



**ISICAD – Information Systems for International Cooperation in
Agriculture Research and Rural Development - ZADI**

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| <p>The Team</p> | <p align="center"><i>Providing the ICT solutions for ARD and Rural Development</i></p> <p>The Team “Information Systems for International Cooperation in Agricultural Research and Rural Development” (ISICAD) is a working group of the German Centre for Documentation and Information in Agriculture (ZADI), the scientific information institution of the Federal Ministry of Consumer Protection, Food and Agriculture (BMVEL).</p> <p align="right">www.zadi.de</p> <p>ISICAD develops tools for information and communication management and services (ICMS) in participation with interested stakeholders in the field of agricultural research and rural development. The developed tools can be used by all stakeholders. ISICAD provides support to all those who want to use the developed tools to improve their ICMS and offers its expertise for the conception and implementation of adapted solutions.</p> <p>All tools are based on open source software to allow participation in the development process, to contribute to the sustainability of solutions and for security reasons.</p> <p align="right">www.isicad.org</p> |
| <p>The Network</p> | <p align="center"><i>Linking People, Projects and Organisations</i></p> <p>The ISICAD group is working together with a large network of international partners, especially in the frame of EARD-InfoSys+, GFAR and the Rural Universe Network. To enable effective information and communication management inside and between these networks we are basically working with four different tools:</p> <ol style="list-style-type: none"> 1. ARD database 2. E-mail ALERT service 3. Groupware for project management 4. Interactive e-Journals for web-publishing <p>If you are interested in using one of the tools or services or would like to collaborate with us please contact us at infosysplus@zadi.de.</p> |
| <p>Tools and Services</p> | |
| <p align="center">IN SHORT</p> | |
| <p>ARD database</p> | <p align="center"><i>Map the European ARD-landscape</i></p> <p>EARD-InfoSys+</p> <ul style="list-style-type: none"> • Enables quick access to information on organisations, projects, funding opportunities, experts, news and events in European ARD • Relates items and displays links between items • Provide overviews on countries, ARD themes, Eco-region, <p align="right">http://www.infosysplus.org</p> |



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| E-mail Alert | <p style="text-align: right;"><i>Keeps you up to date on latest developments</i></p> <p>EARD-InfoSys+</p> <ul style="list-style-type: none"> • Subscribe to receive ARD-news by email • Define individual profiles according to your field of interest • Add your information to disseminate it to interested stakeholders in European ARD <p style="text-align: right;">www.infosysplus.org</p> |
| NodeXML | <p style="text-align: right;"><i>Cross database search</i></p> <p>EARD-InfoSys+</p> <ul style="list-style-type: none"> • Search several databases simultaneously • Pool information from several sources • Decentralised data management to enhance quality of content • Assure that information remains in the hands of the data holder • Developed by IAO, INIA, METAFRO and EARD-InfoSys+ <p style="text-align: right;">nodexml.sourceforge.net</p> |
| PHProjekt | <p style="text-align: right;"><i>Online platform for co-ordination of group activities</i></p> <p>EARD-Infosys+</p> <ul style="list-style-type: none"> • Facilities to exchange documents and share information • Calendar, address-database, help-desk, discussion-fora, ... • Open Source Software, easy to use • Unlimited number of users <p style="text-align: right;">www.isicad.org/tutorial/</p> |
| E-Journals | <p style="text-align: right;"><i>Publish on the web with ease and at low cost</i></p> <p>BMBF / Rural Universe Network</p> <ul style="list-style-type: none"> • Have your own journal on the web • Publish articles on the Internet including pictures, text and multimedia files • Publish and edit with ease and at low cost via e-mail or online • Multilingual • Adapted to regions with poor connectivity • Comment and ALERT function • The entire web site on CD-Rom at 3 € <p style="text-align: right;">www.runetwork.de</p> |



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| Farmers QAS | <p align="center"><i>Useful information on request by framers</i></p> <p>BMBF / CTA / Rural Universe Network</p> <ul style="list-style-type: none"> • Switch demand from donors to farmers with vouchers • Decentralised network of Rural Information Brokers, Answer Services and Experts who serve farmers • A platform to document, interact, monitor, evaluate and control the system • Simultaneous mapping of experts, mining and validation of relevant information • Strengthening local knowledge societies <p align="right">www.runetwork.de</p> |
| Infoprix | <p align="center"><i>Information System for Agricultural Trade</i></p> <p>GTZ / ONASA / RESIMAO</p> <ul style="list-style-type: none"> • Offers market price statistics for 64 local markets and 25 agricultural products in Benin on a daily basis. • Provides price information via SMS, the Internet, bulletins and rural radio. • Provides basic information on legal issues, conflict management, transport, market calendar, products <p align="right">Prototype available at http://www.isicad.org/infoprix/</p> |
| IAR4D | <p align="center"><i>Web hosting and support for Forum</i></p> <p>ICRA</p> <ul style="list-style-type: none"> • Website with an online discussion forum to assess the need and demand for capacity building in IAR4D in Sub-Saharan Africa <p align="right">http://ww.isicad.org/iar4d</p> |
| ACP Joint Media Network | <p align="center"><i>Develop Services with partners in ACP countries</i></p> <p>CTA</p> <ul style="list-style-type: none"> • Joint development of information services with partners in the south • Integration of different types of media to support technology transfer • Sharing of services with other countries • The project was initiated at the World Summit on the Information Society in Geneva, in December 2003 and has been presented on the ICT4D platform. The ISICAD working group is one of the initiating members of this project. <p align="right">www.isicad.org/wsis</p> |



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| ANANCY Virtual Library | <p style="text-align: right;"><i>Facilitate access to information</i></p> <p>CTA</p> <ul style="list-style-type: none"> Development of an online virtual library for text and audio files for CTA publications <p style="text-align: right;">www.isicad.org/cta</p> |
| IN DETAIL | |
| ARD database | <p>EARD-InfoSys+ is based on a relational database. This means data on organisations, projects, funding opportunities, experts and events (the main items) are linked in a way that the relations between these items can be defined and displayed. Each datasheet not only contains basic information, a short description and a URL where further information can be found, but also links to related items in the database. This enables users to browse through the database and choose their path to explore the European ARD landscape.</p> <p>These main items (organisations, projects, experts, events, news and funding opportunities) are also categorised - where applicable - to ARD-themes, activities, geofocus, mandate, ecoregions and other attributes. This permits overviews according to the individual interest of each user. For example: How many organisations in Switzerland are specialised on training, or how many ARD-projects are carried out in Afghanistan. These mappings are giving essential information for the future planning of ARD activities.</p> <p style="text-align: right;">www.infosysplus.org</p> |
| E-mail Alert | <p>The e-mail ALERT news service permits users to be updated automatically on new entries in the EARD-InfoSys+ database according to their individual interest. When registering for e-mail ALERT, users can choose on which items, geographical areas, countries, ARD-themes, commodities, ecosystems and activities they want to be informed via the ALERT news service. They will receive an e-mail with direct links on new datasets in their fields of interests that have been inserted into EARD-InfoSys+.</p> <p>Click here to register for e-mail alert:</p> <p style="text-align: center;">www.infosysplus.org/alert/alert_index.php?alert_start=1</p> <p>Users can also benefit from the Alert service by publishing own information on EARD-InfoSys+. A link to their information will then automatically be sent to all registered users with a matching profile of interest. Users can present their expertise, promote their organisation and inform about their projects and activities. They will receive an e-mail on how many people received the information.</p> <p style="text-align: center;">Enter your information at http://www.infosysplus.org/input/index.php</p> <p style="text-align: right;">www.infosysplus.org</p> |



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| NodeXML | Description |
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| | <p>NodeXML is an Open Source Software for cross-database-search. It is being programmed and implemented in co-operation between EARD-InfoSys+ partners in order to allow a cross-database-search on servers in different locations. Due to the fact that a decentralised approach of dataholding has shown to allow a more efficient maintenance of dataquality, NodeXML was designed to link partners and at the same time assures that information remains in the hands of the data-holder.</p> <p>Technical information</p> <p>NodeXML is a prototype implementation of a software for data-exchange on multiple hosts. It is based on XML and PHP. XML is used to describe information: a standard for the exchange of data between source and destination using DTDs. PHP allows XML parsing and cross database connection. NodeXML's first version (1.0) was released on 7/3/2001.</p> <p>NodeXML and its Gateway, together represent the multiple host search engine. Our prototype is actually focused on project data concerning research for development distributed in different databases in Europe. The system takes into account the differences of platforms and formats which may exist in the systems of different partners.</p> <p>Cross Database Search = wrapper + gateway</p> <p>The Gateway processes the parameters determining what specific kind of data the user is searching for, e.g. a given geographical focus constraining the focus of interest. Then it constructs a standardised request basing on SQL-standard and sends it to each NodeXML engine residing on each host provided by each partner. NodeXML translates this standard request into a specific query adapted to the shape of the local database and communicates with it using an adequate API. NodeXML then picks up the content returned by the database and wraps it in an XML format before sending it back to the Gateway. At this point the Gateway processes the XML-stream, correcting it for faulty content, adapting it for homogeneous layout and formatting it with XSLT and CSS for display purposes.</p> <p>The Gateway yields the functionality of a search interface formulating standardised requests using the users input, communicating with different hosts, processing and displaying XML-based content.</p> <p>NodeXML implements the functionality of a database interface translating a standard request into a database specific query and wrapping the data returned by the database in an XML format. We chose an open source based environment and publish under GPL. Therefore anyone willing to use this system is invited to do so and is able to adapt the code to individual needs and even contribute to the project. Just take a surf around http://nodexml.sourceforge.net/ to get more information about NodeXML.</p> |



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| <p>PHProjekt</p> | <p>PHProjekt is a modular application for the coordination of group activities via internet. It offers an online platform to exchange documents, to share information, to discuss problems and to plan activities.</p> <p>Components of PHProjekt are: Group calendar, project management, time card system, file management, contact manager, mail client and 9 other modules. It is available for 28 languages. The software can be redistributed and/or modified under the terms of the GNU General Public License as published by the Free Software Foundation.</p> <p>In the frame of the EARD-InfoSys+ network PHProjekt has been implemented very successfully and is used frequently by various working groups and networks.</p> <p>For more information on PHProjekt please visit our online introduction at www.isicad.org/intro/ or view our online tutorial at www.isicad.org/tutorial.</p> <p>If you are interested to use PHProjekt and would like to know how to implement PHProjekt for your purposes. Please contact us at infosysplus@zadi.de.</p> <p align="right">www.isicad.org/tutorial/</p> |
| <p>E-Journals</p> | <p>The e-Journal system has been developed in the frame of the Rural Universe Network RUN. The project was funded by the Federal Ministry of Education and Science of Germany from 2000 to 2003. RUN promotes the use of Internet Technology in rural areas and develops tools that facilitate communication and information management.</p> <p>Features of the RUN e-Journals:</p> <ul style="list-style-type: none"> • CREATE YOUR E-JOURNAL: Request a journal by e-mail for free. Each e-journal has its own home page that can be personalised. • PUBLISH on-line and via e-mail: Publishing can be done with basic computer skills at the cost of an e-mail. Use your login and password to publish and delete articles by e-mail or on-line. • ADD FILES: Documents in all popular file formats (text, pictures, video, sound, tables) can be attached to e-mail or uploaded to be part of the article • LINKS: Include Links to relevant web pages • QUESTIONS: Ask questions • EDIT: Edit and delete articles on-line • SEARCH: Search database by keyword, free text or by pictures • COMMENT: Comment articles by e-mail or on-line; authors of articles are notified by e-mail; Comments become part of the article • LANGUAGE: German, English, Spanish, French. Other languages can be added easily. • CD-ROM: The entire web site including all articles (>1600) attached documents (>6000) on CD-ROM at low cost (+/- 3 Euro) <p align="right">www.runetwork.de</p> |



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Farmers-QAS

In collaboration with rural communities in Jamaica, South Africa and Benin, ARC, JAS, CARDI, INRAB and ONASA, ISICAD developed a demand driven question answer service for farmers (Farmers-QAS). The service was developed in the frame of the Rural Universe Network project. After disappointing results with efforts to provide relevant content to farmers by using the project fund to 'subsidise' service providers the project switched to subsidising demand. This is done by handing out vouchers to the target population (clients). The vouchers entitles clients to request information to solve a problem.

In simple terms the Farmers-QAS works as follows: A Rural Information Broker (RIB) helps the client to formulate the information request and to publish it on the web. An Answer Service (AS) looks for an Expert (E) to answers and publishes the answer on the web. The RIB explains the the respons to the client. The client evaluates the answer. The involved service providers are payed after delivery of services by an independent controlling agent (CA) who manages the funds.

The Farmers QAS uses the RUN e-journal system as a platform to document questions and answers, to monitor and evaluate the service and for controlling.

The system was optimised during several cycles of planning, experimenting and evaluation in participation with clients and the different service providers (RIBs, AS, E, CA and project management).

Main effects of this innovative approach are:

- **Switch demand from donors to the target group**
- **Equitable access:** Vouchers can be targeted to specific target groups
- **Readiness to learn:** Asking a question raises the awareness of the target group and induces a learning process.
- **Satisfy individual demand:** Increased impact on decision making and willingness to invest into learning an change.
- **Local knowledge Network:** Clients, RIBs and local experts create a knowledge network.
- **Sustainability of local initiatives:** Additional income contributes to the sustainability of internet-café in areas with low purchasing power. In return this assures that the target group has access to internet services.
- **Networking:** The fact that many participate in the QAS, share similar experiences and publish on the same platform generates a sense of community
- **Mapping** of expertise and information sources
- **Mining of Relevant Content** and put it into practical context
- **Evaluation** and Priority Setting
- **High returns** as compared to other systems of knowledge transfer: Only requested information is made available.

A new experimental phase is launched in collaboration with CTA. Special emphasis during this phase is put on decentralisation of the AS, implication of local experts, building of local knowledge networks, establishment of local archives, dissimination of information via rural radio and the improvement of the monitoring, evaluation and controlling procedures by adding new features to the platform.



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| InfoPrix | <p>InfoPrix is a collaboration of the ISICAD working group at ZADI with the private company TERRESTRIS (www.terrestris.de) and the National Office for Support of Food Security (ONASA) in Benin.</p> <p>The information system provides actual market information via SMS and the Internet. Market observers on 64 local markets collect prices of 25 agricultural products. Prices are evaluated every 4 to 7 days. Data are entered by a network of internet cafés throughout the country and sent to ONASA at the end of each market day. At ONASA the information is verified and made available on an SMS server and the internet. Prices are also broadcast in local language on rural radio and published in a monthly journal.</p> <p>Every evening an SMS message is sent to registered users with the latest price information on the 7 most important products from the 6 most important markets. Each day another product. Registration is for free. To register send an email to onasamdr@intnet.bj indicating your name and mobile phone number. Users also have the opportunity to make special queries for more detailed information by sending a simple SMS message to ONASA. Prices can also be viewed at http://www.terrestris.de/run/. In collaboration with ZADI, ONASA is also preparing a web site with additional information on trade related issues in Benin such as legislation, description of agricultural products, information for conflict management in agricultural trade, a market price calendar, official procedures and a detailed address list of actors involved in agricultural trade.</p> <p>Benin is a member of RESIMAO the West African Network of Market Price Information Systems. RESIMAO is about to develop a regional information system. It is envisaged that regional system will capitalise on the Benin experience and will include GIS features.</p> <p align="center">For more information go to: www.onasa.org or www.isicad.org/infoprix</p> |
| IAR4D | <p>The IAR4D initiative has been launched by the International Centre for development oriented Research in Agriculture (ICRA) and the NATURA Network. The aim of IAR4D is to mobilise a partnership of Sub-Saharan Africa, European and International Organisations to develop and diffuse approaches and methodologies in agricultural research for development.</p> <p>A principal activity on the site was an electronic discussion forum on this issue during the period September 15 - October 24, 2003.</p> <p>The IAR4D website has been developed by the ISICAD working group in the in the frame of EARD-Infosys+.</p> <p align="right">www.isicad.org/iar4d</p> |
| ACP joint media network | <p>Due to population growth and environmental change food security and rural development can only be achieved if production and distribution systems are constantly intensified and improved. This depends to a large extent on a society's capacity to generate and transfer knowledge and know-how, to provide information for improved decision-making, to acquire resources and to motivate change. Food security and rural development is</p> |



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| | <p>at risk if the innovation process is too slow.</p> <p>The aim of this project is to speed up the innovation process by developing and linking various ACP information and communication services to support producers, traders and policy-makers involved in production and distribution systems.</p> <p style="text-align: right;">www.isicad.org/wsis</p> |
| ANANCY Virtual Library | <p>The Virtual Library is being developed by the ISICAD working group for the Technical Centre for Agricultural and Rural Cooperation (CTA), Netherlands. CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in this area.</p> <p>In order to make CTA publications available on the Internet a virtual library is being developed by the ISICAD group. Files can be uploaded by CTA staff. Users will then be able to search and download CTA publications through the virtual library.</p> <p style="text-align: right;">www.isicad.org/cta</p> |