



## Progress Report 2008 and Application for Continuation in 2009

for research funding under the research programme:

**Research in Organic Food and Farming**  
International Research Co-operation and Organic Integrity  
(DARCOF III 2005-2010)

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1. Project title and acronym

Sustainability of organic farming in a global food chains perspective (GLOBAL ORG)

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2. Project journal number

3304-FOJO-05-44

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3. Project period (month, year)

**Start of project:** 01-2006

**End of project:** 10-2010 (originally 2009, but due to delay in the project activities we ask for an extension)

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## 7. Midterm description of the project, its results and progress, and application for continuation in 2008

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### A. Project summary

There is an increased conversion to organic farming (OF) on a global scale both in Developed and in Developing countries such as China, India, Tanzania, Uganda, Egypt, Brazil and Argentina. The primary driving forces for this is the increased demand for imported organic products in the richer countries in the North and the increasing domestic market in some developing countries. At the same time supermarket sales of organic products have been increasing and dominate sales in DK and other European countries. This development may spread also to the home markets in developing countries, where supermarkets are gaining important shares of food sales. Consumers in Denmark and in urban centres around the world are thus being exposed to an increasing number of imported organic foods, some of which are substitutable with similar locally produced conventional food items. It is difficult for consumers and traders to know what the consequences are of their different food choices, i.e. what development do they support if they buy “global organic food”?

The organic food system has been transformed, from groups of loosely coordinated producers and consumers, to a globalised system of regulated trade linking socially and spatially distant sites of production and consumption. While organic farming policies, practices and institutions in Europe have been thoroughly studied; state interest in organic agriculture remains low and weakly institutionalised in many other parts of the world. The development of certified OF in some tropical countries has been driven by demands from companies and organisations with the aim of supplying consumers in the North. Therefore, the organic ideas and principles are not always embedded within the local farmers. These characteristics represent both a possibility and a challenge to organic farming, because they hold the potential to increase the volume of organic products sold, but at the same time threatens to dilute the specific organic ideas as expressed in the principles formulated by IFOAM and local organic movements. Based on this reality, global trade and the increasing role of supermarkets in worldwide organic food supply, this project will research the globalisation of organic agriculture from an interdisciplinary development perspective.

Certified organic farming in Europe has evolved from a niche to become a public policy instrument for meeting multiple societal goals, including provision of environmental services, rural development and sustainable livelihoods. At the global level, potentials to increase volumes of organic products sold has raised expectations for organic agriculture to provide also a global development pathway. Potentially, certified organic farming can offer food security, livelihood and poverty alleviation opportunities and less liquidation of natural capital. That is why development bodies such as IFAD and FAO increasingly perceive organic farming as representing a development potential. Outside Europe, however, developmental – livelihood and sustainability - implications of organic globalisation are under-researched and so is the question of the necessary local institutional set up for organic farming to be locally embedded and benefit smallholder farmers. No major study has yet analysed the ideas, practices and institutions, which comprise and coordinate the increasingly global organic agro food network.

The overall objective of this project, therefore, is to determine to what extent and under which

conditions organic farming may reduce local and global negative environmental impacts and provide sustainable improvements in poor farmers' livelihoods within the framework of the global food supply chain and the increased urbanisation.

**Table A.1: Work package list (from application)**

WP No.	WP title	Responsible scientist	Budget DKK	Start	End	Deliverable No.
1	Urban demands for organic food, food chain organisation and markets	PK, KU-Life	2272	01.01.06	30.09.10	D1.1-D1.4
2	Agro-ecology of Organic Farming Systems	HHJ, KU-Life	2725	01.01.06	30.09.10	D2.1-D2.6
3	Product-oriented environmental assessment	JHE, AU-DJF	1588	01.01.06	30.09.10	D3.1-D3.4
4	Institutions and Livelihood	HE, DIIS	1285	01.01.06	30.09.10	D4.1-D4.8
5	Synthesis: Organic Farming in a global perspective	JHE, AU-DJF	2621	01.07.08	30.09.10	D5.1-D.5.4
6	Project management, database and website	JHE, AU-DJF	778	01.01.06	30.09.10	D6.1-6.6
<b>Total</b>			11269			

(Please give month and year for start and end)

## B. Objectives and expected achievements

Specific objectives are:

- To identify how smallholder organic production systems complies with organic principles and ideas of diversity and recycling of nutrients under different degrees of integration in local and export markets
- To assess environmental profiles of organic food products in relation to long and short food chains relevant for informing Danish and other urban consumers, and economic factors influencing the same.
- To determine levels and nature of embedment of organic ideas, principles and practices among public and private agencies as well as farmers' organisations in 3-4 case countries, like Brazil, Egypt, China.
- To determine to what extent formal policies and programmes are conducive to the development of organic farming in several case countries.
- To study the impact of organic farming on rural development and determine under which policy and market conditions the price premium and/or other development values benefit smallholder farmers in the case countries

The project will build on a combination of case studies where selected organic products are followed backwards through the chain from consumers, through supermarkets and procurement systems to smallholder farmers. Products will be selected to represent different choice situations for the consumers (e.g. imported goods that compete with locally produced resp. exotic products). There will be research in consumers' and market agents' roles for organic food demand in DK and a number of countries and in the consequences of OF in selected smallholder farms. The importance of food miles and energy use in short vs. long product chains will be researched in relation to other environmental and socio-economic consequences of OF. The cross-disciplinary approach will be secured through involvement of different expertise in DK and abroad and participatory working methods. The project has a

strong focus on coordination and communication through workshops and websites and research education including Ph.D. students. Moreover a specific work package is reserved for synthesis of the market oriented, farm oriented, product oriented and institutional analyses.

## **C. Midterm results and progress**

### **C.1 Description (summary) of main results and conclusions for each year**

A main outcome of the project 2008 was the contribution to the ISOFAR congress in Modena – including review of papers, setting and preparation of programme, and chairing of a number of sessions by core project partners. With 9 papers presenting findings related to GlobalOrg, the project was very visible at the conference, and the acceptance of the papers shows that the GlobalOrg project idea has a solid interest.

The fulfilment of objectives of the different WP's in the project requires different level of co-operation and monitoring in case countries. The agro-ecology aspects are in depth aspects investigated in four case countries (Brazil, Egypt, China, and India) representing diverse agro-ecological conditions. The market and institutional aspects include in addition to the before mentioned case countries, investigations in Sub Sahara Africa (Kenya and Tanzania) as well as European countries (France and Denmark) in order to capture sufficient variation in market and institutional framework. Therefore, project activities have taken place in these countries until now as detailed in the description of each WP.

At the same time the geographical variation in the scope and activities of the project have allowed co-operation with a number of students and research environments not directly planned for in the project. This way, secondary information becomes available and of benefit for the project as a whole, and the project in fact constitutes a major research network regarding organic farming and food system in developing and transition countries.

### **WP 1: Urban demands for organic food, food chain organisation and markets**

A number of activities have been carried out in different countries according to plans.

#### **Egypt:**

The country was visited in November and December 2007 where an overall sector analysis and description has been made and published as a an article for the book: “The World of Organic Agriculture - statistics and emerging trends 2008” (E-print 14743).

Consumer studies were implemented at the November/December visit, and completed in spring 2008 by Dr. Ahmed El Naggar. The first attempt has been made to write a journal article on these findings (E-print 14737), and will be followed up in a writing workshop in the beginning of December with key author Professor Lucie Sirieix.

During the November/December the Danish Embassy in Cairo was visited. These contacts were followed up by helping setting up a workshop in April 2008 on the B2B (business to business) donor and support program financed by Danida. The workshop was held at Økologisk Landsforening informing Danish fruit- and vegetable producers on the possibilities of doing trade and business with organic producers in Egypt. A working paper, aimed at Danish fruit and vegetables producers, informing on the organic farm sector in Egypt as well as information and websites on the support facilities in the B2B program is in preparation. The

workshop has been documented in the following E-prints: 14738, 14741 14742.

WP 1 has also initiated starting up writing days with Dr. Henrik Egelyng (WP 4) to join the organic market- and business data with the institutional findings in Egypt. First writing day is 23.10.08 with the aim of making various journal articles together. Dr. Ahmed El Araby, who has been part of the book chapter (E: 14743), will also be part of writing the journal articles. The journal articles are likewise seen as the first input to the overall analysis in WP 5.

### **China:**

Former master student Tursinbek Sulitang was in a joint effort with WP 2 send to China from April to June 2008 to collect data on organic farm- and supply chain organizations. These data (partly documented in E-print 14744 Momentum magazine, theme on rural China – Jord og Viden) will be used together with the first preliminary findings (documented in conference paper 11248) to write a journal article. Tursinbek Sulitang, who is now starting up his Ph.d. in Germany, has therefore been invited to a writing workshop in December to make a journal article on four model typologies concerning organizational forms in organic farming in China. The conclusions of the four general organizational models found in Chinese organic agriculture, is, that they have to be seen in relation to the property rights regime of China and its various forms of ‘politicized capitalism’, as well as the transaction costs connected to the potential labor supply.

Momentum – ‘Jord og Viden’ is arranging two discussion meetings at Copenhagen University and Aarhus University respectively the 04.11.08 and 06.11.08 on the changes going on in Rural China with the articles from the theme magazine mentioned above as a starting point. Dr. Paul Rye Kledal (WP 1) will attend both places.

A workshop on global retailer development was arranged by WP 1 and held at the Institute of Food and Resource Economics 04.04.08 (E-print 14739). Invited was Dr. Jon H. Hanf from Leibniz Institute of Agricultural Development in Central and Eastern Europe, where Tursinbek Sulitang is going to commence his Ph.d. The purpose was first of all to plan Tursinbek Sulitangs visit to China for GLOBALORG and discuss what kind of data should be collected on retailer development and strategies in relation to organic foods; and secondly, to see if there could be some future collaboration sharing data on developments in China, Eastern Europe and Brazil (GLOBALORG data). Tursinbek Sulitang did not however have any luck in getting any interviews from the management of the global retailer chains Carrefour and Metro in Shanghai.

Tursinbek Sulitang also performed consumer research in Shanghai while visiting China, similar to the ones made in Egypt in the capitol of Cairo. The data are to be translated and send to Professor Lucie Sirieix, and used for preparing a journal article at the writing workshop in the beginning of December.

### **East Africa:**

Kenya and Uganda has been visited in August and September 2008 where an overall organic sector analysis and description has been made of Kenya. This has already been made into an article for the book: The World of Organic agriculture – statistics and emerging trends 2009 (forthcoming) (E-print 14758). Uganda was visited short to prepare for an in-depth sector analysis commencing in January 2009 together with Tanzania. Contacts has been established with Alistair Taylor Country manager of EPOPA (Export Promotion of Organic Products from Africa). The purpose of including Uganda and Tanzania is to be able to make a compari-

son of the different development paths taken within the organic sectors of East Africa. The comparison will be used to document why some companies in the South have success and others not in joining the global value chains. In this work collaboration is taking place with researcher Simon Bolwig and Peter Gibbon both from DIIS who has done similar studies, but only in Uganda. The empirical data collected in East Africa will be joined together with Henrik Egelyng (WP 4) to understand the impact of the institutional set up explaining differences in business development, and hopefully present potential donor models that can enhance a stronger growth in the organic sector depending on the specific market and institutional background.

### **Brazil:**

The activities in Brazil are carried out in close co-operation with partners from EMBRAPA. The Brazilian partners at EMBRAPA have supplied primary data on organic agriculture in the State of Sao Paulo (Brazilian case area in the GLOBALORG research). The corresponding consumer data have been delayed, but is expected to be ready soon, so they can be used for finalizing journal articles comparing organic consumers in and among the three urban case areas: Cairo, Sao Paulo and Shanghai. Dr. Lucimar Santiago from EMBRAPA will take part of these writings as she has already done on the joint congress papers (E-print 11247 and 11227).

GLOBALORG is planning together with EMBRAPA to make a workshop in Brazil late April 2009. The start up of students working on the supermarket development and retailer strategies towards organic food purchasing has therefore been postponed until then. Likewise it has been arranged with Helga Willer from Fibl who is in charge of the book 'The World of organic Agriculture – statistics and emerging trends', to make an article on the Brazilian organic food and farm sector for the 2010 edition. WP 1 would from the planned visit in April 2009 then be able to contribute with consumer studies, market- and chain analysis as well as the overall farm structure in Brazil.

The key message from WP1 is that most of the planned data are now available for analysis and interpretation.

### **WP2: Agro-ecology of Organic Farming Systems**

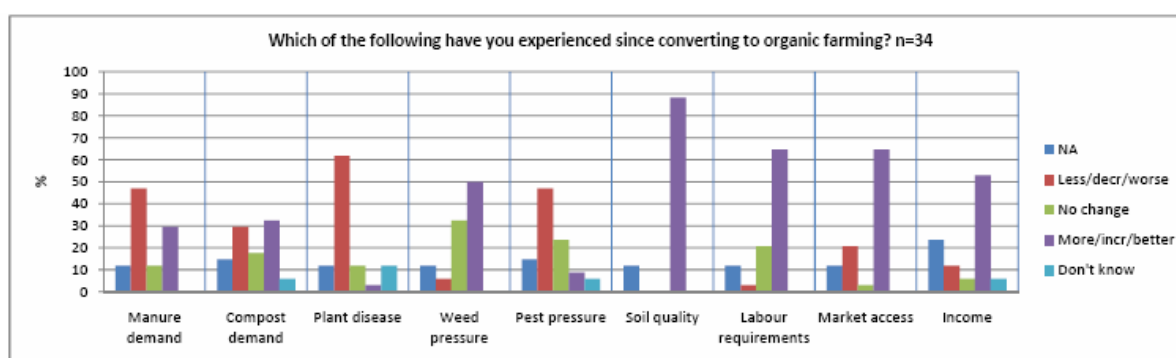
According to the case study approach in this WP, a series of trial sites have been selected and investigated. An overview is given in Table 1 below. **The key message is that a unique database is being generated across multiple sites from three countries.** This database is going to form the backbone in this WP in the sense that this is where data relating to the main research questions are being accumulated.

**Table 1. Overview of cases.**

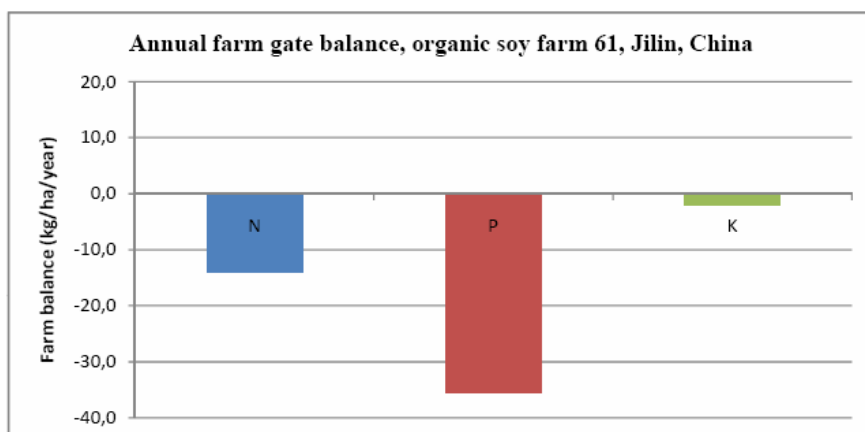
Country	Case area (system)	Interviewed farmers/ farming systems characterized	Status: Data collection	Status: Analysis
Brazil	Ibiuna, SP (intensive vegetables)	40 (34 O; 6 C)	Completed. Data entered into database. Verification currently ongoing.	Analysis underway. Awaiting some documentation.
	Itapolis, SP (fruit and vegetables)	41 (10 O; 9 IC; 9 FT&C; 9 C; 4 Lg O)	Completed. Data entered into database.	Analysis to start mid-September. Expect good collaboration for analysis and verification.
China	Jilin (soy-maize)	50 (32 O; 18 C)	2007 data entered into database and data from a follow-up study in 2008 is being entered into the database	2007 Data analysed, awaiting verification of 2008 data by 15 Sep 2008.
	Shangdong (intensive vegetables)	48: 2 x 12 O 2 x 12 C	Data entered into database and data from a follow-up study in 2008 is being entered into the database.	2007 Data analysed, awaiting verification of 2008 data by 15 Sep 2008.
	Jianxi (intensive vegetables)	40-60 : 20 - 30 O 20 - 30 C	ADBI study.	Verification to use data needed
Egypt	Fayoum in Nile delta plus (vegetables)	60 : (45 O; 15 C)	First round complete. Data currently being entered into database.	Analysis ultimo 2008. Still some quality control of data
	Reclaimed land in desert (vegetables)	10 : (5 O; 5 C)	First round complete. Data currently being entered into database.	Analysis ultimo 2008. Still some quality control of data

O=organic; C=conventional; IT=four trade; IC=in conversion

The database is being cross-validated at the moment but the potential is what we have hoped for. Some examples of what data can be extracted are shown below on data from Sao Paolo, Brazil, showing that farmers have experienced lower disease pressures in their crops but higher weed pressures and increased labour demands. The market-led development that certified organic farming represents, obviously lead to a better market access and a higher income.



Not all problems are, however, solved. The following graph, from the study in North-East China, indicates that these farmers still mine their soils for some nutrients. This scale of mining of particular phosphorus is obviously not sustainable in the long run. However, such balances actually comply with a few reported studies on soybean and nutrient budgets.



Another surprising finding of the project is that farmers organize in different and sometimes quite complex ways in order to reach the market, i.e. to supply the quantity and quality required. These findings are preliminary reported in a paper presented at the ISOFAR conference in Modena, Italy, June 2008. What is unique in this paper is that data from three continents are merged together.

A general framework has been identified for linking the agroecological conditions with the socioeconomics of the farm. A paper was presented at the ISOFAR conference in Modena, Italy, June 2008 report this analysis. The vantage point in the paper is that the General Livelihood Framework concept is being applied where five types of assets (physical, financial, human, natural, social) are included in the livelihood. Indicators for these types of assets was defined and included in the data collection. When all data has been entered into the database we expect this framework to provide a powerful guide to the analysis.

#### *Man power*

Regarding man power, then the contract with a PhD student recruited in Egypt had to be terminated due to lack of performance. Consequently, data collection is a bit delayed but our partner in Egypt has secured that all relevant data has been collected and they are currently being quality assured and entered into the database.

#### *Spin offs*

As spin offs from the project, students are often doing their fieldwork in relation to the project or on topics that has relevance to the project. While the project maintains its focus on its core counties of China, Egypt and Brazil, these student projects often brings beneficial new information to our attentions. Examples are:

- 1) A student project in China contributed strongly to bring the organisational patterns to our attention.
- 2) A student project recently conducted in Thailand in collaboration with FAO, reached the surprising conclusion that it was the older farmers who engaged in organic farming and that those farmers who returned to conventional farming practices after a period of organics were those farmers who had received most training.
- 3) A student project in Uganda focused on farmers' capability for experimentation to increase product quality. As the possibilities of off-farm income is very limited in this case, farmers still focus mainly on their own food supply while only a minor part of

their farming activities are directed to produce a high-value vegetable crop to an external market.

- 4) A master student in Agroecology and Rural Development from the Federal University of Sao Carlos, Sao Paulo State, Brazil was affiliated GlobalOrg through Empbrapa. He found that the network formation among organic producers influenced the land use patterns in the area because through the formation of organic cooperatives, small-holders were able to resist the expansion of large scale sugar cane and orange industries which threaten the basis of small family farmers in Sao Paulo state.

Such projects add to the overall understanding of context, drivers, and obstacles of implementing organic farming in different global environments and enhance our network by establishing links to FAO, CIAT, universities, and NGOs.

### **WP3: Product-oriented environmental assessment**

This WP is carried out integrated with the PhD study by Marie Trydeman Knudsen (primarily financed by KU-Life). Since she was on maternal leave during this project year only few activities took place, and milestones and deliverables were postponed accordingly in last year's report. Nevertheless, the status of the WP is as follows:

The major flows of organic products from the case countries (China, Brazil and Egypt) to Denmark have been identified as a background for selection of the food chains and farming systems to survey. These data show that a large variation exists in terms of products and volumes as well as ownership and farm size. Organic products exported from China mostly originate from areas where the non-organic production is not intensive, so presumably environmental differences are relatively small in the primary production.

Data recording on organic farms and food chains have been made in close collaboration with WP2. A questionnaire and a database have been developed for the three case countries.

In Brazil, data collection on organic farms producing oranges for juice production exported to e.g. Denmark have been completed and entered into the database. Data from conventional farmers producing oranges for juice production have also been collected and entered into the database. Furthermore, data have been collected on the factory processing the oranges into juice. This work has been done in close collaboration with a master student in Agroecology and Rural Development from the Federal University of Sao Carlos, Sao Paulo State, Brazil.

In China, data collection on organic farms producing soybeans exported to e.g. Denmark have been completed and entered into the database for the growing season 2007, and a follow-up study for the growing season 2008 is being entered into the database. Data from conventional farmers producing soybeans have also been collected and entered into the database. Data from the factory processing and exporting the organic soybeans to Denmark has also been collected. This work has been done in close collaboration with a master student at the College of Resource and Environmental Science, China Agricultural University, Beijing. A preliminary N balance and LCA have been made for the organic soybeans being exported to Denmark. Preliminary LCA results show that the contribution to Global Warming Potential comes mainly from the farm level (mainly N<sub>2</sub>O) and secondly from the transportation by ship to Denmark. With regard to Global Warming Potential and eutrophication, farm level is contributing the most. For ozone depletion and ecotoxicity water, the ship from China to Denmark is contributing the most.

#### **WP4: Institutions and Livelihood**

In addition to producing its deliverables and reaching milestones, the following field work and preliminary conclusions on Egypt and East Africa can be presented (as announced in last years status report and adding to last years findings on China and Brazil):

##### **Egypt:**

Despite the forthcoming Egyptian law or “Regulation to process and handle organic products in Egypt”, the institutional landscape for organic agriculture in Egypt is characterized by an institutional vacuum on the part of the state – a vacuum which has therefore for long been attempted filled by the private and non-governmental sector. One case in point illustrating this vacuum, is the Egyptian state agency “Agricultural Economic Research Institute” (AERI), which - while having a broad and deep mandate of research and statistics in relation to the agricultural sector in Egypt - had no activities relating to organic agriculture. In interviews, the reason quoted was that while conventional agriculture could be followed through existing official statistics, there was no official system producing statistics for organic agriculture. In order to research organic agriculture sector developments, AERI would then have to go for their own data collection. AERI kindly offered to eventually undertake such data collection, subject to external funding .

The (WP 4) case of Egypt is elaborated in box 1 below.

#### **Box 1: Some preliminary WP 4 findings on Egyptian Institutional Landscape**

In the Institutional Landscape of Egyptian organics, one feature which immediately catches analyst eyes is the similarity of names of some certification agencies-cum associations for organic agriculture – ECOA – ECOAS and COAE. It turns out these similarities are not a matter of misspelled acronyms, but a history of evolution. As a major exporter of organic food and fibre, Egypt host at least seven international certification agencies operating in the country. Egypt, however, has also two national certification bodies.

COAE was established in 1990, by initiative of the Biodynamic movement in Egypt, first as a “non-profit organisation”, evolving to become (involving also Demeter Bund and IMO of Switzerland) a national certification body by 1996. COAE seem to remain partly a commercial entity – a certifier providing inspection services and issuing certification – and an interest organisation promoting an environmental cause, and doing lobbying and politics.

Egyptian Center of Organic Agriculture Society (ECOAS) was established as an NGO and registered as such under a social movement’s code, because it initially focused not only on certification and inspection, but also on training or capacity development. ECOAS subsequently established Egyptian Center of Organic Agriculture DG (ECOAG) in 1998, as a company, to focus only on certification and inspection (led by Khairi Hafiz).

CLOA (Central Laboratory of Organic Agriculture) was established in 2002 with an ambitious mission, which included enhancement of organic farming, establishing a database on organic farming in Egypt, “coordination” of certification bodies, provide “specifications” for organic products sold domestically and for export and carrying out problem solving research (Hashem 2006). It has taken an active role in preparing the draft regulation on organic agriculture. Importantly, the establishment of these central level institutions has been complemented at the regional level. Today, there is a department for organic agriculture in every governorates agricultural directorate (Abouleish, 2007).

In terms of university level education, the first graduate students holding a degree in “organic agriculture” came out in 2001. Ain Shams University, having just initiated an “organic” program, only started teaching organic agriculture in 2005. In terms of training and extension, the EBDA and UGEOBA play “national” roles, but local or regional associations such as the Fayoum OA Society, the OA Protection Association and “Tomorrow’s Youth for OA” also provide training assistance for farmers (converting and marketing).

Among the Egyptian IFOAM members, Union of Growers & Exporters of Organic & Biodynamic Agriculture (UGEOBA) is a trading organisation, which is involved not only in “Fair Trade”, but also in Education, Environment and Rural Development. Some bilateral donors (Italy), some international development agencies (EU) as well as some INGO’s (CARE) are active in Egypt, and known to have included support for Egyptian organic agriculture in their portfolio of activities.

The story of SEKEM and its 1977 Sekem farm founder – 2003 Right Livelihood Award winner Dr. Ibrahim Abouleish – is well known and well published and shall not be repeated here (see e.g. [www.rightlivelihood.org/sekem](http://www.rightlivelihood.org/sekem)). We shall only mention the status of SEKEM today, a holding company with subsidiaries: ATOS, LIBRA, HATOR, CONYTEX and ISIS, employing a total of more than 2000 people and revenues long passing (already in 2003) the hundred million EGP mark and volume turnover growth during the past three years at 15%, 34% and 20% respectively. While really a Biodynamic institution, SEKEM is therefore the major de-facto “organic” player in Egypt, today. Today, the network of farms supplying SEKEM includes 32.000 hectares certified organically.

The macro-economic benefits of organic farming are well known. In the case of Egypt, they have been listed as follows: avoidance of costs to clean water polluted with pesticides, lower medical costs from improved health, avoided costs from soil conservation. Regarding pesticides Egypt has a Central Laboratory for Residue Analysis of Pesticides and Heavy Metals. Today, the CLRAHM tests samples annually, for residues of known pesticides, thus improving transparency in terms of the agricultural food sectors levels of residue production. One challenge for Egyptian Organic Agriculture to also develop even its domestic market is that testing for pesticide residues in Egypt remains voluntary – meaning that companies submit samples to CLRAHM in their own self-interest of avoiding having shipments denied entry into foreign markets. Where this institutional “design” leaves the Egyptian consumers remains an open question. From a purely theoretical perspective it can be deduced that such an institutional model could tempt some exporters to dump in the domestic market any batches found to surpass acceptable levels. However, based on CLRAHM statistics only a few percent of the samples submitted by producers prove unacceptable high levels of contamination. Indeed, in Cotton for instance, Egypt does have a record of having significantly reduced its pesticide spraying. Not only has the total national figure for pesticide use in Cotton been reduced, but an alternative and pesticide free cotton sector has evolved: organic cotton. Still, and generally speaking, the conventional agriculture feeding the average Egyptian and many of his neighbours, does rely on a number of pesticides, including some that are considered highly problematic.

(Egelyng, Henrik forthcoming)

### **Kenya:**

In Kenya, preliminary findings suggest a rapidly emerging and strengthening institutional environment for organic farming (see table 1 below). An indication of the relative strength of

the Kenyan institutional landscape can be made briefly, with reference to the fact that the East African Standardization is in place and national level public policy institutions in a process of consolidation. Ministry of Agriculture and Rural Development are recognizing the market potential of organic agriculture in recent strategic and policy papers, and the ministry has established an “organic agriculture unit”.

A Kenya Institute of Organic Farming (KIOF), provide training and extension of organic farming in Kenya, conducts regular courses on organic farming covering eastern and southern Africa, and a Kenya Organic Farmers Association (KOFA) promote organic farming practices among its members, publish organic farming standards for smallholder farmers in Kenya, and promote group marketing of organic produce. Larger companies and commercial farmers who are already in the export market have organized themselves into the Kenya Organic Producers Association (KOPA) and all these organic agriculture stakeholders, including KOPA and KOFA, has formed the umbrella network Kenya Organic Agriculture Network (KOAN).

### Overview of institutional framework

In table 1 is illustrated the preliminary findings on the relative strength of selected components of the institutional environments for organic farming in case countries

**Table 1: Relative strength of selected components of institutional environments for organic farming in GlobalOrg case countries (preliminary findings).**

	Strength of overall policy for OF	Reg. set-up in place, certific.	Public support or policy for “organic” R&D	CSO level of activity for OF	Private sector involvement	Conducivity of Context.
Brazil	*****	****	**	***	***	***
China	***	***	*	*	***	***
Egypt	*	**	*	*	***	***
East Africa	**	****	*	**	***	***

A second round of field-work is currently undertaken (China, November 2008, then Brazil and Kenya early 2009).

On this background WP4 is preparing its conclusions on level and nature of local embedment of conversion to organic farming (COA) at relevant dimensions (actors, public, private, CSO) and levels of agency in case countries, on policy and market conditions under which smallholder farmers in developing countries can benefit (more) from COA, on the extents to which formal policies and programmes are conducive to the development of organic farming in the four case countries, and how, and how not; and generally on the conditions under which organic farming can promote sustainable rural development.

### WP5: Synthesis: Organic Farming in a global perspective

This WP includes two main tasks; i) investigation of regional consequences of large scale conversion to organic farming in relation to food supply and food security, and ii) synthesis of

economic, agronomic and environmental results related to organic farming in developing and transition countries.

### **Regional consequences**

Ph.D student Panneer Peramaiyan primarily performs this part of the WP. As explained in the report from last year, it was decided to focus on India due to its major influence on the world situation and to take advantage of data availability. Co-operation has been established with NGOs and a Private Company working on organic farming in different regions of India. Contact was developed and data collected at household level in three regions of India with help of these partners as follows: CIKS (Centre for Indian Knowledge Systems) working on to enhance the livelihood and food security of small and marginal farmers through organic farming in Tamilnadu (south India), the private company called as BioRe India working on organic cotton in Madhya Pradesh (central India) regions, the NGO called Navdanya working on improving livelihood of farmers in Uttaranchal (north India) through biodiversity organic farming. Questionnaires were prepared with focus on household information, land use, livestock use, production and income of various crops as well as farmers experience and perception about organic farming. Pre testing of questionnaire on household level was done during December 2007 and data were collected in the following months from 40 organic and 40 conventional small holding farmers from each region. Representative sample of organic and conventional farmers were selected in same villages and which were similar in terms of resources, income and etc between the two groups.

Data from the questionnaires have now been entered into a database, checked for consistency and analyses have been started. Preliminary results from Tamilnadu on rice growing show that, while yield per ha was higher in the conventional system, the costs were considerably lower in the organic system, resulting in no significant differences in gross- and net margin. Regarding peanuts no differences in yield and costs were found. The questionnaires included aspects of food security *per se* in the farmer households. However in almost no case, farmers felt food insecure and this question could not be answered directly that way. In stead, based on the data collected, the potential livelihood at farm household level will be evaluated based on calculated farm level income from the detailed information gathered.

Additionally to the data from the questionnaires, data have also been collected from extension officers and farmers group of these regions in order to be able to verify the picture that can be drawn based on the questionnaires. Statistical analysis will be done next two months to detail the impact of organic farming on agronomic practices, crop yields and income under organic and conventional smallholdings in India.

These data form part of the input data for modeling of food supply and food security on regional level. The idea is to model these aspects by the IMPACT model developed by IFPRI. Tim Sulser from IFPRI introduced IMPACT model and trained Panneer about this model during first week of September 2008, with the aim to use the model to forecast the consequences of large scale conversion to organic farming in relation to food supply and food security in India and its effects on world food supply and world food prices over the years until 2050.

Additional data collection for regional level and global level aspects for IMPACT modeling will be carried out during first quarter of 2009, and modeling and parameterization will be done following months in 2009. However, it is already now foreseen that it will be beneficial to complement the work with another model more directed to the regional level (like GTAP) to get a better picture of the regional consequences. This will be investigated in coming

months.

### **Synthesis/integrated assessment**

The synthesis activities are only in their beginning. The first ideas were exchanged at a project workshop in March 2008 among the Danish project partners. This was followed by a workshop in Modena, June 2008 that included project partners from China, Brazil and Egypt in addition to the Danish partners. The idea was that, while the research in each country yields particular insight valid for the individual country, we wanted to gain a more general insight taking advantage of the preliminary results obtained across countries. Thus, we discussed working hypothesis related to three central questions in the project:

- Impact on the Agroecology by farmers integration in long high-value organic food chains: nutrient balances, crop diversity, and livelihood
- Farmers livelihood as influenced by farmers-, market- and food chains mode of organisations
- Institutional barriers of sustainable development for OF

The plan is to follow up on these discussions on workshop in Brazil early 2009.

### **WP6: Project management, database and web-site**

Due to the shift in Niels Halberg's position late 2007, it was agreed with DARCOF that undersigned John E Hermansen took over as project leader as well as WP leader for WP's 3, 5 and 6.

We have had three project meetings, of which 2 in combination with 'synthesis' workshops. The website has been updated on this basis with a number of presentations.

For a number of reasons partly explained in last year's report (delayed initiation of PhD studies, maternal leave) and time constraints among other partners, it is foreseen that some of the synthesis activities in the project will be delayed, and we therefore ask for an extension of the project period with one year within the same overall budget. This means that the end date will be 1/10 2010. This is reflected in budget sheets.

## C.2 Fulfilment of deliverables and milestones

(To be completed for each work package)

### Deliverables list (from application)

Deliverable No	Deliverable title	Lead scientist	Delivery date	Allocated scientific person month	Type of deliverable	Fulfilled (ok) or deviations (d)*
D1.1	Urban-Rural economic development and Organic Food Procurement Systems	PRK	08.2007	12	P, R	Ok
D1.2	Consumers Attitudes related to Organic Food and Organic Distribution	PRK (LS) (Ph.D. student)	08.2008	4	S, P, R C	Ok, d
D1.3	Supermarket lifecycle development and urban organic consumers	PRK (Ph.D. student)	01.2009		S, P, R, C	
D1.4	Opportunities and Challenges for Organic Food Producers Supplying Supermarkets Local and Global	PRK	10.2009		S, P, R, C	
D1.5	PhD thesis: Organic farmers and contractual relations with supermarkets	(Ph.D. student)	06.2009	12		
D1.6	Publications in FØJO E-Nyt and Darcof E-news	PRK	*	2	P	
D2.1	Relation between farm-gate nutrient balances on typified farm systems in relation to the nutrient cycling on the farm under varying distance to markets described. International publication.	HHJ (Ph.D. Student)	11.2008	18	S	
D2.2	Effect of market orientation of organic farmers on biodiversity in the farming systems established. International publication.	HHJ	02.2009	8	S	
D2.3	Model developed that link socio-economic and agronomic data. International publication. (link to WP4)	HHJ (Ph.D. Student)	05.2008	18	S	ok
D2.4	Scenario analysis for typified farm systems on the linkage between the farms productivity, fertility and environmental impact to market integration and to income and investment of money, land and labour. Report. (link to WP4)	HHJ (Ph.D. Student)	09.2008	16	R	D (in prep)
D2.5	Relation between market integration of organic farmers and livelihood and socioeconomics for farmers and families established. International publication.	HHJ	06.2009	16	S	
D2.6	Research education of one Danish and one Egyptian Ph.D. student	HHJ	12.2009	6	O	One student terminated
D2.7	Outreach activities like e.g. publications in FØJO E-Nyt and Darcof E-news	HHJ	*	2	P	Ok
D3.1	Comparative Life cycle assessment results of organic products and food chains with different food miles	Ph.D. Student* (Halberg)	06.2009	6	S, O (web-database)	
D3.2	Comparative evaluation of different environmental assessment methodologies (LCA, ecological footprint) and their suitability for describing impacts of different food choices	Ph.D. Student* (Halberg)	08.2009	4	S	
D 3.3	Important factors and tradeoffs for the sustainability and environmental profile of smallholder organic farms.	Halberg, Ph.D. Student*	05.2009	6	S	
D 3.4	Ph.D. thesis	Ph.D. Student	12.2009	10	Thesis	
D3.5	Publications in FØJO E-Nyt and Darcof E-	NHA	*	2	P	

	News					
D4.1	Added values of organic agriculture: a development perspective (links with WP2 and WP3)	Egelyng	06.2007	3	S + C	Ok
D4.2	How well are farmers in case countries compensated for organic values added to and through their products?	Egelyng	06.2008	4	P + S	Ok
D4.3	Institutional environments for organic farming in the tropics: how conducive and how rooted?	Egelyng	12.2007	2	C + P	Ok
D4.4	Findings on the Institutional Nature and Sustainability Ambition of Agricultural Policy Reforms in Case Countries.	Egelyng	06.2009	3	S + C	
D4.5	How are institutional environments conducive to organic farming rooted in selected countries and production systems/regions supplying tropical organic products for Danish markets? (Links with WP 1).	Egelyng	09.2009	5	S + C	
D4.6	Contribution to FØJO E-Nyt and Darcof E-News	Egelyng	*	2	P	
D5.1	Development/improvement of a model tool for the assessment of food production and security under large scale introduction of OF methods in developing countries	Halberg/ (IFPRI)/ PH.D.- student	06.2009	8	O	
D5.2	Estimating the regional effects of large scale conversion to organic farming on food prices and consequences for food security among urban resource poor on a regional scale”	Halberg/ (IFPRI)/ PH.D.- student	09.2009	8	S	
D5.3	Importance of different institutions and procurement systems for large-scale conversion to OF	Kle- dal/Egelyng	07.2009	8	R	
D5.4	Integrated analysis of consequences for food security, livelihood, resource use and environmental impacts of scenarios for conversion to OF in regional scale	Halberg	09.2009	8	S	
D6.1	Annual reports	Herman- sen/all	09,200x	2	R	Ok
D6.2	Common protocols for data recording	Halberg/all	05-10-69	3	R	Ok
D6.3	Project web-site	Halberg/all	17-08-87	3	O	Ok
D6.4	Project database updated	Halberg/all	01.200x	3	O	Ok
D6.5	Newsletters to all stakeholders in and outside Denmark	Halberg/all	08, 200x	2	O	
D6.6	Exchange of Ph.D. students facilitated	HHJ	2007-08	2	O	Ok

#### Milestones:

Milestone No.	Milestone title	Lead scientist	Delivery date	Fulfilled (ok) or deviations (d)*
M1.1	Delimitation and definition on ‘urban’, ‘peri-urban’ and ‘rural’ in relation to the chosen urban settlements.	PRK	2006/03	Ok
M1.2	Delimitation of the organic food commodities and type of food procurements applied for further studies in this and the other WP’s	PRK	2006/06	Ok
M1.3	The chosen organic procurement systems within the case study areas documented in volume and monetary terms	PRK	2007/01	Ok
M1.4	Data collected on urban economic development in the four case studies	PRK	2007/06	Ok
M1.5	Occasional and regular organic consumers identified in the chosen urban settlements for preparation and conduct of focus group studies	PRK	2007/12	Ok, (d)
M1.6	Statistical and subjective analyses of the data obtained from the focus group studies, generating new knowledge on organic consumers in developing and developed countries for comparison studies.	PRK	2008/08	Ok, (d)
M1.7	Data collected on supermarket expansion and market concentration delimitated to those selling the chosen organic food products	PRK	2008/01	Ok

M1.8	Analyses of the qualitative interview data of the supermarket procurement officers in relation to supply and handling requirements on organic food commodities	PRK	2008/06	Ok, (d)
M1.9	Modelling supermarket life cycle development in relation to urban economic data, creating new scientific knowledge on possible supermarket expansion and market concentration in developing countries.	PRK	2008/08	d
M1.10	Refinement of the supermarket model in relation to the studies on consumer attitudes purchasing or not purchasing organic, and from the analyses of the procurement officers	PRK	2009/01	
M1.11	Synthesis of possible strategies and future challenges for organic producers and their organizations trading and supplying supermarkets local and global	PRK	2009/05	
M2.1	Identification, selections and base-line description of farms in Egypt, China, and Brazil (new dates indicated)	HHJ	2006/05 (2007/12)	ok
M2.2	First year quantification of nutrient management on-farm	HHJ	2008/02	ok
M2.3	Model reviewed and tested	HHJ	2007/12	ok
M2.4	Conductance of training course of DSSAT in USA or APSIM in Australia	HHJ	2007/02	ok
M2.5	Second year quantification of nutrient management on-farm	HHJ	2009/06	
M2.6	1 <sup>st</sup> Model integration ready for testing	HHJ	2008/08	ok
M2.7	Plant and soil samples from on-farm studies analysis completed	HHJ	2008/06	d (in process)
M2.8	Diversity analysis on-farm completed	HHJ	2009/03	
M2.9	2 <sup>nd</sup> Model being tested	HHJ	2009/01	
M2.10	Scenario analysis completed	HHJ	2009/09	
M2.11	Livelihood analysis completed	HHJ	2009/09	
M2.12	Initiation (2006/01) (2006/10) of a Ph.D. study in Denmark to be finished	HHJ	2009/09	
M2.13	Initiation (2006/01) (2007/01) of a Ph.D. study in Egypt to be finished	HHJ	2009/12	
M3.1	Selection of products for environmental assessment finalised and coordinated with other WPs.	NHA	2006/06	ok
M3.2	Data recording on organic farms and food chains initiated	NHA	2006/08	ok
M3.3	Preliminary assessment of environmental costs of transport for comparable food products to be used in participatory evaluations of food systems	NHA	2009/03	
M3.4	Data recording for environmental assessment of organic foods finished.	NHA	2009/02	
M3.5	Comparable Life cycle assessment results of organic farming systems and food chains established.	NHA	2009/06	
M3.6	Comparison of different environmental assessment methods ready for use in WP5	NHA	2009/06	
M3.7	Initiation (2006/03) of a Ph.D. study in Denmark to be finished (2009/03)	NHA	2009/02	ok
M4.1	Mapping and analysis of formal policies and programmes initiated in all four case countries	HE	2006/06	ok
M4.2	Mapping and analysis of agency and practices (embedment) initiated in all case countries	HE	2006/12	ok
M4.3	Plan finalized for Workshop Contributions (see WP 6)	HE	2007/01	ok
M4.4	Plan finalized for feeding results of policy and institutional analysis from WP 4 into WP 5	HE	2007/06	ok
M4.5	Mapping and analysis of formal policies and programmes in all case countries completed	HE	2008/04	ok
M4.6	Analysis of organic premiums and development returns initiated in all case countries	HE	2008/06	ok
M4.7	Mapping and analysis of agency and practices (embedment) completed	HE	2008/12	
M4.8	Input to D 5.3 (Importance of different institutions and procurement systems for large scale conversion to OF)		2008/12	
M 4.9	Analysis of organic premiums and development returns completed	HE	2009/09	
M4.10	Theoretical generalization completed	HE	2009/03	
M4.11	Synthesis with WP 5 completed	HE	2009/09	
M5.1	Data recording guideline for the Impact-water model tool established	JHE	2007/12	d
M5.2	Data sources identified by case area	JHE	2008/03	ok
M5.3	Model parameterised and tested with preliminary data for the OF scenarios in the regions	JHE	2008/06	ok
M5.4	Assumptions of technical productivity growth and price relations estab-	JHE	2008/11	

	lished for the model			
M5.5	Modelling with final data finished	JHE	2009/07	
M5.6	Synthesis of results from WP1-4 established and presented to stakeholders	JHE	2009/08	
M6.1	Project website established and access provided to partners	NHA	2006/03	ok
M6.2	Workshop 1, Ex-ante meeting finalising collaboration between partners and the joint selection of typical product and farms to involve in the case studies in each case area	NHA	2006/06	ok
M6.3-6.7	Workshops organised twice per year, 1 for partners only and 1 for local participants in the case-areas	JHE		ok
M6.8	Quarterly newsletters	JHE		
M6.9	Two foreign Ph.D. students visiting Denmark for 6 months each	JHE	2008/12	

\* Deviations are to be further discussed in D

(The nature of the deliverables must be indicated by S = publication in scientific journal with peer review; P = publication in journals without peer review; R = reports; C = presentation at meetings and congresses or O = other types of deliverables, e.g., prototypes, models, web-sites, etc.).

#### **D. Description of deviations and subsequent adjustments of plans**

##### *WP 1:*

Deviation in D1.2 is missing deliverables in Scientific Journals. First draft has been made on the organic consumers in Cairo (E-print 14737). Likewise, writings days held together with WP 4, and writing workshops up-lifting conference papers etc. into scientific journals are in the process in regards to articles on supply chain organizations in China, development paths of the organic sector in Egypt and organic consumer values in China/Shanghai.

M1.5 and M1.6 are fulfilled for Cairo and Shanghai, but we still need to receive the organic consumers interviewed at supermarkets in peri-urban areas of Sao Paolo.

M1.8 related to procurement strategies on organic in supermarkets has been done in Cairo, but the closed culture in China concerning open interviews made it so far impossible to receive any information on these matters in the global supermarket chains Carrefour and Metro. Interviews in Brazil will be planned in relation to the joint workshop between GLOBALORG and EMBRAPA in Brazil late April 2009.

M1.9 the commencement of supermarket studies in Brazil will be conducted in relation to the planned workshop in April 2009.

##### *WP 2:*

Egypt: In relation to last year there is a small adjustment to data collection in Egypt but these are being alleviated through contracting with other enumerators. Furthermore, a Post. Doc. will be employed by the Department of Agriculture and Ecology in 2009 and it is expected that this Post. Doc. due to his particular competencies will be able to establish nutrient efficiencies on farms in Egypt using  $^{15}\text{N}$  as tracer due to the pronounced use of compost in all cropping systems in Egypt.

##### *WP 6:*

D6.5 and M6.8 was not fulfilled due to time constraints.

## E. Project publications and other products

### 1. Products from Organic Eprints archive

- Brandt, Jacob and Kledal, Paul Rye (2008) [Økologi i sandet](#) [Organic in the dessert]. In *Økologisk Jordbrug*, 16. May, No 409. Økologisk Landsforening.
- Egelyng, H. (2007) [Kina spiser grønt](#). *Den Ny Verden - Tidsskrift for internationale studier* 40:pp. 57-66.
- Egelyng, H. (2007) [Udviklingens mål. Fra omsætningsvækst til ægte fremskridt?](#). *Den Ny Verden. Tidsskrift for Internationale Studier* 40:pp. 19-26.
- Egelyng, H.; Vaarst, M.; Hermansen, J.E. and Høgh-Jensen, H. (2008) [Afrika – Fremtidens Økologiske Kontinent?](#). In *Analyse*, 8. October. Politiken.
- Egelyng, Henrik (2007) [Institutional Environments for Certified Organic Agriculture: Enabling Development, Smallholders Livelihood and Public Goods for Southern Environments?](#). Paper presented at 106th seminar of the EAAE, Pro-poor development in low income countries: Food, agriculture, trade, and environment, Montpellier, France, 25-27 October 2007; Published in *Proceedings*. CD-ROM. CIRAD.
- Egelyng, Henrik (2006) [Glocalisation of Organic Agriculture: Options for Countries in the South](#). Paper presented at Conference on Place, Taste, and Sustenance: The Social Spaces of Food and Agriculture (session 5:8), Boston University, USA, June 7 – June 11, 2006.
- Egelyng, Henrik; Halberg, Niels and Høgh-Jensen, Henning (2006) [Organic Agriculture in a Development Policy Perspective](#). Paper presented at Joint Organic Congress, Odense, Denmark, May 30-31, 2006..
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- [opportunity for organic farming](http://www.darcof.dk/enews/mar06/Global1.html). *DARCOFenews*(1). Online at <<http://www.darcof.dk/enews/mar06/Global1.html>>
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- Kledal, Paul Rye (2008) [Økologisk og konventionel landbrug i Egypten - eksportsamarbejds muligheder for danske frugt- og grøntsagsproducenter](#) [organic and conventional farming in Egypt - Export opportunities for Danish fruit- and vegetable producers]. [oral] Presentation at *Danidas Business to business program og mulighederne i Egypten*, Økologisk Landsforening, Århus, 24th of April 2008.
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- \* 25-75% financed by DARCOF  
 \*\* 5-25% financed by DARCOF

## **F. Scientific education**

A total of four MSc students from the MSc study programme in “Agricultural Development” at LIFE have been associated with the project. They have worked in four different countries (China, Vietnam, Uganda, and Brazil).

In addition, two MSc students from partner universities are involved in data collection in China and Brazil. The data collection will form part of the data they will generate in their thesis work.

Two PhD students are directly employed by the project, see participants list. In addition, a Chinese PhD Yuexian Liu student is associated with the programme with support from the China Scholarship Council. Finally, a Danish PhD student is associated with the programme with a full scholarship from LIFE. Thus, the project expects to generate the frame for a total of four PhD thesis’ work.

In Brazil, a MSc student has been deeply involved in the data collection. Also in China, a MSc student has been imperative for data collection in two regions.

## **G. National and international cooperation**

Participated in a joint application seeking funds from the GATES foundation to support an expansion of GLOBALORG to include funding of non-danish researchers and additional countries. The application, unfortunately, did not result in any funding from GATES. Subsequently, though, Henning Høgh Jensen acting on behalf of GLOBALORG entered a new initiative preparing a “new” proposal to Melinda and Bill Gates Foundation, to focus on organic farming and development in Africa.

Close cooperation and networking between Assistant professor Paul Rye Kledal Institute of Food and Resource Economics, Copenhagen University - Supagro/Inra in France/Montpellier with professor Lucie Sirieix - and professor Lucimar de Abreu working at EMBRAPA in Brazil/Campinas in São Paulo State on the consumer studies. The cooperation has so far resulted in two conference papers in 2007, and the work will be continued in November concerning consumer studies in Egypt as well as be extended in Brazil in the beginning of 2008 concerning setting up a Ph.D. plan for investigating supermarket expansion and strategies related to organic food products. There has also been cooperation with Dr. Xi Yunguan, director of Organic Food Research and Consulting Centre at Nanjing Institute of Environmental Sciences on data recording on Chinese organic sector and export (see paper 11246: Organic food and farming in China).

Participation in a Meeting (30 May 2007) called by DARCOF on the new Danish synthesis on growth, development and integrity in the Danish Organic Sector. Invited as member of working group on market creation and globalisation. Consultations with Danish colleagues Dr. Daugbjerg (University of Aarhus) and Dr. Michelsen (University of Southern Denmark), on the desirability of contributing a joint Book Chapter on the institutional framework serving as foundation for the organic market. The proposal was forwarded to DARCOF on 18<sup>th</sup> June 2007.

An analysis calling for the Danish Africa Commission to act on the development potential of

organic agriculture for Africa, was published (Politiken, 8. October 2008), in addition and as a parallel to the input made during summer of 2007 to the Danish (Danish Language) Africa Strategy. The new (2007) Danish Strategy for Africa (now published and available from [www.um.dk](http://www.um.dk)) reads (on page 16, in Danish): “Regeringen vil:” [] “Arbejde for, at miljøhensyn, bæredygtig anvendelse af naturgrundlaget og forebyggelse af naturkatastrofer indarbejdes i afrikanske landes politikker og fattigdomsstrategier og undersøge mulighederne for at fremme f.eks. økologisk landbrug, herunder også som eksportmulighed, med udgangspunkt i den forskning og ekspertise, der findes på området”. (Regeringen. 2007. Danmark i Afrika - et kontinent på vej: regeringens prioriteter for samarbejdet med Afrika syd for Sahara. Udenrigsministeriet, København).

In Brazil, Work Package 4 initiated collaboration with Universidade Federal Rural do Rio de Janeiro (Dr. John Wilkinson) and Empresa de Pesquisa Agropecuária do Estado do Rio de Janeiro (Dr. Maria Fernanda FONSECA).

In China, Work Package 4 initiated collaboration with the Organic Food Development Center (Prof. Xingji Xiao and Dr. Xi Yunguan) and the Chinese Center for Agricultural Policy (Prof. Dr. Jikun Huang, Dr. and Dr. Luping Li). In addition, collaboration was undertaken with the Chinese Agricultural University (Dr. Qiao Yu Hui).

In WP 2 and 3 there is collaboration with CAU in China, Embrapa in Brazil and CLOA in Egypt regarding field surveys in the selected organic food chains. This is an important aspect of the project setup and has taken considerable effort to establish. Formal contracts have been established which foresees joint publication of results and participation of at least one researcher from each country at a project meeting in relation to to ISOFAR conference in Modena 2008

In Egypt, Work Package 4, in addition to the projects collaboration with the Central Laboratory for Organic Agriculture (CLOA), and Dr. El-Araby, WP4 visited and worked with local researchers and certification bodies - Egyptian Center for Organic Agriculture and Organic Agriculture in Egypt (ECOEA and COAE), as well as administrators and policy-makers. WP4 also interviewed Dr. Salwa Dogheim, who worked out of the Central Laboratory of Residue Analysis of Pesticides and Heavy Metals in Food.

In Eastern Africa WP4 undertook explorative research, initially through fact finding, overview and review activities also in collaboration with international organisations (UNCTAD, meeting with Dr. Twarog), (FAO Kenya, Deborah Duveskog) and involving a re-visit to ILRI (Carlos Seré), in preparation for helping GLOBALORG settle the (now settled) question of whether and how to focus on East Africa.

In terms of global collaboration, the WP 4 Lead Scientist (Dr. Egelyng) - with backing from WP3 Lead Scientist (Dr. Halberg) and WP 2 Lead Scientist (Dr. Høgh-Jensen) – actively contributed to the 2006-2007 International Assessment of Agricultural Science and Technology for Development or IAASTD (See [www.agassessment.org](http://www.agassessment.org)). The report of IAASTD will be published in January 2009.

In 2007, the WP 4 Lead Scientist (Dr. Egelyng) joined the Board of the Danish Development Research Network (DDRN) and subsequently advised on the establishment of a DDRN Working Group: Organic Agriculture for Sustainable Development (OASD).

Also in 2007 (March), WP 4 Lead Scientist (Dr. Egelyng) assisted the Ministry of Foreign Affairs (Danida) in programming for Danish Development Days or DDD (2007). He also drafted a paper - *A Developmental Role for SME's: a Globalising Market for Certified Organics - for presentation at the DDD session on Small and Medium Sized Enterprises* for oral presentation.

In 2006 (summer) Esbern Friis-Hansen (DIIS), through the “old” agriculture related research network then known as NETARD, supported an initiative that led to a 2006 workshop on Organic Agriculture in Development.

Participated in a joint application seeking funds from the GATES foundation to support an expansion of GLOBALORG to include funding of non-danish researchers and additional countries. The application, unfortunately, did not result in any funding from GATES. However, Henning Høgh Jensen entered on behalf of DARCOF into a new network which are preparing a new proposal to Melinda and Bill Gates Foundation which is to focus on the development organic farming in Africa.

Henning Høgh Jensen coordinates an application to the EU Peoples programme for support to an Initial Training Network, involving 12 PhD scholarships. Partners are universities from Denmark, Norway, Austria, Tanzania, Kenya and Uganda. Other partners include a private research institute in Spain, an NGO in East Africa, IFOAM and the Food Industry Network (SAI Platform) in Europe.

WP 4 (Egelyng) has acted as advisor invited by the “ulandsudvalg” ØL. Results of this collaboration include that a DDRN working group on organic agriculture for sustainable development has been established ([http://ddrn.dk/index.php?side\\_id=161](http://ddrn.dk/index.php?side_id=161)) and a conference “Ulandskonferencen 27. maj 2008 i København: Hvordan ulandene kan få gavn af det voksende økologiske marked”, arranged in a collaboration between DDRN and ØL (Ulandsudvalg) as well as private sector partners, and held at the University of Copenhagen. All presentations from the conference can be found at the ØL website ([http://www.okologi.dk/Om\\_Økologisk\\_Landsforening/Udvalg\\_og\\_folkevalgte/Ulandsudvalget/Konference.asp](http://www.okologi.dk/Om_Økologisk_Landsforening/Udvalg_og_folkevalgte/Ulandsudvalget/Konference.asp)), which also contains a downloadable summary of the results from the workshop component of the same conference.

## **H. Critical reflection on the project**

The project as a whole – perhaps because it provides a cross-cutting and interdisciplinary research agenda which is broadly appealing in terms of policy relevance – has served as a good platform for invoking the interest of policy makers in international organisations, in case countries as well as in the Danish international policy community.

While almost all subtasks within the individual WP's have been working well, the major challenge now is to handle the methodology for integrated assessment among partners. Efforts have been done in establishing a theoretical basis, but this remains to be proven - and this will be the focus therefore in the coming period.

## B. Budget for the whole project (1.000 DKK)

Total consumption of funds from DARCOF and expected consumption this year and coming years

Year:	Original budget	Consumption 2005/2007	Expected consumption 2008	2009	2010	Total
Man-months						
Scientific personnel		61	45,5	47,5	16,5	172
Technical personnel		2	0,3	1,0	0,7	4

Year:	Original budget	Consumption 2005/2007	Expected consumption 2008	2009	2010	Total
Salaries						
Scientific personnel	6295	2329	1597	1818	722	6466
Technical personnel	149	58	10	32	21	121
Other operational costs	1807	623	559	491	134	1807
Equipment	200	5	20	100	75	200
Others (please specify)	942	89	345	320	45	799
Direct costs	9393	3104	2531	2761	997	9393
Indirect costs (20% of direct costs)	1878	621	490	539	227	1877
Total	11271	3725	3021	3300	1224	11270

### Comments:

## 8. Signatures and stamps

Name	Institute	Date	Signature
Head of project			

## Appendix I. Detailed budget

### A. Budget for each participating institute (1.000 DKr)

Name of Institute and department: Faculty of Agricultural Sciences  
Department of Agroecology and Environment

Year:	Original budget	Consumption 2005-2007	Expected consumption 2008	2009	2010	2011	Total
Man-months							
Scientific personnel	59	19	14	16	8,5		57,5
Technical personnel	5	2	0,3	1,0	0,7		4,0

Year:	Original budget	Consumption 2005-2007	Expected consumption 2008	2009	2010	2011	Total
Salaries							
Scientific personnel	2320	798	526	641	382		2347
Technical personnel	149	58	10	32	21		121
Other operational costs	383	146	172	65	0		383
Equipment							
Others (please specify)	441	30	195	176	40		441
Direct costs	3293	1032	903	914	443		3292
Indirect costs (20% of direct costs)	659	207	181	183	88		659
Total	3952	1239	1084	1097	532		3951

**Comments:**

Name of Institute and department: Copenhagen University  
Institute of Food and Resource Economics

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Man-months							
Scientific personnel	36	6	12	8*)	12	4	42**)
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Salaries							
Scientific personnel	1665	211	493	296	480	185	1665
Technical personnel							
Other operational costs*)	650	22	162	180	246***)	40	650
Equipment	200	0	5	20	100	75	200
Others (please specify)							
Direct costs							
Indirect costs (20% of direct costs)	503	47	132	83	152	89	503
Total	3018	280	792	579	978	389	3018

**Comments:**

\*) The reason for 8 man month assigned for GLOBALORG in 2008 is due to the fact that Paul Rye Kledal has been teaching 3 man month at FOI + working 1 man month for Darcof in relation to the knowledge synthesis "Growth and development".

\*\*\*) The total number of man months has been increased from the original budget, because Paul Rye Kledal had not finalised his Ph.D. when embarking upon the project.

\*\*\*\*) Other operational costs for 2009 includes the payment of the planned GLOBALORG workshop in Brazil, master student(s) commencing the retailer studies in Brazil + deliverables agreed upon with EMBRAPA in Brazil as well as finalizing field studies in East Africa.

Name of Institute and Department: Copenhagen University  
**KU-Life**

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Man-months							
Scientific personnel	44	3	10	15.5	12.0	3.5	44
Technical personnel							

Year:	Original budget	Consumption 2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Salaries							
Scientific personnel	1254	80	286	428	471	133	1398
Technical personnel							
Other operational costs	510	28	155	132	105	90	510
Equipment							0
Others (please specify)	301	14	20	50	74		158
Direct costs	2065	122	461	610	650	223	2066
Indirect costs (20% of direct costs)	413	24	92	122	130	44	412
Total	2478	146	553	732	780	267	2478

**Comments:**

Name of Institute and department: Danish Institute for International Studies

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Man-months							
Scientific personnel	27	5	6	8	7½	½	27
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Salaries							
Scientific personnel	1.055	208	252	347	226	22	1.055
Technical personnel							
Other operational costs	264	64	46	75	75	4	264
Equipment							
Others (please specify)	200	7	18	100	70	5	200
Direct costs	1519	279	316	522	371	31	1519
Indirect costs (20% of direct costs)	303	56	63	104	74	6	303
Total	1822	335	379	626	445	37	1822

**Comments:**

**B. Budget for each participating department (1.000 DKK)**

Name of Institute and department:

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Man-months							
Scientific personnel							
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Salaries							
Scientific personnel							
Technical personnel							
Other operational costs							
Equipment							
Others (please specify)							
Direct costs							
Indirect costs (20% of direct costs)							
Total							

Comments:

**C. Budget for co-financing from each participating institute (1.000 DKK)**

Name of Institute and department: Copenhagen University  
Institute of Food and Resource Economics

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Man-months							
Scientific personnel	4		3	1			4
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Salaries							
Scientific personnel	200562	0	140876	59686	0	0	200562
Technical personnel							
Other operational costs							
Equipment							
Others (please specify)							
Direct costs							
Indirect costs (20% of direct costs)	40113	0	31137	8976	0	0	40113
Total	240675	0	172013	68662			240675

**Comments:**

Name of Institute and department: Copenhagen University  
KU-Life

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Man-months							
Scientific personnel	8	3	2	2	1		8
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Salaries							
Scientific personnel	360	135	90	90	45		360
Technical personnel							
Other operational costs							
Equipment							
Others (please specify)							
Direct costs	360	135	90	90	45		360
Indirect costs (20% of direct costs)	72	27	18	18	9		72
Total	432	162	108	108	54		432

**Comments:**

Name of Institute and department: Danish Institute for International Studies  
Department of Development Research

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Man-months							
Scientific personnel	8	2½	2½	2½	2½		10
Technical personnel							

Year:	Original budget	Consumption 2005/2006	Consumption 2007	Expected consumption 2008	2009	2010	Total
Salaries							
Scientific personnel	400	102	104	105	106		417
Technical personnel							
Other operational costs							
Equipment							
Others (please specify)							
Direct costs	400	102	104	105	106		417
Indirect costs (20% of direct costs)	480	20	21	21	21		483
Total							

**Comments:**