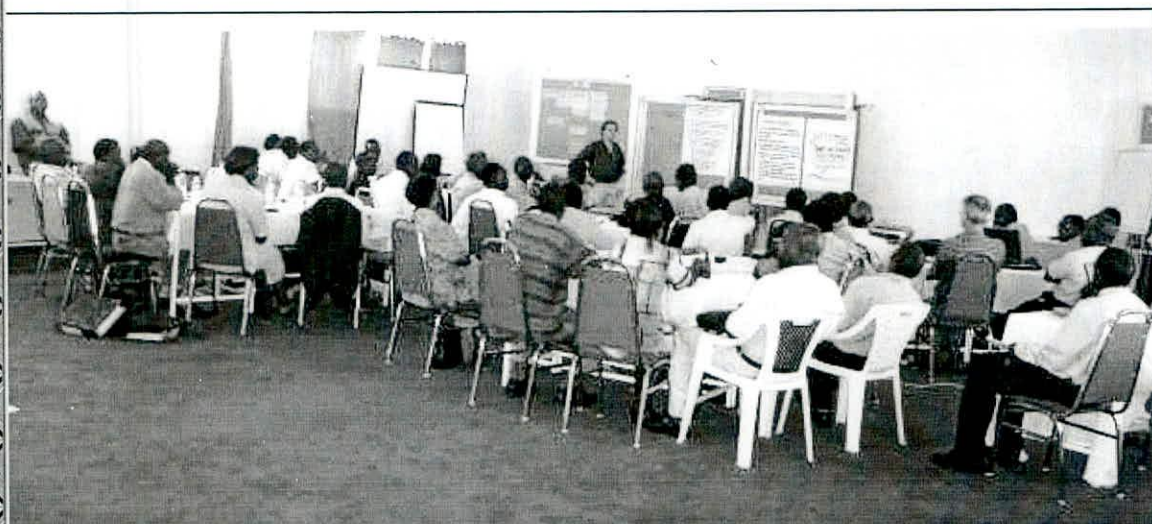


National Agricultural Research Organization (NARO)

Core Function Analysis of NARO

Workshop held in Jinja, Triangle Hotel, May 13-15, 2004

Workshop Documentation



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Workshop Facilitation and Process Design: Dr. Jürgen Hagmann

May 2004

This documentation report documents the workshop which took place in May 13-15, 2004. The report here is not a final synthesized report, but tries to capture the crude output of the workshop in an non-interpreted way as a base for shaping the final report.

THIS DOCUMENTATION IS MEANT TO BE A REFERENCE DOCUMENT for all participants which intends to provide the desired transparency of the decision making process. Almost all results of the working groups and plenary sessions are documented here. In addition, it includes the summary reports of the group rapporteurs.

Table of Contents

1	SETTING THE SCENE	1
1.1	WELCOME	1
1.2	PARTICIPANT INTRODUCTION	1
1.3	WORKSHOP OBJECTIVES.....	3
1.4	RECOGNIZING WHO IS AT THE WORKSHOP	4
1.5	WORKSHOP FLOW.....	4
1.6	OVERVIEW PROGRAM.....	5
2	PRESENTATIONS ON BACKGROUND, FUNCTIONAL ANALYSIS PRINCIPLES AND PROCESS	5
2.1	PRESENTATION 1: DEVELOPING A CHANGE VISION	5
2.2	PRESENTATION 2: NARO'S RESPONSE TO THE REFORMS.....	9
2.3	PRESENTATION 3: THE FUNCTIONAL ANALYSIS PROCESS	11
3	TOWARDS CRITERIA TO DEFINE NARO'S CORE FUNCTIONS.....	14
3.1	CLARIFYING TERMS AND CONCEPTS AROUND ORGANIZATIONAL FUNCTIONS AND CORE FUNCTIONS?	14
3.2	DEVELOPING CRITERIA FOR THE NARO CORE FUNCTIONS	14
3.3	TOWARDS DEFINING NARO'S FUNCTIONS.....	16
3.3.2	<i>Group A results on core functions</i>	<i>16</i>
3.3.3	<i>Group B results on core functions</i>	<i>17</i>
3.3.4	<i>Group C results on core functions</i>	<i>18</i>
3.3.5	<i>Group D results on core functions</i>	<i>19</i>
3.4	SUMMARY: CLUSTERING OF NARO'S CORE FUNCTIONS	22
4	ANALYSIS OF NARO'S CORE FUNCTIONS ALONG NARI-ZARI-NAROSSEC LINES.....	24
4.1	RESULT OF GROUP 1: CORE FUNCTIONS OF ZARIS.....	25
4.2	RESULT OF GROUP 2: FUNCTIONS FOR NARIS.....	27
4.3	RESULTS OF GROUP 3: FUNCTIONS OF NARO ADVISORY COMMITTEE & SECRETARIAT	29
5	FUNCTIONS / AREAS WHICH HAVE A POTENTIAL FOR SOURCING OUT	32
5.1	OUTPUT OF GROUP 1: THEME 1	33
5.2	OUTPUT OF GROUP II: THEME 2	34
5.3	OUTPUT OF GROUP III: THEME 3	35
5.4	OUTPUT OF GROUP IV: THEME 4.....	36
5.5	OUTPUT OF GROUP V: THEME 5	38
6	ASSESSING THE HUMAN RESOURCE REQUIREMENTS FOR THE FUTURE?.....	40
7	NEXT STEPS AFTER THIS WORKSHOP	41
8	WORKSHOP EVALUATION.....	41
9	CLOSING	42
10	ANNEX	44
10.1	LIST OF PARTICIPANTS	44

Acronyms

ARDC	Agricultural Research and Development Center
CFA	Core Functional Analysis
CFAT	Core Functional Analysis Team
CIT	Core project Implementation Team
DDG	Deputy Director General, NARO
FA	Functional Analysis
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
NAADS	National Agricultural Advisory Services
NARC	National Agricultural Research Council
NARI	National Agricultural Research Institute
NARO	National Agricultural Research Organization
NARS	National Agricultural Research System
NGO	Non-Government Organization
PARI	Public Agricultural Research Institute
PEAP	Poverty Eradication Plan
PMA	Plan for Modernization of Agriculture
SASP	Structural Adjustment Support Program
SWOT	Strengths, Weaknesses, Opportunities and Threats
ZARI	Zonal Agricultural Research Institute

Foreword by the organisers

to be utilized by the participants

Foreword by the facilitator

The core function analysis workshop was conducted under great pressure. Most of the participants had stayed in another meeting for the first 3 days before and were exhausted when we started. Despite that exhausting situation we achieved a great output due to the high commitment of participants in long hours.

I would like to thank you all for the active participation and despite the pressure, the fun we had in our interaction. The commitment of the process steering groups deserves special thanks as we had to 'navigate' through the haze in our endeavour to make the little time available most effective to achieve the results.

The people in the background did a wonderful job. Ruth and her team provided secretarial services and Paul Kibwika and Maria Nassuna captured the discussions and compiled a draft of this documentation. Many thanks to all of you.

I wish you all the best for the future of NARO and the Ugandan NARS!

Dr. Jürgen Hagmann

Summary

The workshop to analyse core functions of NARO was an important pillar in the process of the task force to arrive at NARO's core functions within the new NARS. Stakeholders from different sectors of the research environment were present to reach a common understanding of what the core functions should be.

After an introductory session which brought all the stakeholders to a similar level of information and understanding, clarity was sought on the terminology and meaning of core and non-core functions, research and non-research functions which are part of NARO and the different perspectives on what core functions should be. Based on this common understanding criteria to define core functions were developed and agreed by the group.

The core functions of the NARO were then developed and subjected to these criteria. A set of agreed core functions and non-core functions emanated from this process. They were at a more generic level and included non-research and research functions.

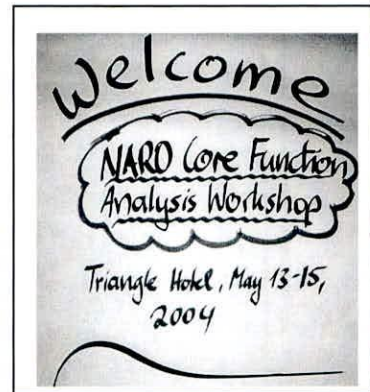
The next step broke down these generic functions into issues to be dealt with at NARI, at ZARI and NAROSSEC level. The research functions were then unpacked into more detail through the present research plan / projects and a list of areas which are potentially to be sourced / contracted out were identified.

The workshop created a common understanding and joint commitment to the reform and to the core functional analysis of NARO. However, the aspect of the staffing requirement could not be dealt adequately yet in the workshop. More analysis is required, combined with a more detailed vision for operationalisation of the organisation of the research implementation. The group tasked NARO and the core functional analysis team to set up a joint working group to define these requirements in consensus.

1 SETTING THE SCENE

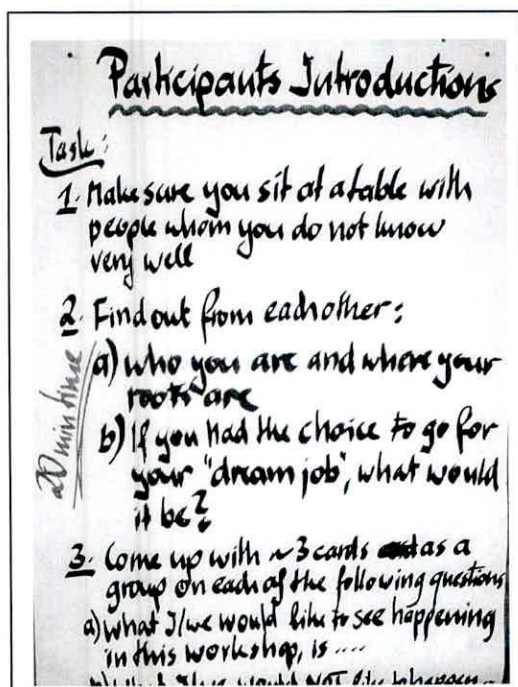
1.1 Welcome

The Deputy Director General (DDG), NARO, Dr. John Aluma welcomed the participants to the workshop. He recognized and emphasized the importance of other stakeholders in the workshop as being to make their input on how NARO should be conducting its business. He then handed over to the professional facilitator, Dr. Jürgen Hagmann to steer the workshop.



Jürgen started by clarifying that the workshop would involve a lot of group discussions and that was the reason for sitting in small groups. For purposes of increasing interaction, the participants were advised to keep changing their seats and tables every half day.

1.2 Participant introduction



The introduction was interactive and intended to break the ice between people on the same table so that they can share ideas more freely. It also involved a shared clarification expectations and fears based on what the participants wanted to see happen and what they did not want to see happen.

The expectations were: What should happen in this workshop, is.....

- Clear presentation of results of the functional analysis
- Report of the task force

- Discuss real issues; No. of NARIs, ZARIs, No of staff
- Functions on different NARS components
- Clear demarcation of roles of the stakeholders
- Concrete outputs
- Teamwork
- Openness
- Active participation
- Full participation by all participants
- Remain focused on the agenda
- Sharp, brief discussions
- More stakeholders should arrive
- Clear contribution of the functional analysis to NARS reform

The fears were: What should not happen in this workshop, is....

- Not going round the bush
- No hidden agenda
- Dodging issues
- Working till late in the night
- Passiveness
- People's views should not be dismissed
- Rushing through issues
- Dictatorship
- Overindulgence
- Participants should not leave before closure
- Lecturing
- Too much argument

Some Reactions from participants:

Need to manage time very well. There is a lot to discuss but at the same time, people need to internalize the issues being discussed. The group need to take responsibility to avoid wasting time.

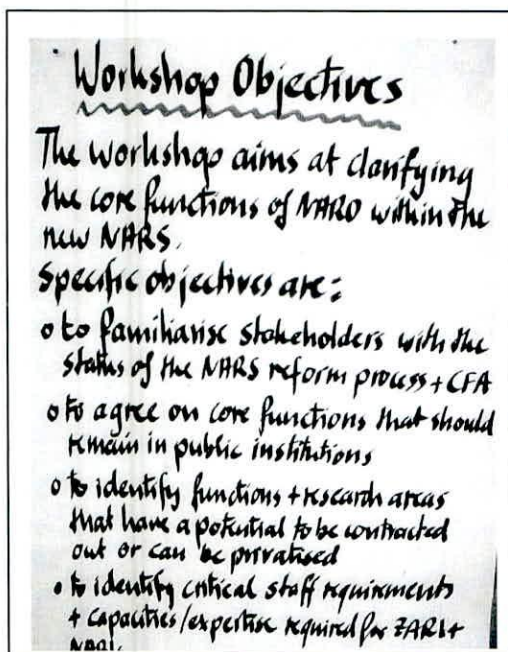
Q: Why should the title of the workshop focus on NARO when there is representation of NARS?

A: The functional analysis team is given the mandate to do a functional analysis for NARO. A little has been mentioned about other stakeholders especially their SWOT but the core of the task force is focused on NARO.

The non or little representation of other stakeholders may have a lot of implications on the new way of doing business. It would have been very important for the stakeholders to be here so that they make their input, particularly the private sector. There is a lot of responsibility given to the private sector in the NARS but their absence deprives us knowledge of their capacity and views.

1.3 Workshop objectives

The facilitator explained the workshop objectives which were set up by the process steering group:



The workshop aims at clarifying the core functions of NARO within the new NARS. The specific objectives are:

- To familiarize stakeholders with the status of the NARS reform process and core function analysis
- To agree on the functions that should remain in the public institutions
- To identify the functions and research areas that have a potential to be contracted out or can be privatized
- To identify critical staff requirements and capacities/expertise required for ZARI and NARIs

Some Reactions from the plenary

Q: Should we agree on the functions, which means that they already exist or should we develop them and agree on them?

Q: How shall we agree on the core functions when the exercise is not complete.

A: The NARS policy and the National Agricultural Research Bill (NARB) provide the framework within which we can agree on the core functions. It is about getting the consensus about those functions in the bill. Besides, there is a time constraint and this is an opportunity to bring all the stakeholders to own the process of functional analysis.

Q: Is the intention for NARO to divest research? All sectors are supposed to participate and probably in different ways. If

A: The framework of the new NARS brings in many players in the system of research. NARO may undertake research in collaboration with other stakeholders or NARO or specific research functions can completely be taken over by other players other than NARO.

On the basis of the criteria that were developed by the steering committee, the process is very pragmatic and aims at analyzing things to come up with a commonly agreed function for NARO. This was further explained by the possible flow of the workshop.

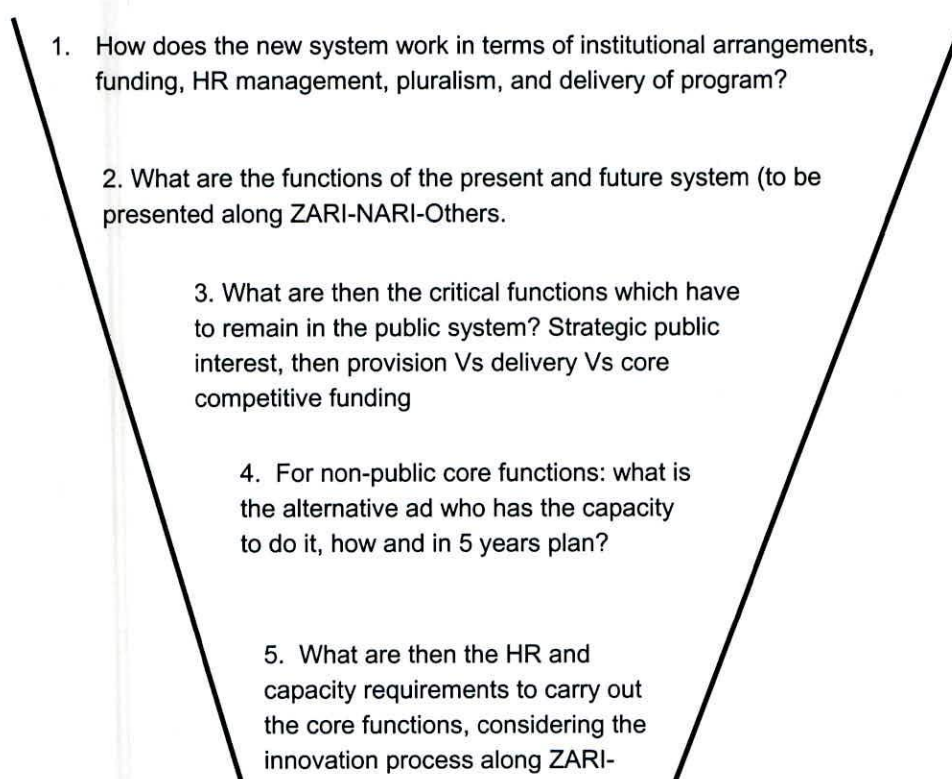
1.4 Recognizing who is at the workshop

The facilitator enhanced the visualization of the stakeholder representation by making them stand in different clusters. This differentiation made it more apparent that certain categories of stakeholders particularly the private sector and universities were underrepresented. Below is a summary of the representation of the stakeholders.

• NGOs	4	• Ministry of Agriculture	4
• Universities	1	• Donors	0
• Private sector	1	• NARO (over 30)	Majority
• Ministry of public service	6		

1.5 Workshop flow

A diagram of the workshop 'flow' highlighted the analytical process applied to arrive at core functions:



1.6 Overview program

Based on the objectives and the flow, the facilitator presented a suggested overview programme for the 3 day workshop:

	Thursday	Friday	Saturday
Session 1 8.30-10.30	Introduction and setting the scene	Analysis continued	Plan/outline for phasing of functions to be contracted out
Session 2 11.00-13.00	Status of the NARS reform process	Analysis of research functions	Staff requirements Next steps Workshop evaluation
Session 3 14.00-15.30	Defining criteria for functional analysis	Analysis continued	
Session 4 16.00-18.00	Analysis of non-research functions	Analysis continued	

The programme and the objectives as set out were generally accepted

2 PRESENTATIONS ON BACKGROUND, FUNCTIONAL ANALYSIS PRINCIPLES AND PROCESS

3 presentations were to bring all the participants on a similar understanding of the whole process. For many people this was a repetition, but it was felt necessary to give everybody a chance to contribute effectively by having this background information

2.1 Presentation 1: Developing a change vision

To develop a change vision, we need to understand:

- The need for change
- What are the key drivers for change?
- What is the change about?

Need for change

- Need to re-orient agricultural technology development towards food security and modernisation of agriculture
- Need to address more vigorously different client categories and market opportunities

- Need to tap private sector capacities in delivery of agricultural research services
- Need to improve coordination between all providers of agricultural research services

Key drivers for change

- Structural Adjustment Support Programme (SASP)
- Poverty Eradication Action Plan (PEAP)
- Plan for Modernisation of Agriculture (PMA)
- National Agricultural Research Policy

Agricultural Sector Policy Linkages

PMA is a key component of the PEAP pillars three and four, but contributes to all pillars

- Creating a framework for rapid economic growth and structural transformation
- Ensuring good governance and security
- Directly increasing the ability of the poor to raise incomes
- Directly increasing the quality of life of the poor

Agricultural Research and technology development is one of the seven priority intervention areas under the PMA (besides non-sectoral conditional grants)

Agricultural research and technology development

- Agricultural advisory services
- Rural finance services
- Agricultural education
- Agricultural marketing and agro-processing
- Sustainable natural resources use and management
- Supportive physical infrastructure

National Agricultural Research Policy: guiding principles -

- Responding to market opportunities
- Empowerment of stakeholders
- Scientific integrity and professional excellence
- Decentralisation of agricultural research services
- Promoting participation of private sector, civil society and farmers
- Separating public funding from research services' delivery
- Mainstreaming gender issues and concerns
- Mainstreaming social, human and environmental concerns

Issues and concerns about the presentation in plenary

Q: Guiding principles: Does it mean that there will be separate funding for the private sector?

A: In the past NARO received the funding and manages the research function. The new policy brings in many players in the research arena. In this case one organization cannot manage funding and research. One body (NARC) should control the funds and the research organizations apply for the funds including NARO. Yes there will be separate funds matched by the private sector to meet their research needs of the private sector.

Before these reforms, NARO was receiving its funds from the ministry of finance and distributing it to the research institutes. In the new arrangement, there is the aspect of competition for the money from the NARC.

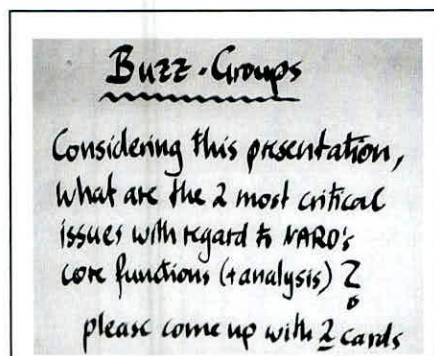
Q: Since participation is one of the principles emphasized, how have the poor farmers participated to this process of change in research?

A: The process started three years ago and a task force was set up to make consultations with different stakeholders (both the suppliers and users of research services). The consultations went as far as the sub-counties involving farmers, input suppliers, marketers etc. More consultations were also done in district, regional and national workshops.

Q: What is the logic of including extension in the research system?

A: The diagram depicts the environment in which the NARS will operate. NARO will definitely need to cooperate with NAADS and local government. These are very critical in the development of the research agenda. NAADS is not a research provider but will guide the research process. In addition, there is need to separate the Local Government from the NAADS coordinators.

Brainstorming on Critical Issues for NARO's core function



Basing on the presentation, participants in buzz groups identified what they considered to be the critical issues with regard to NARO's core function.

The critical issues were as follows:

- NARO should continue developing the technologies and disseminate them
- For each technology, there should be a quality assurance
- We need to consider the financial implications of the new NARS versus its benefits
- The linkages between the NARS and NARO is not clear

- NARO is being analyzed instead of analyzing the NARS
- The review is disrupting NARO while others are consolidating
- The involvement of the private sector may increase corruption
- Too many players, the quality assurance may be compromised
- NARO should concentrate on strategic research and leave the rest to other players
- There might be biases in selection of researchers for the competitive funds especially at the zonal level
- The establishment of the council there is transfer of powers and functions
- Establishment of the autonomous of ZARIs and NARIs has implications of decentralization

2.2 Presentation 2: NARO's response to the reforms

Realignment of research programs

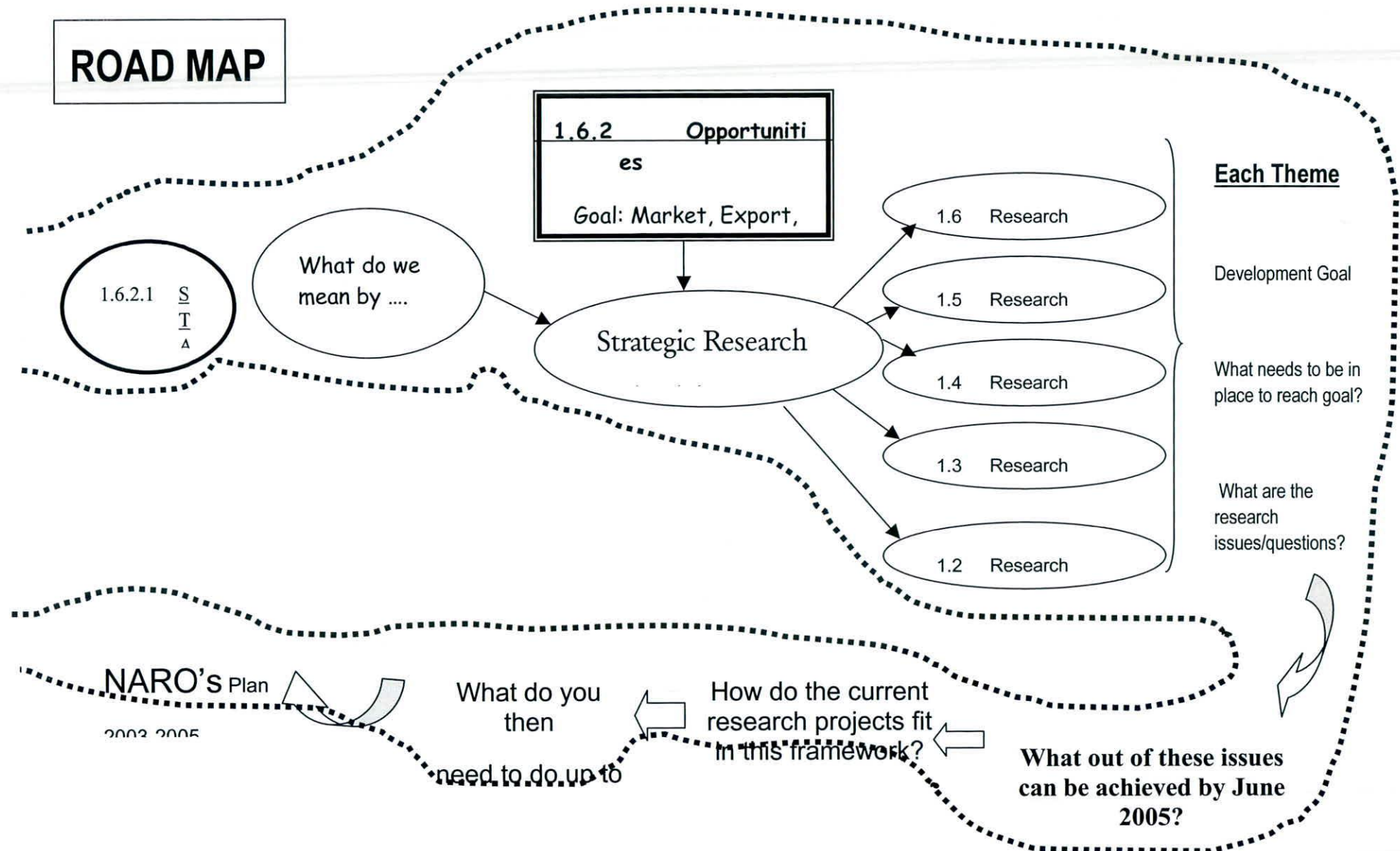
Dr. Aluma reported on how NARO has responded to the reforms by realigning its research program to match the requirements of the NARS policy and PMA principles. From this realignment, five thematic areas for the future research were developed:

1. Understanding people, their livelihood system, demands and impact of innovations
2. Enhancing innovation process and partnerships
3. Developing technological options responding to demands and opportunities
4. Enhancing integrated management of natural resources
5. Linking producers, market opportunities and policies

The roadmap

Dr. Aluma then explained the steps that NARO has taken/intends to take with regard to the reforms are outlined in its roadmap illustrated on the next page. Initially the process was supposed to be much faster, but got delayed due to a number of reasons.

ROAD MAP



Issues and concerns about the presentation

Participants on their table discussed for about five minutes to clarify their concerns and questions about the presentation:

- NARO is ready for take off. Are all the others in the NARS ready? If not what are the implications?
- Can we address research issues based on farmers' views that are erratic in nature?
- Longevity of research may not cope with the market dynamism
- The private sector is likely to have a monetary advantage over NARO since they can obtain additional resources from elsewhere.
- Demand for research should be looked at in a wider context. This needs to be strategic
- Themes should be mainstreamed in research rather than mainstreaming research in themes
- The plan of up to 2005 is too short, that means after 2005, a lot of time will be spent in planning again.
- The themes do not seem to integrate indigenous knowledge.
- Focusing on market as the drivers for research might compromise food security.
- NARO has responded before the NARS bill, when the bill comes out, what happens?
- As public service providers are limited in investment in the markets and the private sector may have an edge over NARO in terms of uptake of technologies

2.3 Presentation 3: The Functional Analysis Process

The third presentations highlighted the process of the Core functional analysis team

Objectives of Core Functional Analysis

- Analyse functions and operations of NARO to respond in the most efficient manner to the NARS principles
- Analyse institutional and organisational characteristics of NARO and identify, within the existing portfolios, opportunities for the NARIs and ZARIs
- Analyse current infrastructure and delivery systems and propose changes in light of the new NARS
- Re-define roles, activities, staff competencies and other HR practices and relate them to the proposed autonomy of the PARIs in the new NARS
- Examine the role of other players and propose mechanisms for increasing synergies
- Propose a transformation plan for the new PARIs

Analytical Framework of CFA

Methodology and data collection tools

- Literature review and synthesis
- Introduction workshops
- Group discussions and consultations
- Brainstorming and group work
- Structured interviews with key informants (individuals and groups)
- Special templates for data collection and processing
- Feed back sessions

Outputs of Core Functional Analysis

- Reviewed and redefined role, functions, competencies and performance indicators for NARIs and ZARIs
- Reviewed, streamlined and rationalized structure and establishment for the new NARO
- Revised research systems and operations
- Transitional arrangements for the implementation of the proposals
- Costs and financial implications of the proposed system

Expected outcomes of re-organization

- PARIs delivery of services is more efficient
- Operations are more business like
- PARIs in a position to respond to client and market demands
- Creation of synergies and partnerships with other service providers
- Core competencies of national interest maintained

Time schedule for CFA

- FA Team orientation, until end of February
- Meeting with NARO Board, 05 March
- Meeting with NARO Management, 09 March
- Visit of NARO-Sec and Institutes, data collection, until middle of April
- Analysing and costing, until end of May
- Report writing, feed-back sessions, until end of May

Status of FA

- Analytical framework for FA prepared
- Introductory meetings held with NARO Board, NARO management (today with NARO-Sec)
- Total of 14 NARO Institutes / ARDCs visited (sensitization, stakeholder analysis, SWOT analysis, assessment of management practices, resources and infrastructure)
- Field visit reports partly completed and information synthesized
- Retreat with scientists and selected stakeholders to identify core- and non-core functions for NARIs and ZARIs including the HR-capacity requirements

Issues and concerns about the presentation

Q: Can you explain more about the composition of the core function team

A: The team has 6 members from ministry of public service; members of CIT (3); NARO representatives (3); Ministry of Agriculture (1). There was not private sector representative because emphasis was on expertise and not necessarily representation of all the stakeholders. Government has its internal expertise and beyond that the team sourced from outside, so it may not be purely based on presence of expertise per se. Enlarging the team also meant financial implications. Although one of the participants doubted that there is no relevant expertise in the private sector. Since the private sector is a member of the NARC, there might be a need to do a functional analysis of the private sector. The public service ministry does the major work and the NARO representatives are more of resource persons on the team.

Q: In the view that some stakeholders are not represented in this retreat, how shall we agree on the core and non-core functions for the NARIs and ZARIs.

A: As earlier mentioned, we shall use the functions in the bill as a resource for this task.

Q: Is this the first representation of the NGOs in this process.

A: When the team was visiting the ARDCs, they were requested to invite stakeholders. So some NGOs were involved and even visited some NGOs in their operational areas. It was obviously not possible to involve all the stakeholders.

Q: How will the costs be determined?

A: We are talking at the cost of the human resource, structures and facilities. It is not costing projects.

There is need to deliberately involve the private sector given the environment of privatisation in Uganda. This process of reform however, has been going on for the last three years and in most fora, the private sector has participated.

3 TOWARDS CRITERIA TO DEFINE NARO'S CORE FUNCTIONS

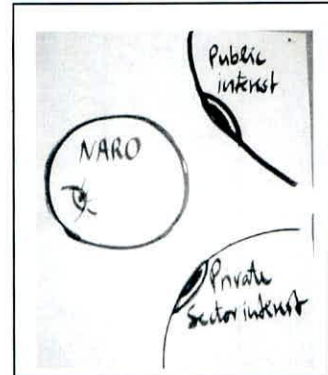
3.1 Clarifying terms and concepts around organizational functions and core functions?

The facilitator tried to clarify the term 'organizational functions' in general and 'core functions' of an organization are:

An **organizational function** is a "task" at organizational level. It is a cluster of activities

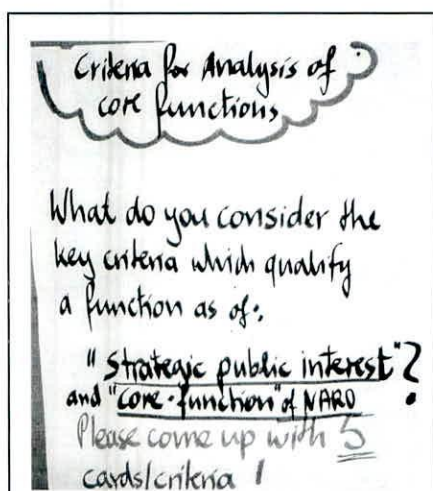
A **core function** is:

- Needed to make an organization work
- Function/business in which organizations have strong comparative advantages
- Functions, which are of strategic interest of business/organisations



These clarifications helped to identify the right level of functions between detailed tasks and broad general thrusts. It was also helpful to clarify that core functions need to be seen from different perspectives (eyes): the private sector might see different functions as core of NARO than the internal perspective or the public interest. It requires a negotiated balance between the different perspectives to agree on core functions.

3.2 Developing criteria for the NARO core functions



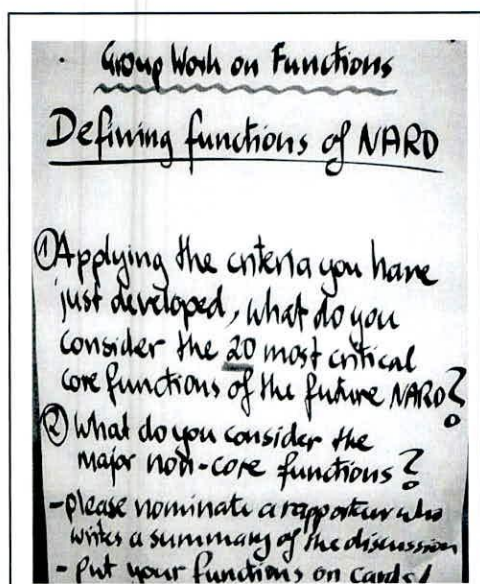
Once the concepts were more clear, the table groups were requested to brainstorm on criteria to classify a function as a core function and of 'public strategic interest'. The outcomes of this task were clustered on the board and appropriate titles assigned. The clusters broadly represent the criteria for determining the NARO's core functions:

The outcome was a group of key criteria which were then applied to the functions of NARO

Criteria	Issues involved in this criteria
Absence of private sector interest and capacity	• Non-availability of other service providers • Where private sector has no capacity and is not interested
Conservation of national heritage and national resources and public knowledge base	• Preservation of national heritage • Protecting public knowledge • Functions that protect the national natural resources e.g. land, water, forests, biodiversity and animal species • Sustainable maintenance of key agricultural interests (data banks)
Emergencies	• Emergency issues • An emergency • Functions that address catastrophe and epidemics
Essential policy statutory formulation and implementation	• Functions that contribute to the implementation of government policies • National policy requirements • International protocols and conventions e.g. on climate and desertification
Emerging Issues and opportunities	• Emerging issues • Emerging opportunities
Reasons for public good nature	• Research that provides public goods • Functions that address need of a large section of the population • Basic needs of the large majority of the population • Relevant to public concerns/constraints • Focus on interests of local community
Contributes significantly to the economic and scientific development	• Functions that contribute to the national economic development • Contributing to national economy • Significant contribution/impact on economy & quality assurance) • Functions that promote scientific development
Comparative advantage in institutional capacity	• Institutional capacity to undertake the research • Capacity to undertake tasks of intellectual nature
Essential national security	• National interests economic and social security) • National security and economic interests • Compromises of food security (food health, life, environment) • Contributions to national security • Contribution to food security • Functions that contribute to income security

These criteria were generally accepted by the group

3.3 Towards Defining NARO's functions



Building on the criteria, participants were now requested to identify the 20 most critical core functions of the future NARO and the major non-core functions for NARO.

Each group presented their outcomes and rapporteur notes reproduced below.

3.3.2 Group A results on core functions

Members: J. Aluma, Mpanga Denis, M. Mastte, G. Maiteki, Hilary R. Semaana, Boas Keizire, Nelly. Isyagi, G. Mbahenzireki, Mukiibi-Muka

NARO core functions:

1. Generation and development of Agricultural Technologies. NARO has got comparative advantage over other Institutions. Other players however, are needed to participate in this function so that efficiency, synergy and complementarities can be achieved.
2. In order to do the above it is NARO's core function to establish and manage strategic partnerships and linkages.
3. Train and backstop and update other service providers on the new technologies.
4. Policy makers require critical information to help them formulate, plan and manage research. It is the core role of NARO to provide this information.
5. It is the core role of NARO to monitor and evaluate performance of its technologies and respond to emerging pertinent issues.
6. As one of its core roles, NARO should undertake publicity of its technologies because no one is there to do it on its behalf.
7. NARO should ensure quality of its technologies in order to avoid fabrication.
8. NARO should define, priorities and articulate researchable areas.
9. Research Management e.g. Human resource development, infrastructure development, coordination, budgeting etc.)

Major non-core functions:

1. Collection, introduction and conservation of germplasm. NARO has a stake but does not have to have this as a core role. Other players can do it.
2. Responding to emerging issues.
3. Other functions not mentioned

3.3.3 Group B results on core functions

Members: J.Okanon, B.A Banjoya, E. Kapampara, Joe Ssentenza, GW Otim Nape, OY Josephat Omoding, Heinz Laos, Denis T Kyetere,

NARO core functions:

1. To undertake innovative and basic research. Basic research to understand systems and advance knowledge. Innovative research that results in extra ordinary new products, processes and methods.
2. To develop varieties and technologies that take care of food and nutritional security e.g. vegetative, cereals such as millet.
3. Development of technologies and practices that enhance the natural resource base (soil, water)
4. Protection and management of agricultural knowledge base of strategic nature (indigenous knowledge) and NARO's internal property rights
5. Management and conservation of genetic resources e.g. gene bank
6. Understanding long term/short term strategic and applied research
7. Evaluating and responding to emerging issues. Analyse the issue, evaluate, monitor and conclude and respond to emerging issues e.g. moringa
8. Addressing emergency issues e.g. banana wilt
9. Adapting and disseminating technologies and practices to uptake pathways
10. Development of technologies that enhance commercialisation and reduce poverty
11. Undertake research that enhances quality assurance bio-safety and environment protection
12. Participate in formulating and implementing of international, regional and national policies, protocols and conventions
13. Understanding research that addresses policies, institutional and marketing constraints
14. Participate in research priority setting process
15. Addressing concerns of marginalized and vulnerable groups
16. Developing and maintaining, sustain public agricultural research capacity e.g. human resource.
17. Building and sustaining linkages and partnerships with other local, regional and international research bodies.
18. Developing research that enhances, shelf life, add value and open new markets to local agricultural commodities.

19. Lobbying and advocacy for public agricultural research institutions.
20. Co-ordination and oversight of PARIS
21. Providing technological back-up to MAAIF and other government bodies
22. Multiplications and provision of foundation technologies e.g. breed stocks for fish (portal type).

Major non-core functions:

1. Capacity building of farmers, extension staff and intermediaries
2. Contracting services/providing consultancy service to other stakeholders
3. Generating own income (estates, commercial production)
4. Extension of technologies.

3.3.4 *Group C results on core functions*

Members: Eva Sebunya, Magunda M.K., Lino Musana, Alphonse Candia, Wilson Waiswa Mwanja, J.P. Saamanya, W.W. Wagoire, J.F.O. Esegu.,

Critical NARO core functions

Understanding core functions

- Comparative advantage
- Strategic interests
- Conferred by law
- Needed for the organisation to work

Core research functions

- Undertake research
- to develop technologies
- to develop knowledge
- to develop information
- in apiculture
- in biotechnology
- in appropriate engineering technologies (tools, implements and machinery)
- in post harvest handling
- in value addition and production development
- in quality assurance
- in animal nutrition
- in natural resources management (fisheries, forests, soil, water harvesting and utilization, biodiversity)
- in pests and diseases management

- in germplasm conservation
- in policy research (impact of policies)
- in market information research
- in cost benefit analysis
- mainstream gender, environment and other social concerns
- promotion and dissemination of technologies (outreach)
- monitoring and evaluation
- impact assessment of technologies
- publications of research results/information

Non-research functions

- Documentation, information data bases and information management
- Financial and material resources mobilization and management
- Technical backstopping to government on apicultural issues
- Human resources capacity building and management for NARO
- Training of service providers
- Training farmers, students from universities, schools, colleges, local leaders (explain)
- Building partnerships locally and internationally
- Public relations
- Management of facilities and assets
- Procurement of facilities and assets
- Procurement and contract management
- Planning, budgeting, priority setting, coordination etc.

3.3.5 *Group D results on core functions*

Members: Emily Twinamasiko, Gumisiriza, J Mubiru , Caleb Gumisiriza , Lazarus, Joshua Guina, Sebunya Era, K. Ondongkara K, Nsubuga, J. Samanya,

The discussion centered on:

- National priority setting
- Who should do what?
- Should NARO coordinate or implement?
- Demand driven or farmer empowerment for
- How should we do this?
- NARO should take lead in this or NAADS or NARC?

The following issues emanated in the working group discussion:

- NAADS is supposed to do this but may not be doing this. NAADS does enterprise development
- Who does Staff capacity building for private individuals to perform or undertake research and development. If not NARO in the new NARS the who exactly?
- Shows, field days, fairs NARO has been holding the and should a continue doing this? Though this could be Dissemination of agricultural research information not technology transfer
- Emerging issues: national catastrophic can best be handle by NARO which has an agricultural research centers and infrastructure across the country. However, Emergencies whichever ones - is a function of Disaster preparedness
- Emerging opportunities: what can we do to identify opportunities and with who?, the is need to Respond to researchable issues in emerging opportunities. How do you respond to emerging opportunities
- NARO should continue Contributing to policy advice, Policy makers, Policies research process, especially were policies direct affect agriculture
- NARO has to have Partnerships with stakeholders, but how do we build partnerships, and how are we linking up with others. NARO had developed research liaison units through which stakeholders would be reached. The ARDC when decentralising research. However there is still need to develop partnerships.
- National security and issues which are crucial to the Economy. NARO should be involved for purposes of certain research which is crucial. Such as in Conservation of National Germplasm and Property rights (International property rights)
- Packaging and branding of what is going out of the country or moving out of the country
- Funds
- Supervision and quality assurance
 - It is a role of UNBS?
 - Should be done by MAAIF or private sector?
 - Should be within NARO for PARIs
- Human resources Management, resource mobilization and development
- Management of physical facilities for research
- Administration coordination of research
- Coordination of research public relations
- Administration And Finance administration

The group outputs in terms of core functions

	Code	Function
1. Generate information necessary for conservation of biodiversity	B	Core
2. Generation of technologies that ensure food security, improving nutritional value, improving household incomes	F1-3, 5	Core
3. Support private sector in building capacity to do research	F1-3, 5	Core
4. Lead in helping farmers articulate the demand for research	A	Core
5. Skills development for research and technical backstopping	A1, H1-2, G4	Core
6. Dissemination for agricultural research technologies	A-I	Core
7. Developing a research mechanisms for responding to emergencies	C	Core
8. Provision of technical advice to policy makers	I	Non-Core
9. Development of partnerships that enhance technology generation and technology dissemination		Core
10. Conservation and protection of national germplasm		Core
11. Mobilizes, Access and Manage the research funds		Core
12. Ensure quality assurance in research within NARO		Core
13. Administration and Management		Core
14. Human resources mobilization and development		Core
15. Managing physical facilities		Core
16. Coordination of research		Core
17. Public relations		Core

All 3 groups came up with core functions which partly were overlapping. After the presentation of the three groups all the suggested core functions were clustered into one synthesised frame, shown below

3.4 Summary: Clustering of NARO's core functions

The synthesis of the results was:

Core Functions	Issues involved
1. Generation and development of agricultural technologies taking care of national strategic interests	• Development of technologies • Generation of technologies which ensure food security , improving value • Development of .. and technologies that promoter • national food and nutritional security • To generate improved and new technologies for crops, forests etc • Animal nutrition • Pests and disease management • To conduct adaptive research and dissemination of techs • Generation and devpt of agric techs • Research on tools , implements and machinery • Main streaming gender, env, other social concerns • Addressing concerns of marginalized and vulnerable groups • market constraints • Policy research • Participate in formulating and undertake research that addresses policy and institutional issues
2. Basic research in processes, systems, & methodologies & technologies	• Undertaking long term strategic and applied research, addressing emergency issues • To conduct basic research on public priority commodities addressing priority constraints • Research in biotechnologies • Undertaking innovative and basic research • Conduct basic research to develop methods and knowledge on priority commodities • Research on uptake dissemination • Conduct farming systems research & understanding livelihood systems in UGANDA • implementing of international, regional, national policies, protocols
3. Generation and management of knowledge and information	• Development of knowledge • Development of information • Generate, manage and disseminate knowledge • publication • Documentation and information management
4. Research on value addition and product development and market information /commercialisation	• Value addition product development • Post harvest handling • Research that enhances shelf life • and value addition and open new markets to local agric commodities • Develop and promote value addition technologies • Market information research • Conduct market research on agric commodities • Development of techs that enhance commercialization and reduce poverty
5. Research on processes and technologies that	• Natural resource management • Development of technologies and practices that enhance natural resource base

Core Functions	Issues involved
enhance sustainable utilization of natural resource base	
6. Research and services to respond to emergency issues	• Development of research mechanisms for responding to emergencies • Addressing emergency issues • Responding to emergency issues
7. Providing technical backup to MAAIF and other govt bodies	• Technical backstopping to credit • Provision of technical advice to policy makers • To provide policy advice for policy formulation in agricultural sector • Provide critical for information and policy formulation, planning and management
8. Research on and management and conservation of genetic resources	• Germplasm conservation • Generate info necessary for conservation of biodiversity • Conservation and protection of national germplasm • Conservation, collection of germplasm • Management and conservation of genetic resources
9. Evaluation of and responding to emergency opportunities and constraints	• Evaluating and responding to emerging issues • To conduct research and emerging constraint opportunities • Conduct research on indigenous crops animals and medicinal plants • M&E performance of NARO techs & respond to issues pertinent to the tech
10. Developing and Management of physical, financial resources	• Research managing, human resource, infrastructure, coordination, budgeting and maintenance of facilities • Financial and materials , resource mobilization and mgt • Mobilise, access and manage funds for research • Administration management • Procurement and contract management • To develop efficient and effective management agricultural research systems in NARO • Managing physical facilities • Public relations • Lobbying and advocacy for public agricultural research institutes • Undertake publicity of its technologies • Coordination and oversight of PARIS • Coordination of NAROS research • Undertake publicity of its technologies
11. Strengthening of demand assessment and priority setting process in agricultural research	• Priority setting and coordination • Participate in research priority setting processes • Define, prioritise and articulate researchable issues • Lead in helping farmers articulate their demand for research
12. Developing and management of human capital	• HR capacity building and management • Skill and technical backstopping for research's development • HR mobilization and development • Development and sustain public agricultural research capacity • To build capacity within NARO, human infrastructure

Core Functions	Issues involved
13. Capacity building of stakeholders on agr research and techs and methodologies	• Training of service providers • Support private sector in building capacity to do research • Capacity building of intermediaries, extension staff and farmers • Train and backstop service providers • To provide technical backstopping in plant animal health protection of exotic materials • Training farmers, students, local leaders
14. Planning, monitoring and evaluation of NAROs research programmes	• Monitoring and evaluation • Impact assessment • To conduct M and E and impact studies of agric research and development activities • Planning, budgeting
15. Resource mobilisation and fundraising	• Generating own income, estates, commercial products • Providing consultancy services to other stakeholders
16. Building and sustaining linkages and partnerships with other local, regional and international research bodies	• Development of partnerships that enhance technology generation and dissemination • To coordinate and develop functional partnerships in Uganda • To develop strong donor relations communication strategy • Establish and manage strategic partnerships and linkages • Building partnerships

There was a general agreement that these are the core functions of NARO. More work in terms of polishing them is required. However, the next steps in the workshop was to break them down into the functions of the different components of NARO.

4 ANALYSIS OF NARO'S CORE FUNCTIONS ALONG

NARI-ZARI-NAROSSEC LINES

Group Work

- ① Compare the functions we have developed with the ones from the bin + NARO strategy
- ② Come up with a consolidated list of core functions for NARI, ZARI, NAROSSEC + NARE, separate them according to research and non-research functions
- ③ Come up with a consolidated list of non-core functions for the same entities.

please present + document them in a Word-file + print it out!

In groups, the participants undertook the task in the chart and presented their outcomes as follows:

NR = Non-Researchable; R = researchable

4.1 Result of Group 1: CORE FUNCTIONS OF ZARIS

1. Establish and control of zonal facilities in the field of research (NR)
2. Establish and maintain collaboration with other agricultural research service providers both at national and international levels (NR)
3. Report the findings of agricultural research to the Council in particular agricultural research services undertaken with public funding from the Council (NR)
4. Collaborate and consult with farmers for a and farmer groups or organization (NR)
5. Maintain core technical, administrative research staff and facilities (NR)
6. Knowledge and information management at agro-ecological zone level (NR)
7. Dissemination of technology to uptake pathways (NR)
8. Development and management of physical, financial resources (NR)
9. Planning, monitoring and evaluation of NARO's research programmes (NR)
10. Development of partnership that enhance technology generation and dissemination (NR)
11. Resource mobilization and fundraising (NR)
12. Manage and carry out applied and adaptive agricultural research relevant for a specific zonal need (R)
13. Participate in problem identification and prioritising and identification of quality research demand and zonal research agenda (R)
14. Development and technology transfer according to identified priorities by the Council (R)
15. Ensuring the multiplication of foundation technologies (R)
16. Undertake agricultural research with farmers, other stakeholders and research teams (R)
17. Act as a centre of excellence and reference on specific agricultural research programmes and enterprises within the zone (R)
18. Providing technical back-stopping to advisory service providers in collaboration with NAADS and other stakeholders (R)
19. Establish and maintain regular contacts and collaboration with other research and technology institutes both at national and international levels and exploring new opportunities in agricultural research and development (R)
20. Quality assurance of service providers on behalf of districts (R)
21. Integration of upstream and downstream research and extension/NAADS (R)
22. Conduct applied and strategic research on public priority commodities addressing priority constraints in that zone (R)
23. Conduct basic research to develop methods and knowledge on priority commodities (R)
24. Conduct farming systems research and understanding livelihood systems within the zones (R)
25. Generation and management of knowledge and information (R)
26. Research on processes and technologies that enhance sustainable utilization of natural resources in that zone (R)
27. Evaluation of and responding to emerging opportunities and constraints (R)

28. Quality assurance of NARO technologies and research processes (R)
29. Strengthening of demand assessment and priority setting process in agricultural research (R)
30. Training of agricultural researchers and others (NR)
31. Hiring and or letting of services for the management and conduct of agricultural research (NR)
32. Capacity building of other agricultural research services providers (NR)
33. Capacity building of stakeholders on agricultural research and technologies and methodologies (NR)
34. providing agricultural research services as a contracted agricultural research service providers (R)

Comments from plenary

Q: I thought this morning we laboured to combine issues and the way this group has brought it, they unpacked it.

A: Could have come as a result of rationalising

Q: I am concerned with no 4. I would think it is a core function of the ZARIs

ZARIS and NARIs are considered to service providers and therefore number 5 under non core should be made core.

The team thought that this was an area where others could come in. One other thinking is that a competitive grant is to help NARO managers to make their staff worker harder, (motivate), or else they will be out competed.

We were saying that numbers 1 to 4 must be done for success, therefore should be all called Non core.

Could the group have used non-core to mean non-research issues? I am asking because in the morning all issues had been termed as core and now the group is calling some core and others non core!

Numbers 22 and 23 are about conducting basic research, shouldn't zones rather concentrate on applied research?

It depends on how one interprets it. Since ZARIs are going to be autonomous, they should carry out basic and applied research, depending on the situation.

Clarification: basic research is one done to further understanding to build on knowledge of science whereas strategic research refers to research on emerging problems like cassava wilt.

Why don't we get rid of the word basic and just say research so that we remove the confusion?

May be we should allow group member to explain what they meant.

Applied research is that done at local level to solve a localised problem. When you generate information on baseline studies then you have done basic research.

Agree to change the word to applied

Is the M and E and impact assessment captured there? Yes

Where we felt that there in no research activity involved, we called it non-research.

I think when something does not result in a technological output it is non research, but it is core, so we should not waste time here

4.2 Result of Group 2: Functions for NARIS.

1. Generation and development of agricultural technologies taking care of national strategic interests
2. Basic research in processes, systems, methodologies and technologies
3. Generation and management of knowledge and information
4. Research on value addition and product development and market information /commercialisation
5. Research on processes and technologies that enhance sustainable utilization of natural resource base
6. Research and services to respond to emergency issues
7. Research on the management and conservation of genetic resources
8. Quality assurance of NARO technologies and research processes (at all levels: NAROSEC, NARIs, ZARIs)
9. Evaluation of and responding to emerging opportunities and constraints
10. Dissemination of technology to uptake pathways
11. Developing and Management of physical, financial resources
12. Strengthening of demand assessment and priority setting process in agricultural research (functions that lead in helping farmers articulate their demand for research is core function for ZARIs)
13. Providing technical backup to MAAIF and other govt bodies
14. Developing and management of human capital
15. Planning, monitoring and evaluation of NAROs research programmes
16. Building and sustaining linkages and partnerships with local, regional and international research bodies
17. Acting as a centre of excellence and reference on specified agricultural research programmes and enterprises
18. Participating in problem identification and prioritisation of quality research demand of national research agenda.
19. Reporting on the findings of agricultural research to the NAROSEC and NARC in particular agricultural research service undertaken with public funding from the Council.
20. Ensuring the multiplication of foundation technologies

21. Providing agricultural research services as a contracted by agricultural research service provider.

Non core functions of NARIs

1. Capacity building of stakeholders on agricultural research and techs and methodologies
2. Capacity building of other agricultural research service providers
3. Providing technical back-stopping to advisory service providers in collaboration with NAADS
4. Quality control of service providers on behalf of districts
5. Collaborating and consulting with the farmers' for a and farmer groups or organizations

Comments from Plenary

Is there a definitive criteria to distinguish NARIs and ZARIs and their functions?

This may be very difficult due to overlap and support of each other

I would say NARI have a specific mandate, but ZARIs are more open at the regional level, What is developed at the NARI may need to be applied at ZARI level therefore to cut a line between NARI and ZARI may be difficult.

It seems many of the functions are going to be duplicated but the level at which a function is made will differ (zonal, National)

Even if NARO secretariat supervises technicians, each institute should be able to supervise its technicians

There now seems to be lack of a body to coordinate what is happening at NARI and at ZARI NARO SEC is supposed to have the coordination role. A careful thought to this has to be put Given the many common functions and that NARIs and ZARIs are semi autonomous, there is a danger of having NARIs and ZARIs competing.

If a problem in a region arises, ZARI is likely to know it first. If they can fix it alone, that would be fine. But many times they may need capacities and facilities located at NARIs. The collaboration between NARIS and ZARI will be inevitable and the danger of competition will not exist.

My prayer is that NARO SEC will expand to undertake effective coordination

It would seem to me that it could be too early to discuss NARI and ZARIs. These two may have to be revisited and even probably renamed. We can rationalize and call these institutes one name and prevent the sentiments

I have observed that some of the functions can be done in collaboration with other stakeholders. Is it now a deliberate strategy due this competition for the common basket for NARO to not mention and highlight stakeholders?

I think point 16 takes care of this unless the speaker's collaboration the speaker is not talking about is local.

In addition, NARO is an agricultural institution, but it does not have all it requires to do all the research. Thus, NARO will depend a lot on collaborating with all the partners available. In

the 5 themes of NARO, NARO does not have capacity to do most of those things but to rely on stakeholders and collaborators. This should allay the speaker's fears.

4.3 Results of Group 3: Functions of NARO Advisory Committee & Secretariat

Under the Advisory Committee (the rephrasing to be the NARO board)

1. Appointing the staff of the Secretariat
2. Appoint and discipline directors of PARIS
3. Approve in consultation with the Minister, the terms and conditions of service of the employees of PARIS.
4. Approval of Plans and Budgets of the secretariat
5. Approve the Procurement and Disposal activities of NARO.
6. Participate in Monitoring & Evaluation of PARIs through the secretariat

Under Secretariat

1. Coordination of the implementation of international, regional national policies, protocols
2. Develop and implement an Agricultural research information management strategy for the PARIS and facilitate shearing of information amongst the PARIS.
3. Management and dissemination of knowledge
4. Publication of information on behalf of the PARIs
5. Documentation and information management
6. M&E performance of NARO techs & respond to issues pertinent to the tech
7. Coordinating, Promotion, & dissemination of technologies
8. Coordinating the Response to emerging issues
9. Ensure quality of research within NARO
10. Coordinating the Response to emergency situations
11. Generating income from own estates and commercial products
12. Providing consultancy services to other stakeholders
13. Human resource, infrastructure, coordination, budgeting and maintenance of facilities
14. Financial and materials, resource mobilization and mgt
15. Mobilise, access and manage funds for research
16. Administration management
17. Procurement and contract management
18. To develop efficient and effective management agric research systems in NARO
19. Managing physical facilities
20. Public relations

21. Lobbying and advocacy for public agricultural research institutes
22. Undertake publicity of the technologies of the PARIs
23. Coordination of NAROS research
24. Technical support to MAAIF and other government
25. HR capacity building and management
26. Skill and technical backstopping for research's development
27. HR mobilization and development
28. Development and sustain public agricultural research capacity
29. To build capacity within NARO, human infrastructure
30. Monitoring, evaluate and report to the Board agricultural research programmes and activities carried out by all PARIS to ensure that they are in conformity with plans, standards and research objectives.
31. Impact assessment
32. To conduct M and E and impact studies of agric research and development activities
33. Planning, budgeting
34. Building and sustaining linkages and partnerships with other local, regional and international research bodies
35. To coordinate and develop functional partnerships in Uganda
36. To develop strong donor relations communication strategy
37. Establish and manage strategic partnerships and linkages
38. Building partnerships
39. In conjunction with the board, Establish coordinate and review linkages of PARIS with any international organization or research body within and outside Uganda
40. Provide advocacy for PARIS
41. Prepare for approval by the board rolling three years research and man power plans of the public agricultural research institutes
42. Make arrangements for periodic assessment of the performance of each of the PARIs in terms of efficiency, appropriateness of organizational structure and adequacy of facilities, and resources with reference to the task to be performed
43. Provide secretarial and logistical support the will facilitate the work of the board and such committees set up by the organization

Significant changes to be strongly considered

- The Advisory Committee should be rephrased to be the NARO board. To be in line with other stakeholders e.g Universities with Councils, Faculty Boards, NAADS - has a Board etc
- Most councils have Executive Secretary or Executive Director but not Director General. NARC should have an Executive Secretary supporting the council.
- NARO should be headed by an Director General as a coordinator of other public Agricultural Research Institutes

Under each heading, the major item issue was put under that title

Comment from Plenary

I was in this group and we failed find where the oversight function could go; I do not remember we included the function of priority setting

Addition; approve the budgets and plans of the secretariat.

I tend to get the feeling that some of the work like policy research is meant other scientists and not NARO research moreover the secretariat is not meant to carry out research per say.

This was meant to follow up implementing policies and ensuring research complies with policies

If secretariat is to enforce discipline, how would it enforce it at Universities?

PARIS are NARO institutes and not universities. We should talk about ZARIs and NARIs which are directly NARO institutes and not PARIs

"Other stakeholders" should read "other government units" in the point about technical backup

Can "advisory committee" be changed to "advisory board"?

Yes since this was simply an omission without political connotations. An advisory committee has no executive powers which are important. It is not too late this board can still be re-instated

I do not feel that some of the issues have been presented as they were deliberated in the group discussion

The group agreed with most of the suggestions but with a condition that the comments are integrated and that more synthesis work is required as there are strong overlaps.

5 FUNCTIONS / AREAS WHICH HAVE A POTENTIAL FOR SOURCING OUT

Once the group had agreed on the core functions of the different components of NARO, an attempt was made to identify possible areas which can be sourced out. The group worked through a number of criteria to identify those areas within the 5 themes and reported back.

GROUP WORK

Identify areas/functions/activities which have a potential for sourcing/contracting/privatizing through a rigorous analysis along the following matrix:

1. What is the area of public interest?
(assurance, delivery, funding)
2. If certain areas are not of high public interest, what are the capacity requirements and who can do it?
3. When can it be sourced out - is the capacity there now?
4. If not now, what provisions need to be planned to make it happen (plan)?

Please document very well why you categorizes the way you do. Hand in this report to Maria for the documentation.

Please come up with a list of areas/functions you suggest to be feasible for sourcing/contracting out!



5.1 Output of group 1: Theme 1

Activity	AREA OF PUBLIC INTEREST			IF NOT PUBLIC		
	Provision of quality assurance	Delivery	Funding Core/ Competitive	Capacity required Vs Availability	When can it be sourced out	What is required to source (Plan/ Provision)
1. Characterisation of production to consumption systems and component interactions	NARO NARC	NARI ZARI	Core/ Competitive	NA	NA	NA
2. Determination of epidemiological status and impact of major livestock vectors and diseases	NARO NARC	NARI ZARI	Core/Competitive	NA	NA	NA
3. Determination of epidemiological status and impact of major crop and tree pests and diseases	NARO NARC	NARI ZARI	Core/ Competitive	NA	NA	NA
4. Analysis of livelihood strategies for farmer and fisher folk in different agroecological zones and aquatic systems	NARO NARC	NARI ZARI	Core/ Competitive	NA	NA	NA
5. Determination of environmental status of aquaticsystems	NARO NARC	NARI ZARI	Core/ Competitive	NA	NA	NA
6. Assessing the adoption level and impact of crop technologies on rural livelihoods	Contract			NA	NA	NA
7. Assessing the adoption level and impact of fisheries technologies on rural livelihoods	Contract			NA	NA	NA
8. Assessing the adoption level and impact of forestry technologies on rural livelihoods	Contract			NA	NA	NA
9. Assessing the adoption level and impact of livestock technologies on rural livelihoods	Contract			NA	NA	NA

- All the functions of Theme 1 are of public interest
- Core funding may not be sufficient to complete all the functions. There will be need for competitive funds.
- Some components of the functions can be carried out in partnership with other service provider. This may be due to:
 - i) Inadequate internal capacity within NARO.

- ii) Some service providers may contribute funds to the cause.
- iii) Timeliness of activities
- iv) Skills of other service provider may be proficient

Assessing adoption levels can be carried out internally because of available capacity. However, impact assessment would be contracted out to SPs like IFPRI, MISR, EPRC etc because: inadequate internal expertise, timeliness, objectivity, impartiality, transparency

5.2 Output of group II: Theme 2

Function sub-function/Research project	Areas of public interest			If not public		
	Assurance/provision, quality assurance	Delivery	Funding core/competitive	Who?	Capacity	What is required to source out – plan/prioritise
1. Development of alternative technology transfer	Yes	Yes	core	ZARI, NARI	Yes, no social scientists	
2. Enhancing FRG development and sustainability	Yes	Yes	core	ZARI, NARI, NAADS NGOs	Yes, social scientist missing	
3. Testing alternative partnerships for research & dissemination of technology	Yes	Yes	competitive	ZARI, NARI, NAADS NGOs	Yes	
4. Developing effective tools for functional analysis and improvement	Yes	Yes	core	ZARI, NARI	Yes	
5. Harnessing biotechnological interventions for increased productivity	Yes	Yes	core	NARI	Yes. No equipment, materials and skills	
6. Evaluation of co-management .. in the fisheries sub-sector	Yes	Yes	core	ZARI, NARI, Narosec, MAAIF, NGOs	Yes. More man power & equipment	

5.3 Output of group III: Theme 3

Function sub-function/Research project	Areas of public interest			If not public		
	Quality Assurance	Delivery	Funding: Core/Competitive	Capacity requirement vs Availability	When can it be sourced out?	Plans/Provisions to source it out
Collection, characterization & conservation of plant genetic resources	Public	Public in wider sense - Universities	Core/Competitive			
Collection, characterization & conservation of animal genetic resources	Public	Public	Core			
Inventory, Collection, characterization & conservation of fisheries genetic resources	Public	Public	Core			
Generation of knowledge & technologies for the management of the ecology of aquatic systems, fishing methods and fish farming and harvesting	Public	Public	Core			
Generation of knowledge and technologies that ensure sustainable utilization of fish stocks (capture fisheries)	Public	Public	Core			
Generation of knowledge for the management of aquatic weeds and their hot spots in different aquatic systems	Public	Public/Private	Core			
Development of propagation and establishment techniques and harvesting methods that ensure market quality of forest products – Development of forest and pest management approaches that affect the quality of forest products	Public	Public	Core			
Development of forest pest management approaches that affect the quality of forest products	Public	Public	Core			
Development and promotion of agro forestry technologies for sustainable land use	Public	Public for long term, Private for Short term species	Core for long term, Competitive for short term			
Development of technologies which ensure the maintenance of water cycle	Public	Public	Core			
Development of water harnessing methods of solar and wind power for household use	Private	Private	Competitive			
Develop technologies that mitigate further soil degradation	Public	Public	Core			

Enhancing practices that reduce water run off, soil erosion and improve productivity	Public	Public	Core			
Projects can source for funding outside NARC						

5.4 Output of group IV: Theme 4

Activity	Quality Assurance	Delivery	Funding	Capacity needed and availability of capacity	When needed	What is required to source out
Development of quality live feed and pellet feed for commercial fish farming	Yes	Yes but limited	Core	Animal nutritionist and fish breeder. An extruder is needed	2004	Recruitment and procurement of equipment
Development of cassava varieties with tuber quality for consumer and market requirements	Yes	Yes	Core	Available	Nil	Nil
Development of potato genotypes for resistance to bacterial wilt and late blight. Development of sweet potato IPM options	Yes	Yes	Core	Available	Nil	Nil
Development of maize varieties and improved integrated pest and disease management options	Yes	Yes	Core	Available	Nil	Nil
Development of drought tolerant millet varieties	Yes	Yes but limited	Core	Breeder	2004	Recruitment
Participatory evaluation of sorghum varieties for productivity, grain quality and resistance to <i>Striga</i> in low and highland areas	Yes	Yes but limited	Core	Pathologist and entomologist	2004	Recruitment
Development of market demanded high yielding and pest resistant bean genotypes	Yes	Yes but limited	core	Entomologist	2004	Recruitment
Development of IPM options for mango fruit flies and mango seed weevils, citrus fruits and Psyllids	Yes	Yes but limited	Core	Pathologist and entomologist	2004	Recruitment
Development and promotion of desirable cup-quality genotypes with resistance to CWD	Yes	Yes but limited	Core	Agronomist and entomologist	2004	Recruitment
Development of high lint quality genotypes and development of cotton IPM technologies	Yes	Yes but limited	Core	Fiber technologist	2004	Recruitment
Development of varieties resistant to rosette and	Yes	Yes but limited	Core	Available	Nil	Nil

other disease and pests with desirable market attributes						
Identification, integration and multiplication of webworm and gall midge resistant sesame genotype with desirable market attributes. Include sunflower	Yes	Yes	Core	Available	Nil	Nil
Development of alternative vector and disease control methods to improve the quality of cattle products	Yes	Yes	Core	Pathologist and entomologist	2004	Recruitment
Development of appropriate poultry breeds and disease control methods to meet market demands	Yes	Yes but limited	Core	Pathologist	2004	Recruitment
Development of appropriate small ruminants' breeds and disease control methods to meet market demands	Yes	Yes but limited	Core	Theriogeneologists	2004	ART equipment (NAGRC)
Development of sustainable animal feed resource base	Yes	Yes but limited	Core	Animal nutritionist	2004	Recruitment
Development of processing technologies for preservation of farm produce	Yes	Yes but limited	Core	Biochemist, food scientist	2004	Recruitment
Product development, value addition and quality assurance	Yes	Yes but limited	Core	Biochemist, Packaging scientist, microbiologist. All relevant laboratory equipment is required including chemicals	2004	Recruitment and procurement of lab. equipment and chemicals
Evaluation of hybrid, and genetically modified controlling banana varieties resistant to weevils, black Sigatoka and nematodes; Development of biological control methods of weevils and nematodes in bananas; Developing value-addition technologies with the private sector	Yes	Yes	Core	Available	Nil	Nil
Development of cost effective tools and machinery for resource poor farmers	Yes	Yes but limited	core	Agricultural engineer and technicians. Additional workshop equipment	2004	Recruitment and procurement of workshop equipment
Developing tools and implements that meet market demands for private sector primary agro-processing	Yes	Yes but limited	Core	Agricultural engineer and technicians. Additional workshop equipment	2004	Recruitment and procurement of workshop equipment

Every project is a core function because:

1. All the projects and activities are of public and strategic interests in the economy
2. NARO has capacity which just needs to be improved to undertake the projects and activities
3. We have a core function of generating foundation technologies

What can be contracted out;

1. Elements of down streaming research can be contracted out for example adaptive research, technology multiplication.
2. Social aspects of problem identification may be contracted but not technical problems

5.5 Output of group V: Theme 5

Function sub-function/Research project	Areas of public interest			If not public		
	Assurance/provision, quality assurance	Delivery	Funding core/competitive	Capacity requirement versus availability: who?	When can it be sourced out?	What is required to source out – plan/prioritise
Analysis of the impact of existing national and local government policies, i.e decentralization, taxation, and privatization of input and agricultural service delivery, by-laws and regulations) an agricultural production and marketing	NARO SEC	NARO, Private Sector	Competitive	Economic policy analysis Capacity exists in private and public sector	Immediately	Competitive bidding
Synthesis of biophysical and social-economic research outputs to draw out recommendations for policy formulation	NARO sec	NARI, ZARI	Core	Biophysical and socioeconomic analysis Exists in NARI and ZARI but may not be sufficient in ZARI	When appropriate	Plan
Analysis of domestic and world market demand and supply for different commodities	NARO SEC	NARO, Private Sector	Competitive	Economic policy analysis Capacity exists in private and public sector	Immediately	Competitive bidding

Analysis of domestic and world market demand and supply for different inputs	NARO SEC	NARO, Private Sector	Competitive	Economic policy analysis Capacity exists in private and public sector	Immediately	Competitive bidding
Analysis of market systems for different commodities	NARO SEC	NARO, Private Sector	Competitive	Economic policy analysis Capacity exists in private and public sector	Immediately	Competitive bidding
Analysis of input marketing systems	NARO SEC	NARO, Private Sector	Competitive	Economic policy analysis Capacity exists in private and public sector	Immediately	Competitive bidding

The discussions o the outcomes revealed a different understanding of core and competitive funding. For some it meant that competitive is like the funding sources they now obtain through projects and donor-funded competitive funds. It was clarified that the future core should be less and some of the public money which now comes through core funds from government will be distributed on a competitive basis. This whole are needs considerable awareness for the future.

6 ASSESSING THE HUMAN RESOURCE REQUIREMENTS FOR THE FUTURE?

The chairperson of the core function analysis team gave a brief background to this exercise as follows: One of the terms of reference for the Core functions analysis team is to come up with numbers of required staff. We would like your guidance. Should we follow projects or follow themes or the future research agenda as our guiding principle? We are interested in some indicative numbers and levels. What do you participants think? In plenary, the following ideas were suggested by participants as useful tips, which the functional analysis team could use:

- Consider percentage requirements
- Certain disciplines that are inadequate would require contracting expertise to overcome manpower limitations
- With reference to ZARIS, all areas cut across all areas of research. That means there is need for a core number of staff that would be required based on functions and themes. These are the ones who would organize the innovation processes (Qn: Should we have a uniform representation of specialties in all the ZARIs?: Idea: Without a structure that is clear about what is to be done and what might not, it might be hard to answer that question now; however a foundation process is underway)
- There is also need to consider realities such as available budget and possible number of staff. In addition, there is a problem of scientists who are about to retire and the rate of scientists who go and not come back is very high (retrenchment and greener pastures).
- NARI should use its mandate to determine the minimum package of specialists
- There is also need to extend beyond the thematic areas and consider likely further demands for research, at a macro level, in order to suggest core number of staff
- There is need to consider support staff / scientists per institute
- It could also be valuable to borrow a leaf from other countries that have put up stable structures
- Lastly, there may be a need to Match the functions and inputs

The discussion could not be conclusive, but it provided some indications on possible ways to iterate the future staff requirements. A team consisting of the core function analysis and of NARO was suggested to look into that aspect specifically

7 NEXT STEPS AFTER THIS WORKSHOP

WHAT	WHEN	WHO
NARO suggests staff requirements and composition in each institute (Combined Team)		DG NARO
A workshop documentation that should be available soon		Jürgen & Paul

8 WORKSHOP EVALUATION

Discuss briefly around your tables, and report back in three sentences:

- What I did not like in this workshop was....
- What I liked was...
- Looking at the future of NARO I feel....

The facilitator asked the group to go back to their table groups and explore a bit what they liked and did not like in the workshop:

What I did not like

- People going out all of the time
- Timetable of the proceeding of workshop was hidden
- Core function was not leading but like students
- Poor attendance by stakeholders
- Some officers were holding private conversations and had to be coerced
- Too compact a programme
- Some issues were left in suspense, facilitator did not give guiding conclusive remarks
- The Urgent deadlines
- Overworking into late hours
- Short notice invitation especially NGO and it was not clear
- Poor attendance of stakeholders
- Loaded programme

- Some things were left hanging, do not know whether what has come out of here to influence NARO bill
- Rushing
- Overloaded workshop

What I liked

- Workshop objectives were likes
- Very participatory
- Objectives were achieved
- Workshop was focused
- Workshop mode was good especially work
- Very informative
- Highly participatory nature
- Facilitation, in spite of shortage of time given
- Participation

Looking at the future of NARO I feel.....

- Bright if all we have said will be followed
- Uncertain
- The dividing line between operations of NARIs and ZARIs is not clear
- Bright
- Looking forward to a brighter future
- Difficult to say at the moment
- If we continue to do a participatory and transparent job, the future of NARO is good

9 CLOSING

Facilitator's Note (Dr. Juergen Hagmann)

I find it most gratifying to have seen all people working very hard for six days. It is true, the program was rushed. I would like to thank the steering group for the enormous input and the organizers for inviting me to undertake this task. It was most gratifying and pleasurable to work with you all.

Deputy Director General, Dr. John Aluma's Note

The positive attitude change expressed here is most encouraging. Thank you so much for the work done and thanks to all the stakeholders.

The Chairperson of Functional Analysis Team

Thanks to the organizers of workshop, the facilitator and to the scientists for the information and participation.

Director General, Dr. Otim-Nape's Note

I would like to really express my excitement about the success recorded in this workshop especially when at the start we did not know where we wanted to go. Now we know where we want to go. I thank everybody and congratulate them for the work well done. Many thanks to the facilitator, for being very accommodative and that is why he gets things done. We appreciate his contributions. Thanks the Core Functional Analysis Team for the work well done. I am impressed by the ability of the team for articulating the scientific work. I would also like to thank the private sector for the contribution. The civil society, MAAIF, Board members, consultants, Human resource and Team management specialists, we enjoy working with you and sharing your intellectual property. For colleagues, I thank you for the positive attitude about the success of this exercise. I would like to invite Dr. Olaho Mukani, Director Animal Resources to say a few words and to close the workshop on behalf of the chairman of the board of directors.

Director Animal Resources Dr. Olaho Mukani

I am sitting in here on behalf of the chairman of Board of Directors, Prof. Kayanja. I thank you for having sat here for all these days, and apologise for having being unable to be here in my personal capacity. In the ministry we have been well represented. I have seen good participation and I thank the facilitator. We take this functional analysis very importantly since it is required by our developmental partners. Functional analysis is allocating key functions and allocating resources accordingly. We should consult documents of PEAP, PMA, NAADS etc so that all research addresses all the national interest. NARO is taken as an important body of this nation, however we do not see livestock research being addressed adequately and we need to think about it seriously. I would like to thank everybody for the many hours and wish everybody a safe journey home after a refreshment reception immediately after this. With these few words, announce the workshop closed

10 ANNEX

10.1 List of participants

To be inserted