

REPORT

On the Conduct in Tbilisi, Georgia, 12-16 December 2011, of the First Training Seminar for Personnel of Agricultural Information Centres of the CAC Region on the Matters Relating to CIARD and Development of Regional Information System



Abbreviations

AGORA - Access to Global Online Research in Agriculture

AGRICOLA - Bibliographic database consisting of literature citations for journal articles, monographs, proceedings, theses, patents, translations, audiovisual materials, computer software, and technical reports pertaining to all aspects of agriculture.

AGRIS - International Information System for the Agricultural Sciences and Technology

AGRIS CARIS - Centre for Information for International Agricultural Research bay FAO

AGROVOC - a multilingual structured and controlled vocabulary designed to cover the terminology of all subject fields of agriculture, forestry, fisheries, food and related domains (e.g. environment) in order to describe the documents in a controlled system language.

AgroWEB - International network in agriculture related information

ASAU - Armenian State Agrarian University

CAC - Central Asia and Caucasus

CACAARI - Central Asia and the Caucasus Association of Agricultural Research Institutions

CIARD -The Coherence in Information for Agricultural Research for Development

CORDIS - Community Research and Development Information Service EC

DB - data base

DCMI - Dublin Core Metadata Initiative

GAAS - Georgian Academy of Agricultural Sciences

GFAR - Global Forum on Agricultural Research

GFID - Georgian Federation of Information and Documentation

GTU - Georgian Technical University

FAO - Food and Agriculture Organization

ICM- information communication management

ICT - information communication technologies

R&D - Research and Development

RING - A Routemap Information Nodes and Gateways

SAU - State Agrarian University

TAU - Tajik Agrarian University

The Training Seminar *Application of ICT/ICM in the Propagation of the Outcomes of Agricultural Research for Development (Application of CIARD Mechanisms)* was arranged and held by the Georgian Federation of Information and Documentation in accordance with the CACAARI Activity Plan for 2011, coordinated with GFAR and backed thereby with the support of Georgian Technical University.

Lectures and practical training were conducted in the GTU-based computer centre equipped with up-to-date computer and audio facilities.

Representatives of the CAC Region countries took part in the work of the Training Seminar (**Annex 1**).

Armenia

Gagik Harutunyan - Head of Information Systems Management Department under the ASAU, National

Expert;

Narine Khurshudyan - Head of ASAU Library Electronic Resources Department

Azerbaijan

Dr. Nagif Hamzaev - Director of the Centre of Information and Communication Technologies under the SAU, National Expert;

Lale Hasanova - the Centre of Information and Communication Technologies under the SAU.

Georgia

Dr. Nelly Makhviladze - Director of TECHINFORMI, GTU, National Expert;

Marina Lebedeva - Leading Engineer, TECHINFORMI, GTU;

Dr. Levon Chobanian - Head of Information Technologies Department, TECHINFORMI, GTU, expert in ICT;

Dr. Zurab Gasitashvili - Pro-rector in Science, GTU;

Dr. Oleg Shatberashvili - President of GFID, member of the CACAARI Steering Committee;

Zoia Natsvaladze - Executive Director of GFID;

Academician Guram Aleksidze - Vice President of GAAS, member of the CACAARI Steering Committee

Tinatin Epatashvili - Coordinator of Relations with International Organizations, GAAS;

Ana Veshaguridze - Chief Specialist of GAU Library;

Nikoloz Zazashvili - Chief Consultant of Agrogrouop of Georgia;

Dr. Nato Kakabadze - Senior Researcher, Institute of Farming;

Zviad Sulaberidze - Senior Researcher, Free University in Tbilisi.

Kazakhstan

Dr. Zhumart Karabaev - Chief Researcher, National Centre of Scientific and Technical Information, National Expert;

Tamara Kubieva - Head of Department of STR Monitoring, National Centre of Scientific and Technical Information.

Kyrgyzstan

Dr. Yrysbek Abdurasulov - Professor of the Biotechnology Chair; Head of Division of Agricultural Information Systems; expert in FAO and INTAS programmes; National Expert.

Tajikistan

Dr. Ihtiyor Ashurov - Head of the Chair of Economic Theory, TAU, national expert;

Dr. Jamshed Solihov - Chief Lecturer of the Chair of Fruit-and-Vegetable Growing and Viniculture, TAU.

Uzbekistan

Dr. Alisher Tashmatov, Executive Secretary, CACAARI;

Iroda Rustamova - Expert of Innovation and Consulting Centre, SAU, National Expert;

Nabira Jumabaeva - Finance Department Manager, Uzbek Scientific Research and Production Centre of Agriculture (USRPA) of the Ministry of Agriculture and Water Management of the Rep. of Uzbekistan.

Opening and Plenary Session

At the plenary session dedicated to the opening of the Training Seminar (12 December 2011) the participants were addressed with welcome speeches by:

Dr. Zurab Gasitashvili, GTU Pro-rector in Science;

Dr. Alisher Tashmatov, the Executive Secretary of CACAARI;

Academician Guram Aleksidze, Vice President of GAAS, member of the CACAARI Steering Committee;

Dr. Oleg Shatberashvili, President of GFID, member of the CACAARI Steering Committee;

The Training Seminar participants heard the reports

Z. Khalikulov (ICARDA), A. Tashmatov (CACAARI) - CACAARI and Agricultural Development in the CAC Region (Reporter Dr. A. Tashmatov);

A. Tashmatov (CACAARI), B. Dosov (CACAARI) - Regional Strategy of Transformation and Strengthening of Agricultural Research and Innovation Systems in the CAC Region (Reporter Dr. A. Tashmatov);

Dr. O. Shatberashvili (GFID, CACAARI) - Regional Agro-information System and the State of ICT and ICM in Agricultural Research for Development in the CAC Region.

Training

The **national reports** - Information and Communication Management in Agriculture for Development - were heard and discussed at the Training Seminar. The reporters by each country of the CAC Region were coordinators from Azerbaijan, Armenia, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan.

Programme of the Training Seminar (Annex 2) was so composed as to inform the participants about CIARD and its constituent parts: CIARD RING and CIARD Fairs, about the benefits of a coordinated, standardized approach during generation and dissemination of agricultural information for research and development; information about international information systems - AGRIS and AGRIS CARIS; on information service of European Union CORDIS; on the use of multilanguage vocabulary AGROVOC for information search in relevant DBs; on the preparation of information for input into international DBs; on standards in agricultural information; on the prospects of development and tasks of international and national agricultural information systems of a new generation (Web 2.0, Web 3.0); on their application for dissemination of agricultural information; on the current state and prospects of AgroWEB development, etc.

The participants had the opportunity to practically see the possibilities of CIARD RING of search in and access to global information resources.

Special attention was given to standards in agricultural information and their links with international metadata standards (Dublin Core Metadata Initiative - DCMI). The role of standardized vocabularies (AGROVOC) in the generation and retrieval of agricultural information was also considered.

A significant part of the Seminar was allocated to the consideration of the methods of use of the AGROCOLA, AGRIS, AGORA databases for searching agricultural information; also considered were the possibilities of the CORDIS system concerning the search of business and scientific partners; placement of cooperation proposals; characteristics, technologies, and concept of WEB 2.0, WEB 3.0 and the prospects of their use for dissemination of agricultural information.

In the final part of the Seminar, the prospects of development and tasks of national agricultural information systems of a new generation were discussed.

On completion of the Training Seminar a Round Table dedicated to the summing up of the outcomes of the Training Seminar, results of the work on the preparation of national reports and the regional report on the Regional Agricultural Information System and the State of ICT and ICM in Agricultural Research for Development in the CAC Region, on the working out of recommendations (**Annex 3**) for further

development of the activities in the sphere of ICT/ICM was organized.

The participants visited the National Library of the Georgian Parliament.

All the participants were awarded with certificates and materials of the training, including a CD with full-text reports, a slide show of the presentation of reports and delivered lectures, photographs, as well as information about Georgia.

First Training Seminar for Personnel of Agricultural Information Centres of the CAC Region

Application of ICT/ICM in the Propagation of the Outcomes of Agricultural Research for Development (Application of CIARD Mechanisms)

Tbilisi, 12-16 December 2011

PROGRAMME

12 December		
9.30-10.00	Registration	
Plenary Session (Chaired by Oleg Shatberashvili)		
10.00-10.45	Opening. Welcome Addresses	Prof. Archil Prangishvili Rector of the Georgian Technical University, President of Georgian Engineering Academy Dr. Zakir Khalikulov ICARDA Dr. Alisher Tashmatov CACAARI Acad. Guram Aleksidze Vice President of the Georgian Academy of Agricultural Sciences
10.45-11.35	CACCAARI and Agricultural Development in the CAC Region.	Dr. Zakir Khalikulov ICARDA Dr. Alisher Tashmatov CACAARI
11.35-12.00	Coffee break, group photographing	
Plenary Session (Chaired by Guram Aleksidze)		
12.00-12.55	Regional Strategy of Transformation and Strengthening of Agricultural Research and Innovation Systems in the CAC Region.	Dr. Botir Dosov CACAARI
12.55-13.30	Regional Agro-Information System and the State of ICT/ICM in Agricultural Research for Development.	Dr. Oleg Shatberashvili GFID, CACAARI
13.30-14.30	Lunch	
Working Sessions		
14.30-16.00	CIARD in General. Manifesto. Guidelines and Checklist.	Dr. Oleg Shatberashvili GFID, CACAARI

16.00-16.15	Coffee break	
16.15-18.00	Presentation of the training participants – National reports on the state of ICT/ICM in Agricultural Research for Development. National Information Centres and National Systems of Agricultural Information; structure of the centres; experience of consulting and information services; development of national information resources; use of external information resources.	Chaired by Oleg Shatberashvili GFID, CACAARI

13 December		
9.00-10.00	CIARD Pathways: Why Pathways? Examples of pathways and proposals of new pathways.	Dr. Oleg Shatberashvili GFID, CACAARI
10.00-11.00	CIARD Virtual Fairs: Why Fair? Presentation of individual selected services. CIARD RING.	Dr. Oleg Shatberashvili GFID, CACAARI
11.00-11.30	Coffee break	
11.30-13.30	Information sources/services registered in CIARD RING International System for Agricultural Science and Technology (AGRIS). AGRIS/CARIS – Current Agricultural Research Information System. Description of the service; information search and retrieval methods; data input and information transfer.	Dr. L. Chobanian Georgian Technical University TECHINFORMI, STU
14.30-14.30	Lunch	
14.30-16.00	Information sources/services not registered in CIARD RING AgroWEB international network; organization of data input; prospects of development (to be additionally specified)	Dr. Z. Sulaberidze Free University in Tbilisi
16.00-16.15	Coffee break	
16.15-18.00	Continuation of presentation of the participants	Chaired by Oleg Shatberashvili GFID, CACAARI

14 December		
9.00-10.00	CIARD RING. What is RING and why RING? What can be done by using RING? Selection of metadata and the registration process. Russian-language CUARD website.	Dr. Oleg Shatberashvili GFID, CACAARI
10.00-11.00	Information sources/services not registered in CIARD RING CORDIS – the (European) Community Research and Development Information Service. Search for business and science partners. Placement of proposals for cooperation/partnership. WEB 2.0 – History, characteristics, technologies, concepts.	Dr. L. Chobanian Georgian Technical University TECHINFORMI
11.00-11.30	Coffee break	
11.30-13.30	Information sources/services registered in CIARD RING CIARD metadata standards. Agricultural vocabularies. AGROVOC. Use of a multilingual vocabulary AGROVOC for indexing retrieval requests for information search in databases.	Dr. L. Chobanian Georgian Technical University TECHINFORMI

	Data preparation and indexing for input in international databases and presentation to CIARD.	
13.30.-14.30	Lunch	
14.30-16.00	Information sources/services registered in CIARD RING Access through CIARD RING to a system of retrieval of bibliographic agricultural information AGRICOLA. Description of the service; information search and retrieval methods.	Dr. T. Chubinishvili Georgian Technical University TECHINFORMI
16.15-18.15	Practical training in access through CIARD RING and use of the vocabulary AGROVOC. AGORA database search.	Dr. L. Chobanian Georgian Technical University TECHINFORMI
17.15-18.15	Practical training in AGRICOLA and AGRIS databases' search	Dr. L. Chobanian Georgian Technical University TECHINFORMI

15 December		
9.00-11.00	Access through CIARD RING to global information systems on water and agriculture. Survey of information services AQUASTAT, ASPA, DB FAOSTAT, IWMI publications.	Dr. L. Chobanian Georgian Technical University TECHINFORMI
11.00-11.30	Coffee break	
11.30-13.30	Information sources/services registered in CIARD RING Standards in agricultural information. Use of AgMES (Agricultural Metadata Element Set) aimed to encompass issues of semantic standards in the domain of agriculture with respect to description, resource discovery, interoperability and data exchange for different types of information resources.	Dr. T. Chubinishvili Georgian Technical University TECHINFORMI
13.30.-14.30	Lunch	
14.30-18.30	Visits to the Georgian Agrarian University Library, TECHINFORMI, National Library	

16 December		
9.00-11.00	Practical training in access through CIARD RING to global information systems on water and agriculture. Search and description of information resources AQUASTAT, ASPA, DB FAOSTAT, IWMI publications.	Dr. L. Chobanian Georgian Technical University TECHINFORMI
11.00-11.30	Coffee break	
11.30-13.30	Prospects of development and tasks of new generation national agricultural information systems.	Dr. T. Chubinishvili Georgian Technical University TECHINFORMI
13.30.-14.30	Lunch	
14.30-16.00	Round Table. Seminar summing up; exchange of opinions; proposals for cooperation within the framework of CACAARI.	Dr. Oleg Shatberashvili GFID, CACAARI
16.00-18.00	Final feedback. Closure of the Seminar.	
19.00-22.00	Farewell Party	

**STATEMENT (ADDRESS) OF PARTICIPANTS OF THE TRAINING SEMINAR
“APPLICATION OF ICT/ICM IN THE PROPAGATION OF THE OUTCOMES OF
AGRICULTURAL RESEARCH FOR DEVELOPMENT
(USE OF CIARD MECHANISMS)”**

Tbilisi, 12-16 December 2011

Training participants: Personnel of six agricultural university-based libraries and two national information centres specializing in agricultural information.

The Training participants mention that

1. Further development of National Agricultural Information Systems (NAIS) and the Regional Agricultural Information System – RAIS CAC should be carried out with due regard for the foregoing challenges and changes clearly understood in the professional environment. The success will depend on the involvement of all the stakeholders in the process: governments, agricultural and allied information services, consumers of all categories, donors, etc.
2. In the CAC Region, it is impossible to do without an essential upgrading of organizations and services involved in the process. Significant efforts need to be made in the propagation of the NAIS and RAIS purposes.
3. An exceptionally favourable factor is that the main donors (FAO, GFAR, EU) not only support the response of the systems to changes, but themselves are the initiators of serious positive changes and determination of the development purposes.
4. A positive factor is the emergence of the CIARD Initiative that has taken into account all the serious challenges discussed above and provided professional organizations with long-term reference points.
5. The essence of the CIARD Initiative to stimulate the development of information products and services based on the up-to-date information processing technologies enabling to organize an efficient exchange in the countries, the Region and globally fully complies with the interests of agro information services, national agro information systems and the CAC Regional system.
6. The information exchange policy, strategy and structures need to be improved with due regard for novel technological possibilities and challenges being faced by agricultural research.
7. Products and services, also depositories available in the Region require an additional study in terms of their compatibility (or compatibility achievement) with the CIARD ideology and guidelines in the part: (a) applicable standards, norms and rules; (b) organization of a set of data and information; (c) organization of access to data.
8. In the Region as a whole, the lack of funds for scientific research, a part of which are the works on the ICT/ICM development, is felt.

9. CACAARI, with the support of GFAR and FAO, is the principal propagator of the necessity of development of ICM in agricultural research for development in the CAC Region.
10. By efforts of CACAARI with the support of GFAR and FAO managerial prerequisites for further development of RAIS have been made and activities for enhancing the potential of National information nodal points have been planned. The nodal points have been identified. The CIARD Initiative has been determined as the main and reference point for further development of NAIS and RAIS.

The Training in Tbilisi has familiarized the representatives of National nodal points with:

- the whole spectrum of the current and long-term tasks of agricultural information management for development and their implementation within the scope of RAIS
- The possibility of taking part in CIARD RING as a means of realization of the tasks of agricultural information for development
- Principal agricultural information resources (paid and gratis) and instruments, including the regional ones and the practical work with the most important of them
- The practical work experience of each of the participating organizations with different consumer groups

The Training in Tbilisi has achieved:

- Single understanding by all of the participants of the tasks of agricultural information management for development in the CAC Region
- Understanding of the tasks as well as main technological and managerial CIARD principles
- The awareness of international information resources registered with CIARD RING, as well as some unregistered resources and the possibilities of their use for needs of farmers, agricultural consultants, scientists and the State machinery
- Agreement on coordinated actions targeted at the CAC RAIS development with due regard for the CIARD challenges and initiative

The Training participants consider that FAO and GFAR should:

- Develop comprehensive CIARDs user instruction in Russian (complete the Russian-language version of the CIARD website);
- Attract technical and financial resources of FAO and EU for creation and development of NAIS and RAIS in the CAC Region (**Europe-Asia**)
- Continue the improvement of the methods of drafting national and regional reports and discuss the issue via the Internet.

The Training participants opine that the administration at the CACAARI headquarters should:

- Continue the work on the development of RAIS, advocating for the allocation of funds from both the donors (including those working at the country level) and the governments of the CAC Region countries
- Carry out the propagation work (advocacy) aimed at the involvement of NARS management into the NAIS and RAIS development, as an integral part of the system of agricultural research for development in the Region
- Involve the administration of research institutes, universities, farmers' associations and entrepreneurs, scientific production associations (SPA) in the work on the support of the NAIS and RAIS development
- Strengthen the CACAARI website and its electronic infrastructure (organization of e-discussions, of a depository of documents, organization of a DB on organizations, experts, projects, farmer associations and NGOs, universities, consultation services, private research organizations, etc.), involving in the work the nodal centres and other organizations engaged in agricultural information
- Develop cooperation of nodal centres aimed at development of CAC RAIS
- With the aim to ensure succession and quality of further work, address the management of NARSs and the appropriate ministries in the countries with a proposal to consolidate legally the roles of identified nodal/focal centres and national experts for the next several years
- Find the possibilities of supporting the AGROVOC developments in the national languages of the Region
- Conduct under the CACAARI aegis regional and national seminars (training) on the problems of agricultural information, with due regard for the deepening of knowledge in the area of input, processing and use of metadata and standards; conduct such seminars by turns in every CAC country
- Support the activities on the use of scientometric, bibliometric and web-metric indicators of R&D outcomes' assessment.

The Training participants consider that the National Nodal Information Points (NNIP) should:

- Strive for the allocation of funds for the NAIS development at the local level and from international donors
- Deem the task of creation and development of both the national and regional information resources (products, services) compatible with the CIARD ideology to be the priority one for nodal points and other agricultural information centres in the Region
- Strive for accessibility and interoperability of resources with due regard for achieving the purposes of the CIARD Initiative

- Involve more agricultural organizations in information exchange within the framework of the CIARD Initiative by dissemination of the knowledge on the Initiative
- Jointly create regional DBs on institutes, experts, projects, farmer associations and NGOs, universities, consultations services, etc., facilitating the development of these DBs on both own servers and the CACAARI servers
- Improve services for local agriculture-related organizations, using local, regional and international information resources
- Develop the systems generating information “tailored” for definite consumer groups: scientists, consultants, farmers, high-level managers; give special attention to the two last categories
- Develop in each country models of provision of farmers with the required information with due regard for the information and consultation infrastructure formed in the given country
- Increase interest on the part of users and agriculture-concerned groups being outside the community of researchers and farmers (processing industry, suppliers, etc.)
- Continue studying the national information resources in terms of their involvement into the information exchange within the framework of the CIARD Initiative, taking into account:
 - information availability
 - information accessibility
 - information applicability
 - information relevancy
 - information usefulness
 - information transformation in a form of useful knowledge, skills and technologies receivable by the communities/farmers/farmer households
 - information use efficiency by the user communities through their training
- Pay attention, together with agricultural sci-tech information resources, to other resources necessary for agricultural scientists and producers, in particular GIS, marketing resources, etc.
- Create depositories and follow the practice of the Linked Open Data and Linked Open Information Objects
- Facilitate an adequate and effective description of resources (based on standards, rules and regulations) enhancing the visibility of local resources at the national, regional and international levels.
- Facilitate a better organization of own sets of data and information, as well as their interaction with other data and information for the purpose of more qualified provision of own users.
- Facilitate an intensive transfer to the use of Web 2.0 technology and, correspondingly, ensure the preparedness for gradual mastering of the Web 2.0 and Web 3.0 technologies.

- Strengthen in their countries links with all the organizations engaged in agricultural information.
- Together with CACAARI, carry out the advocacy work on convincing the agricultural sectors' managers in the necessity of a normative base providing for the collection of data on the planned and completed R&D works, defended dissertations, as well as scientific and other publications in the area of agriculture.
- Seek for a possibility of organization (development) of a two-language abstract DB on agriculture for the South Caucasus (and further for the CAC Region as a whole) in line with the CIARD principles.

The Training participants have agreed that the National Nodal Information Points (NNIP)

- Will jointly work on the generation within the framework of RAIS of unified databases on institutes, experts, projects, farmer associations and NGOs, universities, consultations services, private research organizations with due regard for strengthening the content of the CACAARI website.
- Will request the CACAARI Secretariat to support this work.

The Training participants express their gratitude to the organizers and sponsors of the Training Seminar (FAO, GFAR, EU, ICARDA, CACAARI, GFID, GTU, TECHINFORMI) for arranging and holding the Training Seminar in line with the highest standards.

Training Seminar “Application of ICT/ICM in the Propagation of Outcomes of Agricultural Research for Development”

Tbilisi, 12-16 December 2011

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