



# **Information and Communication Technologies for Agriculture and Biodiversity Conservation**

**ICT-Ensure Workshop in co-operation with  
The Club of Rome - European Support Centre**

**January 15th, 2009, at UNESCO, Paris**

Information technology applications play an increasingly important role in human interaction with the biosphere. New sensors multiply the potential of ICT in assessing biodiversity. Precision farming is starting to be widely applied, robotics is making fast progress, changing the face of agriculture. And ICT could be a key tool in maintaining agricultural biodiversity.

At the same time, information technology makes it possible to create new networks, in which farmers, scientists and activists can exchange information and best practices.

The workshop will both discuss technical developments in ICT application and the support of networks by ICT applications.

# Draft Programme

Jan. 15th, 2009

## **9.00 - 12.00 Session on current state of technical applications**

The session will be dedicated to the assessment of the current status of Information and Communication Technologies application in the area of agriculture / biodiversity / agricultural biodiversity. Experts are invited to present the status of research and applications with a focus on their area of work:

### *Biodiversity and Wildlife*

ICT applications in this area might be related for example to: Information technology in wildlife monitoring, habitat assessment, satellite data processing, tracking of rare species, databases, habitat evaluation and connectivity, Natura 2000 programmes ...

### *Agriculture*

The Importance of IC Technologies in the area of agriculture will be analysed including for example the importance of information technology in agricultural production, sensor development and monitoring, information processing and pests control, application of robotics

### *Agricultural Biodiversity*

Agricultural diversity is the result of careful cultivation and selection, of shaping natural plant and animal resources to create new varieties. The importance of information technology will be addressed in relation to: maintenance of varieties, storage of seeds and/ or genetic information, forming of communities, monitoring of the distribution of rare agricultural varieties and related aspects.

### 13.30 - 17.00 Parallel Working Groups

Two parallel Working Groups are addressing different aspects of Information and Communication Technologies. In both sessions representatives from the area of biodiversity, agriculture and agricultural biodiversity are invited to participate. They will start with a short statement from experts concerning the future potential of different Information and Communication Technologies and will continue with an intensive discussion. The audience is welcome to participate in this discussion.

The working groups are invited to discuss the following Information and Communication Technologies (the list is open for additions):

#### Working Group 1: “Information networking and management”

ICT- field	ICT- field includes...
<i>Information management</i>	Information systems, data bases, metadata catalogues
<i>Artificial intelligence, knowledge management</i>	decision support systems, expert systems, planning systems, cognitive systems, agent systems
<i>Personalised information, eLearning</i>	generation of personalised information, knowledge transfer
<i>Communication, networks, Internet</i>	Web-based systems, portals, wireless telecommunication
<i>Integration, inter-operability, services</i>	services concepts, SOA, service infrastructures, distributed systems, GRID, ubiquitous computing, pervasive computing
<i>Cooperation systems</i>	CSCW, Web 2.0, social Web
<i>Mobile systems</i>	mobile phone and PDA based systems

#### Working Group 2: “Information Acquisition and Supply”

ICT- fields	ICT-field includes...
<i>Human-computer-interaction</i>	Human-computer-interface, visualisation, computer graphics, ergonomics, multimedia, barrier-free access, rich Internet applications
<i>Modelling and simulation</i>	methods and tools, applications
<i>Monitoring &amp; control, sensors</i>	monitoring networks, sensor webs, remote sensing, measurements
<i>Geographical information, GIS</i>	location-based information, visualisation of geographic information

## **17.00 - 17.30 Summary of results:**

At the end of the workshop, participants summarise the results from the separate working groups. Similarities and common trends will be outlined.

## **BACKGROUND INFORMATION**

The ICT-ENSURE project works towards the expansion of the Environmental Informatics research network and towards the development of a Single Information Space in Europe for the Environment (SISE). ICT-ENSURE analyses the importance of research in the field of ICT for environmental sustainability.

In the course of the project four workshops are organised. One workshop will bring programme managers together, while three workshops will provide the opportunity for experts to discuss key areas of central importance. The 2nd workshop in Paris focuses on “biodiversity, agriculture and agricultural biodiversity”.

## **CONTACT**

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