



## Issue 4, August 2010

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### Editorial

Dear Reader,

On 15 April 2010 ICT-AGRI launched the first call. The deadline for submission of pre-proposals was 31 May and we received 44 pre-proposals with a request for funding of almost 20 mio. EUR. This shows a large interest for trans-national research projects. 14 projects have been selected to proceed to the next phase of the call process. Inside this Newsletter you can read more about the first call and also the initial plans for future calls.

For the next call, I hope that we will have a first version of our Strategic Research Agenda (SRA) ready. The work formulating the SRA has started sometime ago within WP 4 (Germany/ Switzerland), and a meeting with the industry and the Technology Platform, ManuFuture has been held. The aim is that the SRA will serve as a reference for the future planning of R&D in EU and nationally within partner countries. The basis for the SRA is the future challenges for European agricultural sector. Therefore ICT-AGRI will make use of the coming SCAR foresight process in identifying emerging issues. Moreover ICT-AGRI will hopefully also contribute to the foresight process with new innovative technologically solutions.

To work with an ERA-NET, knowledge about existing research, infrastructures and resources is a prerequisite. The ICT-AGRI Country Report is a part of this mapping process. Together with the Meta Knowledge Base, the Country Report will be used to identify research gaps and opportunities for Europe. Contacts have been taken to coordinate with other FP7 projects like agriXchange, Bright Animal and Future Farm; and further contacts with other, both European and national, projects will be carried out in the near future.

Technical solutions, which will help to increase the efficiency for the farmers and at the same time is less environmental harmful than other alternatives, require the involvement of the industry. Germany, The Netherlands and Denmark last year established an organisation with the purpose to make verification of environmental technologies for agricultural production (VERA). You can read more about this initiative in this issue of the ICT-AGRI Newsletter.



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*Niels Gatke, Coordinator*



## Update from ICT-AGRI

### Great interest in the first ICT-AGRI transnational call by Carina Madsen (DFIA, DK)

There has been a large interest in the first ICT-AGRI Call for research proposals in the field of ICT and robotics in agriculture. The Call Secretariat has received 44 pre-proposals for a request of funding close to 20 mio. EUR.



**31 May 2010** was the deadline for submission of pre-proposals for the first ICT-AGRI call 'Integrated ICT and automation for sustainable agricultural production'. There has been a large interest in the call for research proposals throughout Europe and associated countries.

#### Overview of pre-proposals received

	DK	BE	FI	FR	DE	GR	IL	IT	LV	CH	TR	NL	IE	ES	Total
<b>Proposals coordinated</b>	6	1	1	0	8	10	3	8	1	1	2	1	1	1	<b>44</b>
<b>Proposal participated</b>	22	11	9	3	25	23	12	28	5	8	20	5	1	6	<b>178</b>
<b>Total own funding, k€</b>	223	255	384	0	291	181	122	631	0	242	59	187	37	222	<b>2833</b>
<b>Total ICT-AGRI funding, k€</b>	3979	696	955	195	2728	1907	896	4025	375	697	1501	200	30	463	<b>18647</b>

#### Phase-I Call Statistics

The ICT-AGRI Call Secretariat received 44 pre-proposals for a total request of funding of almost 20 mio. EUR. After a review of the submitted pre-proposals the Funders Group selected 14 project Consortia to go through to the second phase of the call.

The 14 project consortia that were selected to proceed to the 2<sup>nd</sup> phase of the call process have now been invited to submit a full proposal. The deadline for submission of full proposals is 17 September 2010.

#### Evaluation of Full Proposals

The full proposals will be evaluated by an international Expert Evaluation Panel (EEP) to assess the scientific quality and content. The EEP will make an overall assessment of the scientific merit and make a prioritised list with funding recommendations.

Following the scientific review the funding agencies will decide on the final list of projects to be funded based on the recommendations of the EEP and their own assessment and policy needs in view of funding available.

#### Funding decision

It is expected that the funding decision will be ready during November 2010 and the successful project consortia are expected to initiate their projects end of 2010/ beginning of 2011.

#### Next ICT-AGRI call for research proposals

The ICT-AGRI funding agencies are expecting to launch the next ICT-AGRI call during 2011. Keep an eye with the ICT-AGRI website and newsletter to be kept informed about coming calls as well as other ICT-AGRI activities – such as the mapping of the ICT research landscape and strategic research agenda.

#### More information

For more information about the current ICT-AGRI call and future calls visit our website [www.ict-agri.eu](http://www.ict-agri.eu).

For specific questions in relation to the call please contact the ICT-AGRI Call Secretariat or your ICT-AGRI National Contact Points for questions on national aspects (see our website: <http://ict-agri.eu/Calls-7.aspx> for contact details of ICT-AGRI National Contact Points).

## New ICT-AGRI Publication

# ICT-AGRI Country Reports: Reports on the Organisation of Research & Research Programmes in 15 Countries

by Jürgen Vangeyte (EV-ILVO, BE) & Carina Madsen (DFIA, DK)

**Knowledge about existing research, national R&D programmes, infrastructures and resources available for ICT and Robotics is a prerequisite towards developing joined research activities and a common Strategic Research Agenda across Europe. ICT-AGRI network has therefore collected information on national research programmes, funding bodies and structures, and national institutes and facilities in 15 countries.**

The ICT-AGRI Country Report is part of the mapping process of ICT and robotics research and its application in the agricultural sector in the ICT-AGRI network of countries.

The new ICT-AGRI Country Report is to be used as a reference book and a tool to find relevant research programmes and suitable project partners.

Based on the descriptions of institutes, expertises, infrastructures and priorities, researchers can form balanced consortia for applying for future ICT-AGRI call funds, or participate in non-competitive collaborative projects such as PhD out-placements, exchange of hardware resources etc.

Together with the "Meta Knowledge Base" (MKB) the report will also be used to identify research gaps and opportunities as a basis for developing a common Strategic Research Agenda in the field of ICT-AGRI in Europe.

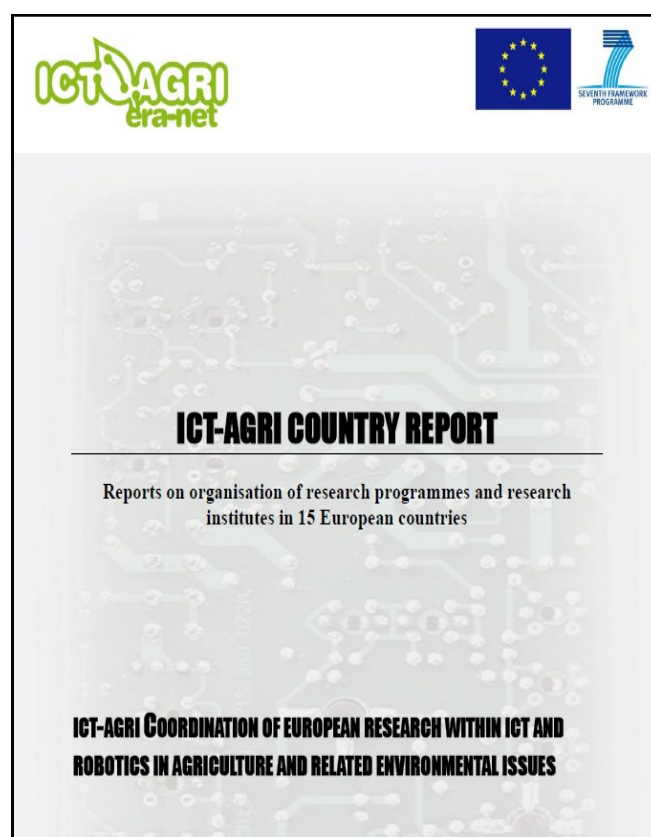
### Publication

The final touches on the ICT-AGRI Country Report are being made over the summer.

The final document will be about 325 pages long and will contain detailed information on the research landscape in the 15 countries that have provided data for the report.

The countries covered in this report are: Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Latvia, The Netherlands, Spain, Switzerland, Turkey and United Kingdom.

A large thank you is extended to the Country Editors for their input to this extensive report.



### How to obtain your copy of the ICT-AGRI Country Report

The publication of the ICT-AGRI Country Report is expected in September 2010.

The report will be available for download from the ICT-AGRI website ([www.ict-agri.eu](http://www.ict-agri.eu)).

A limited number of hard copies will be available. To obtain a copy please contact your ICT-AGRI National Contact Point, or the ICT-AGRI Secretariat. See ICT-AGRI for contact details ([http://ict-agri.eu/About\\_us-2.aspx](http://ict-agri.eu/About_us-2.aspx)).

### Meta Knowledge Base (MKB)

[http://ict-agri.eu/Meta\\_Knowledge\\_Base-121.aspx](http://ict-agri.eu/Meta_Knowledge_Base-121.aspx)

- Now 346 users
- Meet fellow researchers & find partners in research
- Meet funders from national funding agencies
- Contribute to joint pool of knowledge on ICT. Automation and robotics in agriculture
- Provide input for a common European Strategic Research Agenda
- Find funding opportunities, collaborative actions & research facilities

## Article

### VERA – a New Test and Information Tool by Kristian Snorre Andersen (DEPA, Dk)

**VERA – Verification of Environmental Technologies for Agricultural Production – is a new test and information tool for eco-efficient livestock technologies.**

VERA was established in 2009 as a collaboration between Germany, Denmark and the Netherlands – and more countries are expected to join.

The collaborative work was initiated with the aim of promoting the international market for environmental technologies for agricultural production.

Environmental technologies are understood as technologies (products, processes and services) whose use is less environmentally harmful than relevant alternatives.

Within the VERA collaboration common test protocols are developed specifying the conditions for performance testing specific technologies in the agricultural sector. Based on these test protocols the VERA organisation issues independent verification statements on the specific technologies.

#### VERA is primarily addressing:

- The manufacturers of environmental technologies for agricultural production;
- Farmers applying environmental technologies;
- Authorities including the local authorities determining specific demands on agricultural production;
- Other stakeholders including branch organisations, research organisations etc.

#### The VERA organisation

The superior body of the VERA organisation is the International VERA Board consisting of representatives from the national authorities of the participating countries. The board has the overall responsibility for the VERA system and decides on objectives, rules etc.

#### Use of the VERA tool

The VERA organisation is strongly linked to the authorities in the participating countries. Therefore, it is the intention and the expectation that the tool developed by VERA will be an integrated part of the public management of the agricultural and environmental sector.



VERIFICATION OF ENVIRONMENTAL TECHNOLOGIES  
FOR AGRICULTURAL PRODUCTION

The International VERA committee is the technical expertise forum of VERA and consist of leading technical and scientific experts from the participating countries within the field of environmental technologies for agricultural production.

The committee develops common test protocols and plays a consistency of the test and verification activities central role in securing reliability and of VERA.

The collaborating work within the VERA organisation is coordinated and supported by the VERA secretariat.

At the national level each of the participating countries has national technical committees collaborating with the VERA organisation and the VERA Secretariat.

In Denmark, for example, the access for a technology to the 'Technology List' in the Danish Livestock Approval Act will be linked to the VERA system.

This means that a VERA verification statement can form basis for an application for getting on the list (the Technology List is a guiding list of technologies and techniques that may be used for fulfilling the environmental demands on livestock farming. Therefore, this list is the gateway to the Danish market for a manufacturer of environmental technologies and techniques).

An analogous use of the VERA system in the public management of the agricultural and environmental sector as in Denmark is expected in the other participating countries.

## Article

### Status and future perspectives

Until now five drafts test protocols have been developed within the VERA system by leading experts from the participating countries in the field of environmental technologies for agricultural production.

These drafts cover test protocols for:

- Air cleaning technologies
- Manure separation technologies
- Land applied manure
- Covers for stored manure
- Livestock housing systems.

The final approval by the participating countries of the test protocol for air cleaning technologies is expected in September 2010, followed by an approval of the test protocol for livestock housing systems later this year.

The draft test protocols for manure separation technologies, land applied manure and covers for stored manure are already in use in Denmark although a formal approval between the participating countries will be decided later.

New VERA initiatives are expected to include a test protocol for biogas production.

In addition, other VERA initiatives will include an enlargement of the system to include more countries and a possible collaboration with other programs and systems.

#### VERA Secretariat

**Address:** Kollegievej 6, DK-2920  
Charlottenlund, Denmark

**Phone:** +45 3996 6130

[info@veracert.eu](mailto:info@veracert.eu)

[www.veracert.eu](http://www.veracert.eu)



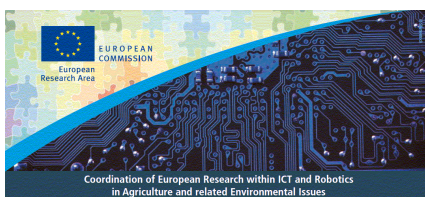


## Communication & Dissemination

### New ICT-AGRI Fact Sheet: Taking High-Tech to the Fields

by Carina Madsen (DEFIA, Dk)

Taking high-tech to the fields is a new fact sheet about ICT-AGRI recently published by the European Commission.



#### Taking high-tech to the fields

The agricultural sector is currently facing a conflicting challenge: to produce more food and maintain high food quality and animal welfare standards while reducing agriculture's environmental footprint. Although information and communication technologies (ICTs) can help farmers address these issues, European research on the use of ICTs in agriculture is fragmented. The ICT-AGRI (Coordination of European Research within ICT and Robotics in Agriculture and related Environmental Issues) ERA-NET is coordinating European research in this important area to ensure that the massive potential of ICTs in the farming sector is not wasted.

ERA-NET  
2010

ICT-AGRI is unique because its cross-thematic nature is building bridges between disciplines and research areas that do not commonly join forces. ICT-AGRI will help create the best possible opportunities for a modern European agriculture while protecting the environment and promoting innovation and competitiveness.

Growing global demand for food, animal feed, fuels and resources means that farmers are under increasing pressure to boost their productivity. At the same time, they are required to lower the impacts of agriculture on the environment and adhere to ever-stricter food safety and animal welfare rules.

How can technology help grow great food? ICTs have the potential to help farmers cut their environmental impacts in many ways. For example, with ICTs, herbicides and pesticides can be applied by machines guided by a GPS (Global Positioning System) to avoid overapplying applications, while sensors in the field can provide information on the state of the crop so that chemicals are only applied to the parts of the field where they are needed. Similar systems can be used to control irrigation, helping farmers reduce the amount of water supplied to the crop. These systems allow for precise environmental adaptation with high protection of vulnerable areas.

can the animal welfare from robotics and ICTs can also assist with feedback management, large amounts of data can be gathered by automatic feeding systems, milking robots, milk analysis and sensors mounted on animals.

Meanwhile, product quality and safety are not forgotten. There is a lot of research into laboratories on chips. These small devices can be placed next to food items to monitor their quality and safety parameters, then transfer data automatically to a computer via wireless communication.

Some agricultural ICTs are already being used on farms today, while others are still at a relatively early stage of development. However, these technologies are of little use on their own. It is possible to place smart sensors in a field but there is no way for them to send their data to the farmer's computer. In addition, the farmer must be able to display the data in an understandable form so that the farmer can use the information to make decisions. For this reason, developing common standards to allow different devices to communicate with one another is a priority for this exciting area of research.

#### World class research

Europe is a world leader in many areas of ICT research and innovation, and boasts numerous research organisations working on the application of ICTs and robotics in agriculture. However, the extensive knowledge gathered by these researchers is scattered across many countries and disciplines.

The agricultural sector is currently facing a conflicting challenge: to produce more food and maintain high food quality and animal welfare standards while reducing agriculture's environmental footprint.

Although information and communication technologies (ICTs) can help farmers address these issues, European research on the use of ICTs in agriculture is fragmented.

The ICT-AGRI (Coordination of European Research within ICT and Robotics in Agriculture and related Environmental Issues) ERA-NET is coordinating European research in this important area to ensure that the massive potential of ICTs in the farming sector is not wasted. **ICT-AGRI** is a unique ERA-NET because its cross-thematic nature is helping building bridges between disciplines and research areas that do not commonly join forces.

The European Commission has launched a new ERA site which is worth a visit.

The European Commission has updated it's site on the European Research Area with a new lay-out and various information.

On the site you can find the Commission's vision and status of progress, areas of action, description of ERA instruments and much more.

Check it out on: [http://ec.europa.eu/research/era/index\\_en.htm](http://ec.europa.eu/research/era/index_en.htm)

ICT-AGRI will help create the best possible opportunities for a modern European agriculture while protecting the environment and promoting innovation and competitiveness. See the Fact Sheet published by the European Commission at the [ICT-AGRI website](http://ict-agri.eu).

## Meetings

### ICT-AGRI visits CIGR by Jürgen Vangeyte & Donald Dekeyser (EV-ILVO, BE)



On 13-17, 2010 the International Commission of Agricultural and Biosystems Engineering ([cigr.org](http://cigr.org)) held its XVIIth World Congress in Québec City, Canada on the theme: "Sustainable Biosystems through Engineering".

CIGR, celebrating its 80<sup>th</sup> anniversary, was founded in 1930 as a Belgian non-governmental, non-profit professional organisation.

The International Commission of Agricultural and Biosystems Engineering (CIGR) is a world-wide federation regrouping in a networking system national, regional and multinational associations, societies, corporations and individuals working in science and technology applied to the different fields of agricultural engineering.

Stimulating the development of science and technology in the field of Agricultural Engineering is one of the major goals of CIGR.

Furthermore the International Network on Information Technology (INFITA) joined CIGR in Québec with the 8<sup>th</sup> World Congress on Computer in Agriculture. INFITA worked together with CIGR section VII "Information systems" to offer joint technical program.

## Meetings

### ICT-AGRI presented at CIGR

In this jointed international conference researchers could share their most recent discoveries in the areas of agricultural, food and biosystems engineering with colleagues from around the world .

Researchers could participate in sessions on the progress and development of trends in their areas of work.

With its focus on sustainable biosystems, ICT, and engineering, this conference dealt with the very core topic of ICT-AGRI.

Therefore the conference was an important appointment and a unique opportunity to present the ERA-NET on ICT and robotics in Agriculture and Environmental related issues.

In our presentation in section VII, we explained the challenges and objectives of our collaborations.

The Meta Knowledge Base was presented as a central web-based tool for mapping and analysing research and development on ICT and robotics in agriculture and environmental related issues. The design and the preliminary results of the database were discussed.

During the presentation the high interest in the first ICT-AGRI call "Integrated ICT and automation for sustainable agricultural production" .

Also, the work with developing a common Strategic Research Agenda was explained.

We invited researchers to keep up-to-date with future calls by subscribing to the ICT-AGRI Newsletter.

The audience was explained why it is important to them to provide input to the activities of ICT-AGRI.

Congress participants were invited to use the online tools to provide input to the Meta Knowledge Base and the Strategic Research Agenda.

Finally, in the discussion some interesting challenges and difficulties of our approach were pointed out by the participants, which the ICT-AGRI WP2 will consider in their future work.



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With a total of 750 participants registered at the XVII<sup>th</sup> World Congress of CIGR this conference was very successful.

The fascinating beauty of the city of Québec and the kindness of its citizens certainly contributed to the success of the conference.

By presenting it's activities and visions at this conference, ICT-AGRI was able to enlarge its network and to connect to new stakeholders and organisations.

The ERA-NET will attend more interesting conferences in the future to present the ongoing activities of the international collaboration.

### Next appointment

Our next appointment is at the **International Conference on Agricultural Engineering AgEng 2010 CF** in Clermont-Ferrand, France, 6-8 September, 2010. We really look forward to meet you there!



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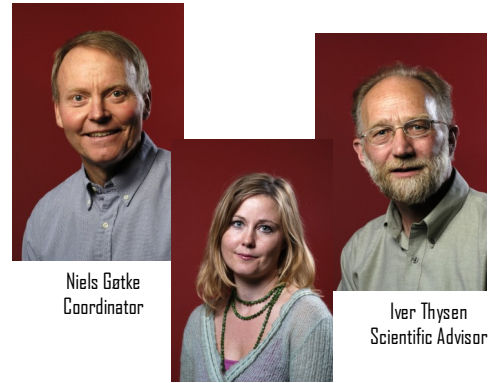
## ICT-AGRI Secretariat

**Danish Food Industry Agency**  
**Nyropsgade 30**  
**DK-1780 Copenhagen**  
**Denmark**

**Phone: + 45 41 89 25 22**  
**Fax: +45 33 95 80 80**  
**E-mail: ict-agri@ferv.dk**

The ICT-AGRI Secretariat is situated at the Danish Food Industry Agency, Ministry of Food, Agriculture and Fisheries in Copenhagen, Denmark.

The secretariat has the overall responsibility and day-to-day management of the project.



Niels Gotke  
Coordinator

Carina Madsen  
Project Manager

Iver Thyssen  
Scientific Advisor

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## ICT-AGRI Partners & Observers

**There are 18 partners and 14 observer organisation involved in the ICT-AGRI ERA-NET covering 21 countries.**

### Partners

1. Ministry of Food, Agriculture and Fisheries, Danish Food Industry Agency (DFIA), Denmark
2. Ministry of the Environment, Danish Environmental Protection Agency (DEPA), Denmark
3. Ministry of Agriculture of the Flemish Community, Institute for Agricultural and Fisheries Research (EV-ILVO), Belgium
4. Ministry of Agriculture and Forestry (MMM), Finland
5. CEMAGREF Technical Centres Development (CEMAGREF), France
6. Federal Agency for Agriculture and Food (BLE), Germany
7. Federal Ministry of Food, Agriculture and Consumer Protection (BLEV), Germany
8. Greek Research and Technology Network (GRNET), Greece
9. Ministry of Agriculture and Rural Development (MARD), Israel
10. Ministry of Agriculture, Food and Forestry Policies (MiPAAF), Italy
11. Latvian Academy of Sciences (LAS), Latvia
12. Malta Council for Science and Technology (MCST), Malta
13. Swiss Federal Office for Agriculture (FOAG), Switzerland
14. Ministry of Agriculture and Rural Affairs, General Directorate of Agricultural Research (GDAR), Turkey
15. Scientific and Technological Research Council of Turkey (TÜBİTAK), Turkey
16. Netherlands Organisation for Applied Scientific Research (TNO), Netherlands
17. Agriculture and Food Development Authority (TEAGASC), Ireland
18. Region of Murcia Agency of Development (INFO Murcia), Spain

### Observers

1. Leibniz-Institute for Agricultural Engineering Potsdam-Bornim (ATB), Germany
2. National Institute for Agricultural Research (INRA DARESE), France
3. Food and Agricultural Organization of the United Nations (FAO), Italy
4. Region of Lombardia (ROL), Italy
5. Cities on Internet Association (COIA), Poland
6. Romanian Academy of Agricultural and Forestry Sciences (ASA), Romania
7. Soil Science and Conservation Research Institute (SSCRI), Slovakia
8. Instituto Tecnológico Agrario de Castilla Y Leon (ITACYL), Spain
9. LEITAT Technological Center (LEITAT), Spain
10. Swedish Institute of Agricultural and Environmental Engineering (JTI), Sweden
11. Federal Department for Economic Affairs (DEA), Switzerland
12. Department for Environment, Food and Rural Affairs (DEFRA), United Kingdom
13. Agricultural Research Institute, (ARI) Cyprus
14. Wageningen University (WUR), The Netherlands

### *Next issue – December 2010*

- ICT-AGRI activities: Joint Call, Meta Knowledge Base & Strategic Research Agenda
- ERA initiative—Joint Programming
- Meeting reports