hip – Zhendan publishes a green data base and interactive platform), China Development Brief, No. 37, 2008 (http://www.chinadevelopmentbrief.org.cn/qikanarticleview.php?id=863), and Fu Tao, China's environmental NGO advocacy actions, in: Nora Sausmikat, 2010, pp. 16–21.

17 Dozens of governmental officials and private entrepreneurs were dismissed, other were punished by terms of imprisonment from 2 years to lifelong imprisonment. A dairy farmer and dairy salesman were executed. Finally, in June 2009 the new food safety law came into effect.

18 See Vincent Kolo, China's "poisoned milk" trial – punishing the victims while the criminals strike again, 1.4.2010, in http://www.chinaworker.info/en/content/news/1025/.

Chinese consumers are increasingly selective concerning their diet. There are already rock stars, like Zhen Xie of the band *Giant Beanstalk,* who stand up for vegetarian diet and animal rights.

Consumer-Producer Networks

Network initiatives are a new trend of both producers and consumers. Most of these initiatives began as rural "building-up" initiatives, which cooperated with local authorities and governmental development programs for the reinforcement and advancement of villages. But most of them set their own priorities. The establishment of marketing structures for small scale sustainable agricultural enterprises has increasingly inched its way into the focus of both self-help initiatives and development programs.

The single projects support farmers with pilot projects, i. e. to conduct collectively-shared agricultural projects. The projects promote the production and marketing of organic food which is free of pesticides through the building-up networks between producers and consumers. Here are a few notable examples:

a) The networks *Little Donkey* and *Nanling Action Team* are two examples of small local NGOs: While studying in the USA, agricultural economist Shi Yan became acquainted with the concept of *Community Supported Agriculture* (CSA). In this context, consumers and farmers cooperate with each other: consumers give farmers a guarantee of acceptance of the goods, and in return they were granted a look into the production processes. On the northern outskirts of the city of Beijing, Shi Yan convinced farmers to create a community farm, which they named "Little Donkey". City inhabitants acquire a plot of land at which eco-friendly cultivation is organized on their own accord or carried out by the farmers. By this point, there are about one hundred shareholders.[19]

b) The Nanling Action Team, a local NGO from Guangdong, is based on the CSA-approach and works on independent market structures for small farmers. They inform urban consumers about companies which function sustainably and grand memberships in the networks through shopping expeditions.

c) In May 2010, the American *Institute for Agriculture and Trade Policy* (IATP) organized a workshop in Beijing in cooperation with the People's University and the *Social Science Research Council* (SSRC) which addressed the topic of consumer cooperatives. The aims of the workshop were to bring these and similar attempts to a broader discussion, to exchange experiences and to link already existing initiatives.[20] Participants of the workshop came from all over China: grassroots activists from rural areas, members of a buying collective (which is linked to Rudolf Steiner Schools in Guangzhou Province), and representatives of the Urban Rural Fair Trade Store (who wanted to learn about pricing and planning), and finally European, American and Taiwanese consumer cooperatives. Common themes were the worry over food safety, the skepticism about the governmental "green food"-certification system and the wish to harmonize ecological and social matters and competitive prices.

d) Finally, the massive Chinese organization *Global Environment Institute* (GEI) must be mentioned. In single projects, the GEI works on the establishment of sustainable market structures for rural small businesses. In one of their many pilot projects, the GEI has attempted to establish a financing model for the rural sector, which could bear the restructuring of rural cooperatives (the creation of a bio-gas plant, greenhouses for organic farming, etc.), and in the last step, establishes rural marketing companies.[21] So the conclusion of An Xin and Chen Zhiping: without a well-directed governmental aid no positive results could be produced.

Some initiatives of independent think-tanks, like micro-credit programs, also contribute to the improvement of the situation in rural areas. Mao Yushi, head

Visit to an organic village in Southern China

19 Yang Lu, Sanlian Life Weekly, July 12, 2009. http://tradeobservatory.org/library.cfm?refID=106768.

20 There is an informative video report of the IATP under: http://www.youtube.com/watch?v=nsLRY_GhI-c&feature=player_embedded.

21 Detailed information of this project can be found in Sausmikat, 2010, pp. 75–90. This project was a study case because some peasants had substantial problems in dealing with the organic waste of animal husbandry, other did not know how to handle cattle husbandry at all.

of the non-governmental institute *Unirule*, founded a private organization in the Shanxi Province, which offered cheap micro-credits to poor farmers. All in all, one can ascertain that the predominant part of organizations and single persons engaged in these matters are marked by its academic nature. Some of the projects which are declared as "organic farming projects" are *de facto* regional development programs and quite doubtful regarding participation and efficiency. There are, for example, regional development projects that build up "eco-villages" which in fact are mainly serving as picturesque tourist destinations. As Thomsen described, other projects of organic agriculture resulted in the resettlement of hundreds of farmers, who were forced to provide their leased lands as fields of experimentation. At least some of these landless farmers found work there again. The exposed neighboring of genetic engineered and "organic and pesticide-free food" raise doubts about the understanding of sustainable agriculture.[22]

22 See Berit Thomsen, The Sky's Limit in China, in: Nora Sausmikat, 2010, S. 161–165.

Fair Trade in China

The very first organization that introduced the idea of fair trade to China was the Dazhang Association (*Jiangxi Wuyuan Dazhangshan Organic Food Company/Dazhangshan Organic Tea Farmer Association*) which, as a partner of European import corporations like GEPA, has been allowed to sell green tea (with the fair trade seal on its packaging) since 1998. Some 14,600 small farmers' companies are organized in this cooperative. The main topics are questions of certification and advocacy of the members' interests, however not of getting to the bottom of the basic problems of food caused by the international trading system. This is business-as-usual for fair trade partners.

Since 2001, the Dazhang Association has been a partner of the GEPA. The tea factory had become privatized in 2003 and is presently owned by several stakeholders. The additional charges due to fair trade raise salaries to two times higher than in other tea factories in the region. This mark-up also contributes to the development of the social infrastructure, i. e. through the building of schools and buying teaching aids. Since 2009, this mark-up has also been used for the promotion of ecological agriculture. Other producer organizations are members in the the *World Fair Trade Organization* (WFTO), a global association for fair trade-organizations (GEPA or El Puente are also members of WFTO).

Part 6: Summary

Different from many other countries, China succeeded in developing a diverse, productive agricultural sector, which is characterized primarily by small farmers and oriented towards national self-sufficiency, especially regarding the supply of basic foodstuffs (Part 1). This "food security" remains one of the pillars of agricultural policy. China neither floods the world with subsidized surpluses- pushing peasant agriculture in the recipient countries aside (like the European Union or the USA tend to), nor does its demand drive up world market prices for wheat and rice, milk and sugar, endangering the supply in countries which are dependent on imports. In spite of the balance it has found within the world marker, there remain numerous problems.

- *Firstly:* The natural foundations of agriculture – soils, water and biological diversity – are threatened from industrialization, chemical fertilizers, pesticides and genetically modified crops. Damage, combined with scarcity, makes it difficult to maintain productivity of agriculture, let alone enable its growth.
- *Secondly:* The economic and social situation of peasant agriculture and vast areas of the countryside lag behind growing prosperity, the development of physical and social infrastructure in the key areas of industrialization and in the mega-cities (Part 2). The lack of employment and income opportunities force millions of people to migrate, and raise important questions, like how they could ever return to agriculture and their villages once the construction boom and industrialization don't need them anymore. The solution of the land issue plays a crucial role in this problem.
- *Thirdly:* While food security has been achieved, the safety of food has become a problem (Part 3). This is not only an issue concerning the export of food, but especially for the consumers, who respond increasingly with protests and legal means to health hazards from food items.

Possible further development will depend on how these problems are be solved – by accelerating the industrialization of food production, by taking the external costs of the development of agriculture (like environmental damages) into more serious consideration than in the past, and by promoting ecological, economic and social sustainability.

Current food and agricultural policies concentrate primarily on the further industrialization of agriculture, on genetic engineering, large commercial enterprises – be they private, collective or government owned – and on agrochemicals and mass production to satisfy the growing demand and the changing consumption patterns. On one hand, there are positive signs: Government expenditure increases for rural areas, infrastructure, health and education systems are being used more efficiently, and subsidies and the economic incentives for agriculture and the development of new technologies promise to improve productivity and to invigor-

ate agriculture. But these policies aim primarily towards the promotion of economic value chains considered 'modern', which integrate all sectors of food production commercially, and promote and further concentration and market-orientation. This tendency is reinforced by the growing awareness of better and safer food, and may sideline family farms further.

"In government and academic institutions there is a growing awareness for the problems of agricultural and rural development, stimulating debates about appropriate answers and solutions."

Thusly, development follows the model of other industrialized countries like the US and in part, Europe. Globally, this could lead to more competition from China for land, water, agricultural commodities and markets (Part 4). Given its economic power and foreign currency reserves, these are bleak perspectives for weaker countries and competitors.

But there exist opposing trends and approaches for a less aggressive national and global industrialization of the agricultural sector. In government and academic institutions, there is a growing awareness of the problems within the present model of agricultural and rural development, stimulating debates about appropriate answers and solutions. One significant example is the controversy about genetic engineering for food crops like rice (Part 3).

All signs seem to indicate that civil society is waking up. Independent producer organizations, environmental groups who tackle issues (and use them in their campaigns) – like the threats to land and water resources from industrialization and agroindustry, the raising of awareness, lobbying, and consumer groups- which work to bring scandals about food to public attention and demand more information about the products they consume, are all emerging. Demands for compensation for damages from environment pollution or contaminated food are becoming more prominent, as are protests against the loss of access to land (and therefore of livelihoods) in rural areas. Alternative approaches like ecological agriculture, cooperatives of producers and consumers, and self-determined forms of organization are being experimented with (Part 5). Zhou Li, agronomist at the Renmin University in Beijing, calls for a return to the Chinese tradition of restraint, "producing for the benefit of the farmers and consuming for the well-being of the consumers".[1]

To compensate for the limitations of state provisions, civil society groups- who utilize the space emerging from interest shown by the government- are more and more often forming farmers' organizations, like the Farmers' Specialized Associations and Specialized Farmers' Cooperatives, or the policy of the New Socialist Countryside with its concept of a "participatory democracy".

The question "How is China feeding itself?" is therefore opening up a broad range of developments, problems and solutions, and focusing on a diverse set of actors with very different, and often conflicting, interests and ideas about how China should and want to feed itself.

This provides a number of connecting points with debates in Germany and in Europe as a whole: Should other countries or peasant farmers suffer for the sake of a country's own food security? Are ecological agriculture and peasant farming the best answers to ecological problems, including climate change caused by agriculture, or to the social and economic marginalization of rural areas and the people living there? What is the contribution of modern technologies – and what are their potential dangers? How do we regulate concentration processes and economic power in agroindustry? Which role can consumers play in the promotion of sustainable agriculture and safe, healthy nutrition? And how can politics and economy be influenced to change framework conditions in a way which enables a different and better food production as part of a different agriculture and rural development?

1 Uwe Hoering 2010

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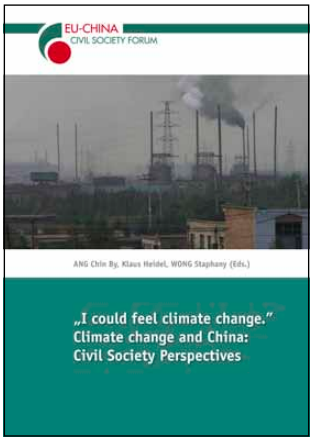

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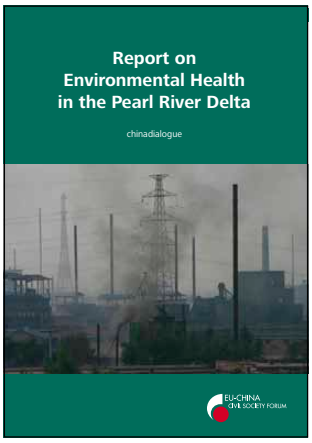

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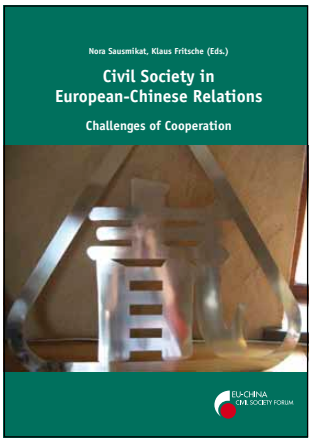

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The agricultural crisis in China (or, better put, the crisis of the rural society) has been discussed, however not in any official capacity. It had not been until 2004 that the Chinese government declared the development of China's rural regions to be of top priority in their policy-making.

During the past few years, an increasing number of urban civil society-initiatives have began discussing consumer and rural topics and have succeeded in creating their own programs, like "green food", or those promoting sustainable agriculture. From a European perspective, the growing exportation of agricultural products into the EU as well as China's involvement in agriculture in Africa are of particular importance.

This publication provides a systematic overview of the agricultural developments in China. It also focuses on those issues which are relevant to European civil societies, and hopes to contribute to the exchanges between the major players of both regions' civil societies.

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