



MINISTERIET FOR
FAMILIE- OG
FORBRUGERANLIGGENDER

Ministeriet for Fødevarer, Landbrug og Fiskeri
Direktoratet for FødevarerErhverv



Danish Research Centre for Organic Farming



Application

for research funding under the research programme:

Research in Organic Food and Farming

International Research Co-operation and Organic Integrity

(DARCOF III 2005-2010)

Funded by the Ministry of Food, Agriculture and Fisheries
under the Finance and Appropriation Act, Sections 24.33.02.10

Application deadline 15th March 2005 at 12:00 a.m.

1. **Project title and acronym** (acronym max. 10 letters):

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

2. **Project manager** (name, title, address, telephone, fax and e-mail. For projects in which several institutes participate, one project manager must be appointed to head the project):

Niels Halberg, Senior Researcher, Ph.D., Danish Institute of Agriculture Science (DIAS), Dept. of Agroecology, Research Centre Foulum, PO Box 50, DK-8830 Tjele. Phone: +45 8999 1206.
Fax :+45 8999 1200. E-mail: Niels.Halberg@agrsci.dk.

Please submit 15 hard copies and 1 electronic version to:

Danish Research Centre for Organic Farming
Research Centre Foulum
P.O. Box 50
DK-8830 Tjele

Tel. +45 89 99 16 75
Fax. +45 89 99 16 73
E mail: foejo@agrsci.dk
Web site: www.darcof.dk

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3. **The project is within the following research project theme** (name of the project theme according to 'Invitation til projektansøgninger'. Include argumentation, max. 10 lines, if the project is only a part of a project theme):

The project focus on "3.8 Økologisk jordbrug i et globalt perspektiv" (Organic Agriculture in a Global Perspective), and on "3.8.1 Bæredygtighed, urbanisering og global handel (Sustainability, urbanisation and global trade) and will cover all the aspects mentioned in this section of the call as described in A.1.

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4. **Participating institute(s)** (name, address, telephone, fax and e-mail):

Danish Institute of Agriculture Science (DIAS), Dept. of Agroecology, Research Centre Foulum, PO Box 50, DK-8830 Tjele. Phone: +45 8999 1206. Fax: +45 8999 1200. E-mail: Niels.Halberg@agrsci.dk.

Royal Veterinary and Agricultural University (KVL), Department of Agricultural Sciences, Højbakkegaard Allé 13, DK-2630 Taastrup. Phone: +45 3528 3391. Fax: +45 3528 3584. E-mail: hhj@kvl.dk.

Danish Institute for International Studies (DIIS), Department of Development Research (DoDR). Strandgade 56, DK-1401 Copenhagen K. Phone: +45 3269 8787 (Reception). Fax: +45 3269 8700. Email: heg@diis.dk.

Food and Resource Economic Institute (FOI), Rolighedsvej 25, DK-1958 Frederiksberg C. Phone: +45 3528 6800. Fax: +45 3528 6801. Email: foi@foi.dk. URL: www.foi.dk.

Only the above participants are partners with separate budgets. The following organisations are willing to participate actively in the project with their own means or on a per cost basis, please see attached letters of support (after the CVs in Annex1).

ENSA, Departement Sciences Economiques, Sociales et de Gestion UMR MOISA, 2 Place Pierre Viala, 34060 Montpellier Cedex 1, France. Phone: +33 4 99 61 22 00. Fax: +33 4 99 61 25 80. Email: URL: www.agro-montpellier.fr.

International Food Policy Research Institute (IFPRI), The Environment and Production Technology Division (EPTD), 2033 K Street, NW, Washington, DC, USA, +1.202.862.5600, ifpri@cgiar.org.

Empraba, Meio Ambiente, Jaguariuna, Sao Paolo, Brazil

Egyptian Centre of Organic Agriculture Society (ECOAS)/ Ain Shams University, Faculty of Agriculture, Cairo, Egypt.

Makerere University, Department of soil science, Kampala, Uganda

ADDA (Agricultural Development Denmark Asia), Hanoi, Vietnam

5. Contact persons (title, name, address, telephone, fax and e-mail of one contact person appointed to represent each participating institute):

Niels Halberg, Senior Researcher, Ph.D., Danish Institute of Agriculture Science (DIAS), Dept. of Agroecology, Research Centre Foulum, PO Box 50, DK-8830 Tjele. Phone: +45 8999 1206. Fax: +45 8999 1200. E-mail: Niels.Halberg@agrsci.dk.

Associate Professor, Henning Høgh Jensen, Ph.D., Royal Veterinary and Agricultural University (KVL), Department of Agricultural Sciences, Højbakkegaard Allé 13, DK-2630 Taastrup. Phone: +45 3528 3391. Fax: +45 3528 3584. E-mail: hhj@kvl.dk.

Project Researcher, Henrik Egelyng, Ph.D, Danish Institute for International Studies (DIIS), Department of Development Research (DoDR), Strandgade 56, Building E, 1st floor, office 1.10, DK-1401 Copenhagen K. Phone Direct: +45 3269 8744. Cellphone: +45 2339 0618. Fax: +45 3269 8700, Email: heg@diis.dk, www.diis.dk/sw7025.asp.

Researcher Paul Rye Kledal, Food and Resource Economic Institute, Rolighedsvej 25, DK-1958 Frederiksberg C. Phone: +45 3528 6875. Fax: +45 3528 6801. Email: paul@foi.dk.

6. Project staff (title, name, address, telephone, fax and e-mail):

Niels Halberg, Senior Researcher, Ph.D., Danish Institute of Agriculture Science (DIAS), Dept. of Agroecology, Research Centre Foulum, PO Box 50, DK-8830 Tjele. Phone: +45 8999 1206. Fax: +45 8999 1200. E-mail: Niels.Halberg@agrsci.dk.

Researcher, Paul Rye Kledal, Food and Resource Economic Institute, Rolighedsvej 25, DK-1958 Frederiksberg C. Phone: +45 35 28 68 75. E-mail: paul@foi.dk.

Associate Professor, Henning Høgh Jensen, Ph.D., Royal Veterinary and Agricultural University (KVL), Department of Agricultural Sciences, Højbakkegaard Allé 13, DK-2630 Taastrup. Phone: +45 3528 3391. Fax: +45 3528 3584. E-mail: hhj@kvl.dk.

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Professor, Lucie Sirieix, ENSA-Montpellier, Agro Montpellier, Dpt SESG, 2 place Viala, 34060 Montpellier Cedex 1, France. Phone: +33 4 99 6127 19, E-mail: Sirieix@ensam.inra.fr (see letter of commitment attached)

Research Analyst Timothy Sulser, Environment and Production Technology Division (IFPRI) (see letter of commitment attached)

Head of Research unit, Tommy Dalgaard, Ph.D. Danish Institute of Agriculture Science (DIAS)

Ph.D. Student, Ahmed El-Naggar, Royal Veterinary and Agricultural University (KVL)
Senior Researcher, Esbern Friis-Hansen, Ph.D., Danish Institute for International Studies (DIIS)

Head of Department, Neil Webster, Ph.D., Danish Institute for International Studies (DIIS),

Senior researcher, Mogens Lund, Ph.D. head of section Production and Technology at Food and Resource Economic Institute (FOI)

Professor, Kostas Karatininis, Food and Resource Economic Institute (FOI)

7. Project duration: 3 years 9 month From: 01-2006 To: 10-2009
(please give month and year in 'From' / 'To')

8. Main objective(s) (maximum 10 lines):

The overall objective of this project is to determine to what extent and under which conditions organic farming may reduce local and global negative environmental impacts and provide improvements in poor farmers' livelihoods within the framework of the global food supply chain and the increased urbanisation. Moreover, the project will

- *describe and explain how urban socio-economic factors influence consumer perceptions for short versus long procurements systems supplying organic food and the role of supermarkets in organic food procurement*
- *determine to what extent formal policies and programmes are conducive to the development of organic farming, and to what extent the price premium and development values benefit smallholder farmers*
- *determine the level of local understanding and nature of embedment of organic ideas, principles and practises among public and private agencies as well as farmers organisations in developing countries*
- *give assessments of the consequences of large scale conversion to organic farming for food supply and food security among urban and rural poor at a regional scale*

9. Project summary in Danish (approximately 1 page, suitable for publication):

Økologisk jordbrugs bæredygtighed i relation til globale fødevarer kæder

Der er en stigende udbredelse af økologisk landbrug globalt set, både i de rige lande og i udviklingslande i Asien, Afrika og Latinamerika såsom Kina, Vietnam, Uganda, Ægypten og Brasilien. Drivkræfter bag denne udvikling er en stigende efterspørgsel efter økologiske varer blandt befolkningsgrupper med stigende velstand i en række nyligt industrialiserede lande og en øget import af eksotiske økologiske fødevarer fra tropiske lande til forbrugere i industrialiserede lande herunder Danmark, fx kaffe, frugt, snacks og krydderier. Initiativtagerne til denne udvikling er i mange tilfælde virksomheder i I-landene, som organiserer produktion og evt. primær forarbejdning lokalt og sørger for den nødvendige certificering og kontrol samt naturligvis eksport-import og kontakt til detailhandel. Ofte er det ikke de lokale bønder, som ejer certificeringen og der er stor forskel på i hvor høj grad selve de økologiske dyrknings-principper og idéer får et lokalt ejerskab. Mange udviklingsorganisationer, såsom IFAD og FAO, støtter nu udbredelsen af økologisk jordbrug som en mulig udviklingsvej for småbønder. Det er en fordel, at man udnytter diversitet og recirkulering indenfor bedriften og minimerer afhængigheden af indkøbte hjælpeoffer. Undersøgelser viser en spirende lokal interesse og bevidsthed om de sociale og miljømæssige fordele af økologiske jordbrug og et stigende lokalt ejerskab og forankring.

Supermarkeder står for den overvejende del af det økologiske fødevarer salg i Danmark og flere Europæiske lande og i mange udviklingslande er supermarkeder ved at overtage store dele af fødevarerhandelen (og med tiden måske også salg af økologiske varer). Der er risiko for at den øgede handel med økologiske produkter over lange afstande og via supermarkeds kæder fremmer en udvikling i retning af den samme type

specialisering, storskala-produktion og afhængighed af input udefra til den enkelte bedrift, som var nogle af de kritikpunkter den økologiske bevægelse byggede deres alternativ op på. De økonomiske, sociale og miljømæssige konsekvenser af denne globalisering af økologien bør derfor undersøges nærmere. Ovenstående udvikling rejser flere spørgsmål af interesse for danske og udenlandske økologiske forbrugere og markedsaktører og for dansk forskning i økologisk jordbrug i et globalt perspektiv. Projektet vil skabe og formidle klarhed over følgende spørgsmål:

- Hvilken rolle spiller supermarkeder for salg af økologiske varer og hvordan kan små-bønder agere ift. til denne udvikling?
- Hvilken udvikling støtter man som forbruger, når man køber forskellige typer af importerede økologiske varer i Danmark og andre udvalgte lande?
- I hvor høj grad bidrager økologisk certificering reelt til at beskytte jord og biodiversitet på sårbare lokaliteter og hvad er den økonomiske og sociale bæredygtighed af sådanne initiativer?
- Hvordan harmonerer global handel af økologiske varer med idéerne om udnyttelse af lokale ressourcer og gensidig forståelse mellem producent og forbruger samt andre værdier bag ”nærhedsprincippet”?
- Hvor stor er betydningen af transport og energi ved økologiske varer i hhv korte og lange forsyningskæder set i forhold til andre (miljø-) fordele ved økologisk landbrug?
- Hvor forankret er idéerne bag økologisk jordbrug i produktionssystemer og lokalsamfund, som leverer økologiske varer til bl.a. danske forbrugere og i hvor høj grad kommer den økologiske merpris de fattige bønder i U-lande til gode?
- Hvad bliver konsekvensen for regional og global fødevareforsyning såfremt økologisk produktion kommer til at udgøre en stor andel?

Projektet bygger på en kombination af casestudier, hvor en række økologiske produkter følges igennem hele kæden fra jord til bord. Der vil være studier af forbrugere og markedsagenter i flere lande samt gårdstudier på økologiske småbrug i en række udviklingslande, som leverer varer til hjemmemarked og til Danske forbrugere. *Projektet vil desuden modellere konsekvenserne af hhv. de lange og korte forsyningskæder af produkter for miljø og økonomi. Produkterne udvælges således at de repræsenterer både danske økologiske fødevarer, som konkurrerer på et internationalt marked og importerede eksotiske produkter.*

Desuden undersøges effekten af en stor udbredelse af økologisk jordbrug i udvalgte regioner på fødevareforsyning m.m. samt mulige udviklingsveje for småbønder i lyset af markedsændringerne. Disse konsekvenser er imidlertid mangfoldige (rettigheder, miljø, produktion, arbejdskraft, indkomst) og på mange skalaer (mark, bedrift, landsby, region). Denne type forskning kræver derfor en del metodeudvikling som bl.a. består i at sammenkoble humane og biologiske parametre på tværs af niveauer.

10. Budget:

The proposed budget must be inclusive of increases in the level of salaries and prices and specified on an annual basis. The proposed budget must specify the number of man-months and related salary costs for scientific staff and non-scientific staff, other direct costs and costs to buy equipment. To this should be added an overhead contribution of 20% of the direct costs.

Salary levels must not exceed union levels for comparable positions in the Public Service (e.g. laboratory assistant, researcher or senior researcher).

Official journeys must follow government regulations.

The applicants are generally expected to procure and make available all necessary equipment for the project themselves. Only in exceptional cases when this is not possible may expenditures for the acquisition of equipment be included in the budget for consideration.

Funding is provided exclusive of the recipient's input VAT (purchase VAT) and output VAT (sales VAT).

For government institutes funding is provided in accordance with the budget guidelines issued by the Ministry of Finance for research activities receiving programme funding and the funding is only granted for one year at a time.

If private business partners co-finance or take part in the project otherwise then all partners have to enter a co-operation agreement or provide other kind of documentation of the co-operation cf. 'Invitation til projektansøgninger'.

Note that budgets must be made for the entire project as well as for each participating institution.

Budget for the entire project—broken down by calendar year						
Budget item	From Ministry of Food, Agriculture and Fisheries		From place of work		From other sources	
	Person months	DKK	Person months	DKK	Person months	DKK
1st calendar year 2005	Salaries/academic staff					
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses					
	Others (please specify below)					
Total direct costs						
Overhead (20 % of direct costs)						
Total						
2nd calendar year 2006	Salaries/academic staff	44	1.535,094	5	237,940	
	Salaries/techn.-adm. staff	1.5	43,200			
	Equipment		60,000			
	Operational expenses		364,900			
	Others (please specify below)		139,000			
Total direct costs		2.142,194		237,940		
Overhead (20 % of direct costs)		428,439		47,588		
Total		2.570,633		285,528		
3rd calendar year 2007	Salaries/academic staff	49	1.779,638	5	239,378	4
	Salaries/techn.-adm. staff	1.4	42,500			
	Equipment		60,000			
	Operational expenses		619,700			
	Others (please specify below)		390,193			
Total direct costs		2.892,031		239,378		
Overhead (20 % of direct costs)		578,406		47,876		
Total		3.470,437		287,254		
4th calendar year 2008	Salaries/academic staff	50	1.977,889	5	240,859	4
	Salaries/techn.-adm. staff	1.5	46,800			
	Equipment		50,000			
	Operational expenses		627,400			
	Others (please specify below)		362,400			
Total direct costs		3.064,489		240,859		
Overhead (20 % of direct costs)		612,978		48,172		
Total		3.677,467		289,031		
5th calendar year 2009	Salaries/academic staff	20	1.001,490	5	242,385	
	Salaries/techn.-adm. staff	0.6	16,800			
	Equipment		30,000			
	Operational expenses		194,900			
	Others (please specify below)		50,000			
Total direct costs		1.293,190		242,385		
Overhead (20 % of direct costs)		258,698		48,477		
Total		1.551,888		290,862		
Total for the 5 years		11.270,425		1.152,675		

Budget for each participating institution — Name of institution: DIAS						
Budget item	From Ministry of Food, Agriculture and Fisheries		From place of work		From other sources	
	Person months	DKK	Person months	DKK	Person months	DKK
1st calendar year 2005	Salaries/academic staff					
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses					
	Others (please specify below)					
Total direct costs						
Overhead (20 % of direct costs)						
Total						
2nd calendar year 2006	Salaries/academic staff	18	656,400			
	Salaries/techn.-adm. staff	1.5	43,200			
	Equipment					
	Operational expenses		102,900			
	Others (please specify below)		0			
Total direct costs		802,500				
Overhead (20 % of direct costs)		160,500				
Total		963,000				
3rd calendar year 2007	Salaries/academic staff	17	634,500			
	Salaries/techn.-adm. staff	1.4	42,500			
	Equipment					
	Operational expenses		104,700			
	Others		217,300			
Total direct costs		999,000				
Overhead (20 % of direct costs)		199,800				
Total		1.198,800				
4th calendar year 2008	Salaries/academic staff	18	711,000			
	Salaries/techn.-adm. staff	1.5	46,800			
	Equipment					
	Operational expenses		110,400			
	Others		223,400			
Total direct costs		1.091,600				
Overhead (20 % of direct costs)		218,400				
Total		1.310,000				
5th calendar year 2009	Salaries/academic staff	6	318,000			
	Salaries/techn.-adm. staff	0.6	16,800			
	Equipment					
	Operational expenses		64,900			
	Others (please specify below)		0			
Total direct costs		399,700				
Overhead		80,000				
Total		479,700				
Total for the 5 years		3.951,500				

Others: Include involvement of IFPRI on a per cost basis (see Annex 1) and costs for local data recording.

Budget for each participating institution — Name of institution: Food and Resource Economic Institute						
Budget item	From Ministry of Food, Agriculture and Fisheries		From place of work		From other sources	
	Person months	DKK	Person months	DKK	Person months	DKK
1st calendar year 2005	Salaries/academic staff					
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses					
	Others (please specify below)					
Total direct costs						
Overhead (20 % of direct costs)						
Total						
2nd calendar year 2006	Salaries/academic staff	6	242,115	1	47,940**)	
	Salaries/techn.-adm. staff					
	Equipment		60,000			
	Operational expenses		50,000			
	Others (please specify below)					
Total direct costs		352,115		47,940		
Overhead (20 % of direct costs)		70,423		9,588		
Total		422,538		57,528		
3rd calendar year 2007	Salaries/academic staff	12	498,756	1	49,378**)	4***)
	Salaries/techn.-adm. staff					
	Equipment		60,000			
	Operational expenses		300,000*)			
	Others (please specify below)					
Total direct costs		858,756		49,378		
Overhead (20 % of direct costs)		171,751		9,876		
Total		1.030,507		59,254		
4th calendar year 2008	Salaries/academic staff	12	610,313	1	50,859**)	4***)
	Salaries/techn.-adm. staff					
	Equipment		50,000			
	Operational expenses		300,000*)			
	Others (please specify below)					
Total direct costs		960,313		50,859		
Overhead (20 % of direct costs)		192,063		10,172		
Total		1.152,376		61,031		
5th calendar year 2009	Salaries/academic staff	6	314,311	1	52,385**)	
	Salaries/techn.-adm. staff					
	Equipment		30,000			
	Operational expenses					
	Others (please specify below)					
Total direct costs		344,311		52,385		
Overhead (20 % of direct costs)		68,862		10,477		
Total		413,173		62,862		
Total for the 5 years		3.018,594		240,675		

*) Focus group interview, Translation, Ph.d. support

**) Contribution from senior research fellows

***) Contribution from ENSA with 8 person months without funding. See also Letter of Commitment

Budget for each participating institution — Name of institution: KVL						
Budget item	From Ministry of Food, Agriculture and Fisheries		From place of work		From other sources	
	Person months	DKK	Person months	DKK	Person months	DKK
1st calendar year 2005	Salaries/academic staff					
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses					
	Others (PH.D. studies)					
Total direct costs						
Overhead (20 % of direct costs)						
Total						
2nd calendar year 2006	Salaries/academic staff	14	388,000	2	90,000	
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses		150,000			
	Others (PH.D. studies)		89,000			
Total direct costs		627,000		90,000		
Overhead (20 % of direct costs)		125,400		18,000		
Total		752,400		108,000		
3rd calendar year 2007	Salaries/academic staff	14	388,000	2	90,000	
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses		150,000			
	Others (PH.D. studies)		122,893			
Total direct costs		660,893		90,000		
Overhead (20 % of direct costs)		132,179		18,000		
Total		793,072		108,000		
4th calendar year 2008	Salaries/academic staff	14	388,000	2	90,000	
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses		150,000			
	Others (PH.D. studies)		89,000			
Total direct costs		627,000		90,000		
Overhead (20 % of direct costs)		125,400		18,000		
Total		752,400		108,000		
5th calendar year 2009	Salaries/academic staff	2	90,000	2	90,000	
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses		60,000			
	Others (PH.D. studies)					
Total direct costs		150,000		90,000		
Overhead (20 % of direct costs)		30,000		18,000		
Total		180,000		108,000		
Total for the 5 years		2,477,872		432,000		

Others: Include support for Ph.D.-student in Cairo = 36 months included in Annex 1.

Budget for each participating institution — Name of institution: DIIS						
Budget item	From Ministry of Food, Agriculture and Fisheries		From place of work		From other sources	
	Person months	DKK	Person months	DKK	Person months	DKK
1st calendar year 2005	Salaries/academic staff					
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses					
	Others (please specify below)					
Total direct costs						
Overhead (20 % of direct costs)						
Total						
2nd calendar year 2006	Salaries/academic staff	6	248,579	2	100,000	
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses		62,000			
	Others (please specify below)		50,000			
Total direct costs		360,579		100,000		
Overhead (20 % of direct costs)		72,116		20,000		
Total		432,695		120,000		
3rd calendar year 2007	Salaries/academic staff	6	258,382	2	100,000	
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses		65,000			
	Others (please specify below)		50,000			
Total direct costs		373,382		100,000		
Overhead (20 % of direct costs)		74,676		20,000		
Total		448,058		120,000		
4th calendar year 2008	Salaries/academic staff	6	268,576	2	100,000	
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses		67,000			
	Others (please specify below)		50,000			
Total direct costs		385,576		100,000		
Overhead (20 % of direct costs)		77,115		20,000		
Total		462,691		120,000		
5th calendar year 2009	Salaries/academic staff	6	279,179	2	100,000	
	Salaries/techn.-adm. staff					
	Equipment					
	Operational expenses		70,000			
	Others (please specify below)		50,000			
Total direct costs		399,179		100,000		
Overhead (20 % of direct costs)		79,836		20,000		
Total		479,015		120,000		
Total for the 5 years		1,822,459		480,000		

Other costs include expenses for local assistance and workshop related expenses during fieldwork.

11. Signatures:

Name	Institute	Date	Signature
Project manager: Niels Halberg	Danish Institute of Agricultural Sciences (DIAS) Dept. Agroecology		
Institute management: Jesper Waagepetersen	Danish Institute of Agricultural Sciences (DIAS) Dept. Agroecology		
Institute management:			
Institute management:			
Institute management:			
Institute management:			

12. Description of the project:

The description of the project must be given in Annex 1 and according to the guidelines described herein.