



Preparatory Discussion on the ICT Expert Consultation Meeting to Strengthen RAIS of the WANA Region

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Description

AARINENA, in the framework of GFAR GLOBAL.RAIS Project, will organize an ICT Expert Consultation Meeting to Strengthen the RAIS of WANA Region in Cairo, Egypt, at the end of February 2003 (25th to 27th).

This discussion forum aims at finalizing the background document that will represent the base for the meeting.

The discussion will last for two weeks.

We invite all interested persons, ICT experts, not only from WANA Region to contribute....

Available Documents

Background Document – DRAFT

Agenda

Summary

Structure

The discussion was opened and structured through 5 main questions¹ issued from the background document proposed.

These main questions, articulated into specific sub-lines were:

1. How to improve the ICT skills of the human resources involved both at a national level (National Information Nodal Points - NINPs) and the regional level (RAIS)?

- a) Definition of the situation in terms of human resources, technologies and internet connectivity
- b) Definition of a specific Plan of Work and Business (PWB).
- c) Crossbreeding and knowledge sharing at an intra-regional and an inter-regional level.

2. What the expectations of the National AARINENA Stakeholders in their RAIS?

- a) Definition of national priorities and their level of involvement in the AARINENA-RAIS Secretariat tasks.

¹ See Appendix 1

b) Validation and endorsement of the twofold RAIS Strategy: (i) Management Information System (MIS) through its four sub-components (Regional Research Networks Database, NARIS/NARS Databases, ARD Projects Database, Agricultural Research & Development Indicators Database), and (ii) Regional Reference System.

3. How to articulate national web information resources and regional requirement of the RAIS?

- a) Definition and role of what could be National Information Nodal Points (NINPS).
- b) Role of NINPs in Management Information System (MIS) and Regional Reference System (RRS).
- c) Added value of the RAIS.
- d) How to steer the RAIS activities from the NINPS and AARINENA points of view.

4. SWOT Analysis (Strengths, weaknesses, opportunities and threats) of the AARINENA Web Site launched by AREO (Iran)

- a) Definition of the next steps.
- b) Specific plan of Action including Management Information Tools for of ARD activities, including the straightening of the gateway function.

5. How to support National Information Nodal Points (NINPs) and RAIS activities?

- a) Improvement of the institutional networking and commitment of the institutions, at a policy level, involved in the AARINENA-RAIS.
- b) Definition of a sustainable funding strategy and access to funds.
- c) Definition of cost sharing activities at all levels (from the local to the regional through the national).
- d) Co-operation with other RAIS.
- e) Definition of a well articulated set of collaborative programmes with FAO, GFAR and other stakeholders to be further defined.

In addition to these five, another question was posted by Ajit Maru (ISNAR):

6. The process of enhancing and developing a regional or national agricultural information system needs to examine a set of issues before it can answer the five questions of this discussion forum.

- a) Who are/will be the users (clients, customers) of these information systems?
- b) What do they, the users, want from the information system?
- c) How do we, a group of interested and concerned information managers from agricultural research and development Institutions respond to this need?
- d) What are the strengths and weaknesses of our present responses in satisfying the information needs of our targeted users?
- e) We must also consider the "price" (Risks/Threats) of each of the options that we are suggesting for the RAIS and NAIS.
- f) We must really identify the most difficult issues to solve them.

Questions 2, 3 and 5 get no answers from participants. Questions 1 and 4 get one answer each, while question 6 was the most stimulating.

Discussed themes

1. ICT skills of human resources

It was highlighted from the study prepared by Mr. Rafea two years ago and reported in the background document, that a big problem in the Region is the lack of human resources in terms of professional information system developers.

The situation hasn't changed, as reported by Ms. Ebrahimi, because still this lack remains, caused by low salaries in the public sector, compared with the private.

This lack of financial resources is of course a limitation also in organizing training courses for public employees who wish to learn and be involved in the RAIS.

What AARINENA Secretariat is asking is help both from International Organization and from other RAIS or Network who have the know how to provide support in terms of training and workshops organization for persons in the Region who have the potential to be involved in the RAIS system.

2. Collaboration form Countries of the Region

In building the AARINENA website, Ms. Ebrahimi had several problems of involvement of WANA Countries. The need of commitment of NINPs is very strong and the clear request is that one of the outputs of the Workshop will be this commitment. The experience from other RAIS can help and it is strongly asked from AARINENA in order to learn and not to repeat the same mistakes.

Identification of users and their needs

It is clear that users of the system are not only pure researchers, so we have to consider groups like Farmers' Organizations as active stakeholders in leading the demand of the system. We can't, as well, continue thinking in terms of "institutions" leading the demand, but consider individuals as the real users of the systems, with their variety of requests.

The system should be a real collaborative tool, adaptable to the growing requests from different groups.

The starting point for involving stakeholders can be a survey of bilateral and multilateral projects in the Region, so we can have a first picture of activities already going on in the Region and needs alrerady identified. This process should lead to involve more and more stakeholders, following a magnifying effect

Of course the financial aspect of the RAIS development is a main issue, but coordinating experiences and showing collaborations between different stakeholders and realities of the Region is the best solution to be presented to the donor communities and to International organizations that can, in this new

non-fragmented context, help more in channelling proposals and finding sources of funding.

3. Role of the RAIS

The role of the RAIS should be not purely collecting the information, but networking and offering an open space for discussion inside the Region, facilitating the exchange of information and helping in disseminating documentation and lessons learned from the different realities of the Region.

This role will mature over time, following the demand of products expressed by stakeholders. The system should be flexible enough to adapt itself to it and the only way for having that is to build it in a participative and collaborative way, in one word "demand-driven".

4. Technical highlights

IPGRI Regional Office remembered the offer to help in building a prototype of the RAIS, made in the Cairo meeting in 2000. This offer is still valid. The landscape has changed since then: the AARINENA-RAIS has been established in Teheran and a collaboration first with GFAR, then with EARD-Infosys+ has started.

Other realities are present in the Region and every of them can add their experience in different aspects. The best solution, and one of the expected outputs of the Workshop, is to merge experiences and coordinate different expertises in order to build a complete system, touching all aspects of ARD.

Appendix 1: Questions & Answers

1. How to improve the ICT skills of the human resources involved both at a national level (National Information Nodal Points - NINPs) and the regional level (RAIS)?

This question can be articulated into three main lines:

- a) Definition of the situation in terms of human resources, technologies and internet connectivity
- b) Definition of a specific Plan of Work and Business (PWB).
- c) Crossbreeding and knowledge sharing at an intra-regional and an inter-regional level.

Answer of Taraneh Ebrahimi – AARINENA-RAIS Secretariat

As Fulvia wrote, first of all definition of the situation in terms of human resources, technologies and Internet connectivity, is so important. As everybody knows, in most agricultural institutions in the region, the problem is that we have no professional information system developers, and it happens sometimes because of the low salaries. Better situations in the private sectors attract IT professionals to work in the non-governmental organizations. This problem could lead our organizations to developing unreliable system. I think in the first step we should change our conditions to attract professionals, but if it is not possible, we should select some kind of solutions, which should help us in resolving the problem. Several solutions that we should consider are as follow:

- 1) In every organization there are active employees who are interested to learn more and more and have the ability to reach to professional levels. So we can provide suitable conditions to improve them.
- 2) Providing training courses, Workshops and long-term courses to develop their skills and increase their effectiveness in ICT.
- 3) Lessons learned from other RAIS like APARIS
- 4) Technical and Educational support by FAO, GFAR and other international organizations

Another objective is about designing our work plan in the region. What we want to do exactly in the field of Regional Agricultural Information system? What kind of Information we need to exchange? Who must provide the information policy? What kind of information will be highly important to publish on the web? We need a common policy in the national and regional level so every regional country could follow it and use it as a model for its information system. For example research projects of the research countries could be an important objective to publish on the web to exchanging the information and experiences between regional countries.

About the Internet connectivity in the regional countries, as you see in the background document, there are several problems like the high cost of leased

lines, dials up prices and etc. Fortunately in Iran, we have not the problem in this field. Financial problems in the research institutions could be one of the reasons of this problem. In this case, international organization's help is highly appreciated. Without the Internet connectivity, all the programs in the field of exchanging information between regional countries will be insignificant.

Finally, as a conclusion paragraph, I could say that we need professionals or smart persons who could reach professional levels providing them some regional and international educational programs. Of course they must have a minimum knowledge in IT science and a maximum potential to learning new subjects. These persons should know the regional information system policy. They should assess regional needs and consider them as the main objectives of their work.

2.What the expectations of the National AARINENA Stakeholders in their RAIS?

This question can be articulated into two main lines:

- a) Definition of national priorities and their level of involvement in the AARINENA-RAIS Secretariat tasks.
 - b) Validation and endorsement of the twofold RAIS Strategy: (i) Management Information System (MIS) through its four sub-components (Regional Research Networks Database, NARIS/NARS Databases, ARD Projects Database, Agricultural Research & Development Indicators Database), and (ii) Regional Reference System.
-

No answers to this question

3. How to articulate national web information resources and regional requirement of the RAIS?

This question can be articulated into four main lines:

- a) Definition and role of what could be National Information Nodal Points (NINPS).
 - b) Role of NINPs in Management Information System (MIS) and Regional Reference System (RRS).
 - c) Added value of the RAIS.
 - d) How to steer the RAIS activities form the NINPS and AARINENA points of view.
-

No answers to this question

4. SWOT Analysis (Strengths, weaknesses, opportunities and threats) of the AARINENA Web Site launched by AREO (Iran)

This question can be articulated into two main lines:

- a) Definition of the next steps.
 - b) Specific plan of Action including Management Information Tools for of ARD activities, including the straightening of the gateway function.
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Answer of Taraneh Ebrahimi – AARINENA-RAIS Secretariat

As I am the designer of the AARINENA web site, maybe I could not judge it, but I would like to talk about the main problem that I had during last year and I have it yet. It is exactly about getting accurate and timely information; I had no information related to the regional countries .In the beginning of the work, I used GFAR information on the NARS. Then I contacted several times with the countries, but only two or three of them, have sent me information. Then I searched on the Internet and tried to collect all the useful information related to the research institutions, NGOs, Universities, private sectors and ministries in the region. Although I have published all these information on the AARINENA web site, but I know that they are not complete and up-to-date yet. I need the cooperation of the AARINENA regional countries. Of course the role of NINPs in this matter is so important. I hope that in the Cairo Workshop, we will reach positive results in this matter. We have a lot of to do for the web site: designing and building databases one of our main goals in the future programs.

5. How to support National Information Nodal Points (NINPs) and RAIS activities?

This question can be articulated into five main lines:

- a) Improvement of the institutional networking and commitment of the institutions, at a policy level, involved in the AARINENA-RAIS.
 - b) Definition of a sustainable funding strategy and access to funds.
 - c) Definition of cost sharing activities at all levels (from the local to the regional through the national).
 - d) Co-operation with other RAIS.
 - e) Definition of a well articulated set of collaborative programmes with FAO, GFAR and other stakeholders to be further defined.
-

No answers to this question

**6. The process of enhancing and developing a regional or national agricultural information system needs to examine a set of issues before it can answer the five questions of this discussion forum
(From: Ajit Maru - ISNAR)**

This question can be articulated into six main lines:

1. Who are/will be the users (clients, customers) of these information systems?

As we are finding in the iNARS discussion, the users set of these information systems are not whom we conventionally think of. They now include a wide swath of individuals and Institutions from the market supply chain of agricultural commodities and the multiple of stakeholders to agricultural and rural development. We have to clearly identify who will use information from these systems. Apparently, the users of national agricultural information systems will be different from the regional agricultural information system. Of course, there will be some overlap but each of the systems will have to clearly identify its targeted users.

2. What do they, the users, want from the information system?

Information needs of policy makers differ from those of agricultural development managers, of managers from researchers and those of researchers from extension workers. The needs of farmers and rural entrepreneurs are not limited only to agriculture but many issues related to their livelihoods and quality of life. Our conventional approaches to the needs assessment have certain flaws and do not really reflect the real needs of the users. If at the beginning of the century, if Mr. Henry Ford asked a potential motorcar user what he/she would need as a "motor car", he would have got a motorized horse carriage, so different from today's motorcar.

3. How do we, a group of interested and concerned information managers from agricultural research and development Institutions respond to this need?

We must examine what services we already provide to this group of users and we must enhance them with appropriate information technologies. One of the common learning from designing information services and systems, especially for public good information, is that techno-centric approaches usually do not end in useful systems. We must design systems that center on people who are to use it.

4. What are the strengths and weaknesses of our present responses in satisfying the information needs of our targeted users?

We are finding ourselves in a totally new information environment. New Information and communication technologies have virtually flattened the traditional information hierarchies. The user does not go through a hierarchy of information access points as he/she would in the hierarchical organization of the NARS. It would be just easy for a user to click a mouse to go to the FAO website as it would be to go to AARINENA website. We must understand the need for uniqueness for each of these sites to make them useful.

New ICT brings about what are called "pluralistic" information flows. Our present information systems are designed to handle linear information flows (See for example VERCON where we design for Research à Extension à Farmer linkages). We must design systems that enable these pluralistic information flows

among even a targeted subset of the wide variety of users and multiple stakeholders.

Information must ultimately result in learning by the users. And this learning must end in action. Developing information systems is not enough. In other words, the information system must support the mission and achievement of goals of either the national agricultural system or the regional body as they case may be.

5. We must also consider the "price" (Risks/Threats) of each of the options that we are suggesting for the RAIS and NAIS.

Information systems that do not serve their intended purpose they can be very costly not only in monetary terms but in the aftermath of its impact.

6. We must really identify the most difficult issues to solve them.

Recently in the iNARS Workshop we identified some of them as related to:

- a) Connectivity
- b) Content
- c) Capacity Development
- d) Collaboration
- e) Capital

Answer of Margaret Sraku-Lartey - Forestry Research Institute of Ghana

Dear Colleagues,

I couldn't agree with Ajit more on all the points that he has raised. The other issue that I think should be considered seriously is how sustainable the Information Systems we put in place should be. When such systems are developed in Developing countries, it is usually with external funding. But we fail to address the sustainability issues resulting in the project being curtailed as soon as funding runs out. This is especially critical when the systems are "techno-centric" and rely extensively on outside funding to sustain and maintain it. maybe we could design less simpler but more useful systems that can easily be maintained.

I think this should be a subject for discussion during the workshop.

Answer of Taraneh Ebrahimi – AARINENA-RAIS Secretariat

Dear Colleagues,

I agree with Ajit in some of his points. I would like to pointe them again briefly as follow:

"We must identify the users (clients, customers) and their information needs. We must design systems that center on people who are to use it. Information must ultimately result in learning by the users and this learning must end in action.

We must really identify the most difficult issues to solve them."

As Ajit said in the final part , we must really identify the most difficult issues to solve them . Now I would like to ask Ajit and all of you what are your solutions for the above mentioned issues? How we can solve them?How we can identify the real users and their information needs?How we could be sure that the experts, designed a useful information system?What is the role of the experts? Is it possible that they decide sometimes on behalf the users and their needs?

Answer of Kheder Durah - IPGRI Regional Office for Central West Asia and North Africa

Dear Colleagues,

Back to 2 years ago we had an ICT meeting at Cairo-Egypt, during this meeting we agreed to create a prototype for the RAIS in WANA region. The prototype had 2 parts:

1. Logical Part (What the system should do?)
2. Physical Part (How the system should do it?)

We also agreed that a quick start for the RAIS prototype would be having a passport database (covering Flora, Funa, Micro-organisms and fossils as defined by IPGRI for CWANA region) with statistical production figures taken from the AOAD database. This should cover the logical part of RAIS.

Now for the Physical part, that is what is the platform that should be used to develop the prototype?

IPGRI-CWANA regional office offered in that meeting to Host and Administer RAIS as its current LAN-WAN infra structure can suite most of members' ICT requirements in terms of connectivity, scalability and stability. My offer is still available. We only ask from AARINENA to cover the cost of developing the RAIS in terms of developing time.

Answer of Ajit Maru – ISNAR

Dear Colleagues,

Here are my views (a bit lengthy, excuse me) on Taraneh Ebrahimi e-mail:

1. We must identify the users (clients, customers) and their information needs.

Based on the mandate of the regional organizations for promoting collaboration in agricultural research and development in their respective regions, my suggestion is to start with a list of all bilateral (between two country NARS), multilateral and International Agricultural Research Projects and Programs in the WANA region. From this list we would get the institutions, individuals and stakeholders (those who support or benefit from the projects) involved in each of them. They would be the initial clients and actors of a regional agricultural information system.

2. We must design systems that center on people who are to use it.

We would seek the "shared information spaces" that individuals in these project use for information exchange. For example, a bilateral project might have joint publications such as reports, seminars, workshops, electronic discussion lists,

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websites where information is exchanged. This is what I call the "shared information space".

We would look at ways in which a regional agricultural information system can support enhancing this shared information space of the project that would like to use the RAIS for information exchange. For example, the RAIS could help publication and/or dissemination of material that is printed or on a CD_ROM, host an e-discussion group or a website with project documents. The advantages would be in cost savings for all the NARS and IARCs in the region, effective and improved communication and dissemination since these functions (of facilitating and hosting) are centralized and coordinated for bilateral and multi-lateral projects. This also solves the issue of "ownership" of data and information since the projects own and manage them and not the RAIS. The RAIS only enables or facilitates the "shared information space".

A (paper & digital) repository of data and information (content) would steadily be built around these projects, their information needs and their outputs. We would add a search engine so that data and information (including graphics, sound bytes, video clips etc.) from the various participating projects can easily be accessed. We would aim for the digital and electronic part of the RAIS to be a web portal where users could define and access their individual information needs (something like My Lycos or My MSN).

As the RAIS and portal mature over time, there would be demands for products like decision support systems, knowledge based systems, crop models, tools like more specific search engines, data brokers and services such as e-mail boxes, catalogues, indexes, yellow pages and hosting of Community of Practices from the users and the RAIS would become one large "shared information space" of the regional organization. RAIS would also give rise to collaboration among the members of this space in developing say a crop model, a weather data broker or a GIS.

In other words, I would like the RAIS to evolve organically as per its users needs. This would be parallel to how the Internet grew. There is an overall enabling but the data and information would come from the users.

To summarize this important issue:

- I. We would seek "shared information spaces" of bilateral and multilateral projects and enhance them through appropriate ICT and other related technologies.
- II. We would focus on building a data and information repository with products, tools and services as a core function of the RAIS.
- III. We would install policies and strategies that would enable the RAIS to evolve "organically". RAIS would be an Institution that attempts to improve the symmetry of agricultural information exchanges between the users within (and, if the Internet is considered) outside the region.

3. Information must ultimately result in learning by the users and this learning must end in action.

As I state above, RAIS should aim to create collaboration and cooperation in data and information sharing. If the research institutions within the region collaborate to develop decision support systems, knowledge bases, Community of Practices etc., together to use their information spaces effectively, they will be involved in what may be termed collaborative "multi-stakeholder learning". The outputs from this learning will be the products, tools, services, processes, ideas, visions, needs that are all innovations and contribute to action.

4. We must really identify the most difficult issues to solve them.

The most difficult issues I stated were Connectivity, Content, Capacity Development, Collaboration and Capital.

I Connectivity, which should not be limited to physical connectivity such as computer and Internet access but also the connectivity that enables effective messaging and communication.

A. Physical connectivity, I believe is an issue of appropriate national and regional telecommunications policies, financial investment and access to appropriate technology. The RAIS can only play an awareness and sensitization role here.

B. I believe RAIS would have a major role in enabling effective messaging and communication through capacity development not only in the use of new ICT but also in enhancing the process of communication with the new ICTs. For example, how to facilitate and moderate an e-discussion list or a Community of Practice or how to develop a e-document.

II. Content

Appropriate content is key to a successful RAIS. Unfortunately, we believe that content is "free" of costs but that is not true. We all know the costs involved in producing a report or a book. Not only its printing but also the costs of writing, editing and disseminating it. Each Web page on the web is estimated to cost between a 100-1000 USD to develop and host.

A RAIS must then enable developing content within the participating projects through capacity development and financial investment for it. Many of the skills in content generation such as writing, editing, developing a web page or a PDF document are difficult to find in projects and research Institutions. The RAIS must organize and support training in these areas of content generation and hosting it.

III. Capacity Development

I have already linked up capacity development for connectivity and content above.

For multi-stakeholder learning we need to build new skills. Since this learning will be through multiple stages and experiential, we will need "learning" skills. We need to enable the "adult" individuals who are members of the RAIS how to learn together especially through on-line social networks. This is a very difficult area since there may not be face-to-face interactions. For example, take this discussion. Whatever I write here will result in many different perspectives and understandings of what I write and if it results in some learning, it will be different for each reader.

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To act together, users of a RAIS will need skills to articulate their needs, relate and build partnerships and to negotiate within the group and outside the group. These skills are usually missing among researchers.

There will also be a need to develop capacity within the RAIS to manage and maintain it. This would mean skills such as for information systems administration and information management.

IV Collaboration

I think one of the core objectives of a RAIS is to support and enable collaboration. There will be many issues around this such as of trust which ultimately RAIS would be involved in creating among its users through its activities.

V. Capital

One of the many reasons why regional organizations and their information systems have not become more effective has been their funding. There must be adequate 'seed' money for these activities and to sustain them.

One of the ways I see for financial sustainability of RAIS is through bilateral and multilateral projects incorporating funds in their budgets for RAIS information services.

Answer of M. H. Roozitalab - AREO, Iran

Referring to the e-mail message on 10 February regarding the recommendations made by Dr. Kheder Durah from IPGRI-CWANA Office, I would like to draw your kind attention to the following points:

- 1) AARINENA- Executive Committee Meeting held in Tehran in Dec 2001 approved the proposal by Agricultural Research and Education Organization, AREO, Iran for hosting the AARINENA-RAIS. AREO appointed Ms Taraneh Ebrahimi as the RAIS Manager. AARINENA Web- site (www.aarinena.org) has been designed and developed by cooperation of GFAR-Secretariat and other member countries. The web site has been made operational since August 2002.
- 2) The main objective of the ICT Consultation Meeting in Cairo is to review and discuss the progress made so far and to make decisions on further enhancement of AARINENA- RAIS with collaboration of GFAR, international and regional organizations/centers as well as the ICT experts from NARS of the region.
- 3) Effective partnership and ownership of AARINENA member countries, particularly the National Information Nodal Points, NINPS are of paramount importance, if we want to establish a comprehensive and sustainable regional information system.
- 4) AARINENA-RAIS should provide the gateways and links to other international and regional information systems as well as providing an interactive electronic forum for discussion and debating the major regional issues, access to different databases, ARD Networks, etc
- 5) IPGRI-CWANA may play its very important role in developing and preparing interactive databases for plant genetic resources and any other relevant

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information as deemed necessary in the CWANA region. This will also be linked to AARINENA-RAIS.

In conclusion, I would like to express my best wishes to all of you for having a very successful and fruitful meeting in Cairo.

Answer of Marc Bernard - EARD-Infosys+

Based on the 5 years experience EARD-Infosys+ is giving technical advice to GFAR.

As a result GFAR and EARD-Infosys+ were able to develop tools and exchange mechanisms that enable the flow of information between the European RAIS (EARD-Infosys+) and EGFAR.

Similar collaborations should be established with the emerging RAISs to assure the success of GFAR, this means establish an efficient and interactive Global Information System for ARD.

EARD-Infosys+ has been asked by GFAR to contact AREO (AARINENA-RAIS Secretariat) in order to evaluate possibilities for collaboration, transfer of technologies and exchange of experiences.

The state of the art of the GFAR EARD-Infosys+ collaboration will be presented at the AARINENA Workshop in Cairo.

EARD-Infosys+ will also present the lessons learned during the 5 years period in managing the European RAIS (see also Annex 5 of the Background document).

EARD-Infosys+ highly recommends to consider the lessons learned while discussion operational and organizational aspects of the emerging RAISs.