



FARA



CORAF/WECARD

**Strengthening Capacities for Agricultural Research
and Development in Africa (SCARDA)**

**Participatory scoping study for the
identification of priority capacity
strengthening needs of NARS of the
CORAF/WECARD sub-region.**

FINAL REPORT

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Acronyms and Abbreviations

AATF	African Agricultural Technology Foundation
ACCB	African Center for Capacity Building Swaziland
ARMTI	Agricultural and Rural Management Institute, Nigeria
AGRHYMET	Institution spécialisée du Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS)
ANAPE	African Network for Agriculture, Agro-forestry and Natural Resources Education
ASARECA	Association for Strengthening Agricultural Research in East and Central Africa
CaSt	Capacity Strengthening
CSIR	Council for Scientific and Industrial Research of Ghana
CORAF/WECARD	Conseil Ouest et Centre Africain pour la recherche et le développement agricole /West and Central African Council for Agricultural Research and Development
CTA	Technical Centre for Agriculture and Rural Cooperation
DFID	Department for International Development, UK
DGs	Directors General of National Agricultural Research Institutes
FAO	Food and Agriculture Organization of the United Nations
FARA	Forum for Agricultural Research in Africa – Forum pour la recherche agricole en Afrique
FO	Farmer Organisations
CGIAR	Consultative Group on International Agricultural Research
GIMPA	Ghana Institute of Management and Public Administration
IPR	Intellectual Property Rights
ICT	Information and Communication Technology
IAR4D	Integrated Agricultural Research for Development
INSAH	Institut du Sahel of CILSS Bamako
INSTI	Institute for Scientific & Technological Information of Ghana
ISNAR	International Service for National Agricultural Research
MoU	Memorandum of Understanding
NARS	National Agricultural Research Systems
NRI	National Resource Institute/University of Greenwich, UK
NARIS	National Agricultural Research Institutes
NGO	Non Governmental Organization

PSAOP	Projet d'appui aux Services Agricoles et aux Organisations de Producteurs
RAILS	Regional Agricultural Information and Learning Systems, FARA Programme
RESADOC	Réseau Sahélien de Documentation et d'Information Scientifiques et Techniques, CILSS Programme
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SADC/FANR	Southern African Development Community/Food Agriculture and Natural Resources
SRO	Sub-regional Organizations
SCARDA	Strengthening Capacity for Agricultural Research and Development in Africa, FARA Programme

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Executive Summary and Recommendations

Background to SCARDA

1. SCARDA, Strengthening Capacity for Agricultural Research and Development in Africa, (SCARDA) is a DFID supported FARA programme designed to address the NARS deficiencies through strengthening the priority human and institutional capacities to significantly improve agricultural research performance and delivery in Africa. The goal of SCARDA is *“to contribute to sustained poverty reduction in Sub-Saharan Africa by empowering institutions and stakeholders involved in agricultural research and development to leverage the full potential of agriculture in sustainable wealth creation”*

SCARDA is an integral part of the FARA’s approved 2007 – 2016 Strategic Plan designed to contribute to one of the five networking support functions of FARA. SCARDA consists of two major components, namely (i) strengthening competences and capacity in agricultural research management and (ii) strengthening capacity for professional development of agricultural scientists and extension workers in agricultural research and development.

2. SCARDA is to be implemented through the SROs according to the project implementation model, based on the subsidiarity principle and decision making established by FARA and the SROs.

3. It is envisaged that the successful implementation of the SCARDA programme will significantly contribute to enhancing the efficiency and effectiveness of African NARS so that they can fulfil their national mandates through adopting the innovation systems approach to agricultural research for development and establishing functional and effective partnerships and collaboration with all relevant stakeholders in the agricultural production, marketing and value chain.

Implementation of SCARDA: The Inception phase – the Scoping Study

4. During 6 months inception phase of SCARDA, the SROs conducted participatory scoping studies with national stakeholders in the different sub-regions to identify the priority capacity strengthening needs that can be supported by SCARDA. It is understood that the major kinds of capacity

strengthening needs to be supported will focus attention on professional and skills development of personnel in agricultural research and development organizations and institutions as well as strengthening institutional capacities for enhanced performance.

5. The primary objectives of the participatory scoping study are as follows:

- i. To visit and consult with national partners and to assemble relevant documentation such as (a) the approved national agricultural development strategy and implementation plans including the national funding patterns for agricultural research (b) poverty reduction strategy document (c) agricultural development policies (d) national food security strategy and other related documents and (e) if available, capacity building strategies and plans for agricultural research.
- ii. To collect relevant information on on-going agricultural research and development programs and projects.
- iii. To consult with senior managers of major agricultural development programmes working with research institutes as well as universities and higher agricultural training institutions in the country.
- iv. If feasible, to organize group consultations with the heads of the relevant institutions to discuss and endorse the priority capacity strengthening needs for agricultural research and development.
- v. To prepare a detailed list of priority capacity strengthening needs that should be addressed to enhance agricultural research delivery – these should include
 - (a) needs for specializations in key areas of agricultural research,
 - (b) needs for strengthening institutional capacities for agricultural research management, including human resources and financial management
 - (c) needs for strengthening partnerships between research institutions and universities and other training institutions, including technical networks, NGOs and the private sector.
 - (d) identification of beneficiary targets for capacity strengthening activities

(e) identification of potential service providers for implementation of capacity strengthening activities giving priority to African institutions and Networks

6. A strongly participatory approach was adopted for the scoping study, involving the use of carefully designed questionnaires, personal structured interviews with relevant partners and group discussions in all the 22 countries in the CORAF/WECARD mandate zone. A wide spectrum of partners was consulted, consisting of the following:

- Hon Ministers and High Government Officials–Policy makers
- Directors General (DGs) of National Agricultural Research Institutes, NARIS
- Senior research scientists of NARIS and Agricultural Extension Services; a few research scientists from international agricultural research centres.
- Senior management staff of NARIS
- Representatives of Universities and higher agricultural education and training institutions
- Representatives of local NGOs
- Representatives of Farmers Organizations
- Representatives of the private sector
- Representatives of the FAO of the United Nations, the European Union and CEMAC, the regional Economic Community for Central Africa.

7. Inputs by the Natural Resources Institute (NRI) University of Greenwich United Kingdom, assigned as a SCARDA collaborating partner included provide technical backstopping and preparation of Briefing Papers on key topics.

Results of the CORAF/WECARD SCARDA Scoping Study

8. This report outlines the priority individual and institutional capacity needs of NARS for efficient and effective agricultural research performance and delivery in the NARIS of the CORAF/WECARD sub–region. The contents of this report will contribute to the process for developing the SCARDA African Capacity Strengthening Project Implementation Strategy & Business Plan for DFID funding and to be implemented during the following 3 years.

9. Successful implementation of the recommendations for capacity strengthening activities made in this report is expected to result in significant improvements in the efficiency and effectiveness of agricultural research performance and delivery. But the levels of effectiveness realised will depend largely on the extent to which some critical assumptions hold true for CORAF/WECARD to achieve the desired specific objectives associated with activity results for capacity strengthening targeted in the approved CORAF/WECARD 2007–2016 Strategic Plan.

10. *Identification of CaSt needs* – Structured identification of capacity strengthening needs was facilitated by adopting a series of key guiding principles which enabled accurate targeting of the most crucial areas for capacity strengthening. The main guiding principles addressed issues of CaSt were needs relating to national policies, support for infrastructural development and expensive research equipment, CaSt needs identified which would add immediate value to efforts to develop the critical mass of scientists required to implement specific research programmes and engaging the services of suitable sub–regional service providers for project implementation.

11. *Grouping of NARIS* – National agricultural research institutes were grouped in order to facilitate accurate targeting of capacity strengthening activities. The prevailing status of the institutional capacities and organizational arrangements in the NARIS of the CORAF/WECARD sub–region is complex and highly variable. This wide diversity in the status of the NARIS is a major determinant of the portfolio of strengthening needs identified.

Generally, 4 main groups of NARIS can be conveniently recognised, (see table 1 of this summary) although this grouping is not exclusive since some NARIS fall into more than one general group. The groupings were confirmed by the NARS partners at the stakeholders workshop.

*Summary Table 1. Grouping of NARIS in the CORAF/WECARD sub-region.
(from workshop report)*

NARIS Categorization	1 NARIS Emerging from civil conflict	2 Reforming NARIS	3 Struggling NARIS	4 Stable NARIS
Benin				✓
Burkina Faso				✓
Cameroon				✓
Cape Verde		✓	✓	
Central Africa Republic	✓	✓	✓	
Congo Brazzaville				
Cote d'Ivoire	✓			
Democratic Republic of Congo (DRC)	✓	✓	✓	
Gabon		✓		
Guinea Conakry			✓	
Guinea Bissau	✓			
Gambia		✓		
Ghana			✓	✓
Liberia	✓			
Mali				✓
Mauritania			✓	
Niger			✓	✓
Nigeria		✓		
Sierra Leone	✓		✓	
Senegal				✓
Tchad	✓	✓	✓	
Togo		✓		

12. Priority themes for Capacity Strengthening – From responses to the questions in the questionnaires and consultations during the country missions, the following list of topics for capacity strengthening is compiled (see List 1). Summary table 2 and Figure 1 show the frequency distribution of the needs for scientific capacity strengthening identified by the NARIS of the CORAF/WECARD sub-region.

List1. Topics for capacity strengthening

Research management

- Research strategy development
- Monitoring and evaluation
- Human resources development & management
- Programme management workflow, quality, resourcing etc
- Financial management

Capacity building

- Training skills
- Teaching skills
- Mentoring skills
- Collaborating skills
- Resource materials skills

Institutional capacity

- Team working
- Institutional management
- Change management
- Intra-institutional communication
- Institutional memory
- Institutional vision/mission/culture

Soft skills

- Development and management of partnerships
- Facilitation skills
- Negotiation and conflict management
- Interpersonal skills, communication and feedback

Scientific capacity and technical issues: Research performance and research delivery.

- A. Tools for research:
- Data management
 - Experimental design
 - Proposal writing

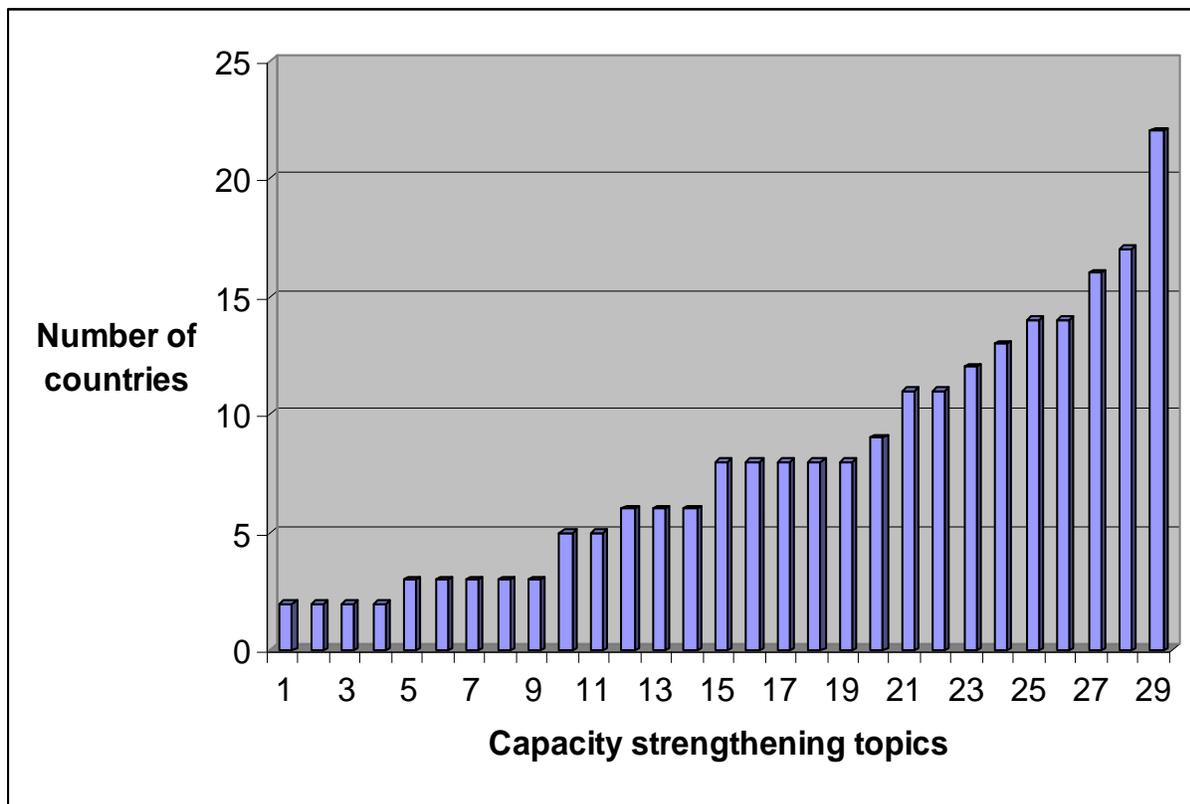
- Self-teaching skills
- Scientific writing relevant to audience
- Facilitation of technical networks

B. Natural and social science specializations as follows

- Biotechnology
- Biometrics and data management
- Molecular biology
- Integrated Pest Management
- Socio anthropology
- Socio economics
- Systemic Agronomy
- Water and irrigation management
- Drip irrigation
- Environmental Science
- Fisheries management and Aquaculture
- Soil physics
- Soils and fertility management
- Small scale mechanisation
- Value addition
- Quality control of agric. Products
- Innovations Systems for IAR4D
- GIS and Remote Sensing
- Climate change in relation to agric research
- Germplasm introduction and improvement
- Plant Breeding– development of quality seeds and planting materials
- Research programme formulation, planning and implementation
- Agricultural research policy formulation
- Monitoring and Evaluation and Impact assessment
- Livestock breeding, nutrition and management
- Post-harvest technology & Value addition
- Agricultural economics
- Marketing & Rural Economy

Summary table 2. Frequency distribution of scientific capacity strengthening topics identified by CORAF/WECARD countries

Topics	Number of countries
1. Drip irrigation	2
2. Farming systems	2
3. Natural Resources Management	2
4. GIS and remote sensing	2
5. Molecular Biology	3
6. Socio anthropology	3
7. Systematic agronomy	3
8. Environmental science	3
9. Climate Change	3
10. Innovations Systems for IAR4D	5
11. Market & Rural Economy	5
12. Veterinary science	6
13. Small scale mechanization	6
14. Quality control of agric produce	6
15. Water and Irrigation Management	8
16. Fisheries Management & Aquaculture	8
17. Research programme planning and formulation	8
18. Agricultural research policy formulation	8
19. Post-harvest technology	8
20. Germplasm introduction and improvement	9
21. Value addition	11
22. Plant breeding-quality seed/planting materials production	11
23. Biotechnology	12
24. Agricultural economics	13
25. Socio economics	14
26. Soil Physics & Soil fertility management	14
27. Livestock breeding nutrition and management	16
28. Integrated Pest Management	17
29. Biometry	22



Summary Figure 1. Frequency distribution of scientific capacity strengthening topics identified by CORAF/WECARD countries. (topic names given with numbers in table 2 above).

13. Emerging Issues – are rapidly becoming vitally important in agricultural research for development but not immediately evident were identified by a few NARIS. For example only Cameroon, identified Intellectual Property Rights (IPR) management, Climate Change and GIS as priority topics for capacity strengthening, but when these topics were mentioned to other NARIS, a majority of them concurred with Cameroon and expressed the need for building capacity in these topics.

14. Critical review of CaSt needs – In view of the limited funds available and the relatively short life of the SCARDA project, it is unrealistic to expect that all the CaSt needs identified and requested by the NARS can be fully addressed. We therefore recommend that NARS of the CORAF/WECARD countries need to

critically re-visit their identified needs to decide on the most pressing CaSt needs to be targeted. This exercise should be conducted by CORAF/WECARD SCARDA Coordinator, in collaboration with NARIS during the preparation of detailed annual work plans.

15. Targeting CaSt activities – Following the identification of capacity building/strengthening needs, a wide range of training activities, specific to the four NARIS categories, were recommended to address the needs identified. Activities were recommended in five major themes, namely (i) agricultural research management, (ii) scientific capacity,(iii) agricultural information and communications management and (iv) partnerships and collaboration and (v) emerging issues. Details of recommended CaSt activities are as follows:

Group 1 Countries emerging from civil conflict

Agricultural research management

Principal capacity strengthening activities

- i. Organize sub-regional and in-country group training courses and self e-learning programmes in agricultural research management, incorporating programme management, human resources management.

Targets; DGs of NARIS, Senior Scientists and Administrators

Countries: All countries

- ii. Support consultants to assist with preparation of a National Agricultural Research Policy, 10 year Agricultural Research Strategy and 5 year Implementation Plan

Targets: NARIS

Countries: Liberia, Tchad, DRC, CAR

- iii. Support the establishment of financial management system and conduct sub-regional and in-country training courses in financial management.

Targets: Financial staff of NARIS; research programme leaders

Countries: Liberia, Tchad, DRC, CAR, S.Leone, G.Bissau,

- iv. Conduct national and sub-regional workshops to explore mechanisms for sustainable funding for agricultural research and development

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations, Development partners etc)

Countries: All countries

- v. Support technical study tour to CNRA Cote d'Ivoire to study research funding mechanism

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations, Development partners etc)

Countries: All countries

Scientific capacity

Principal capacity strengthening activities

- i. Partial support for higher degree training of young scientists in critical research disciplines; training in African universities and in special cases outside Africa

Targets: Young scientists and agricultural extension personnel

Countries: Liberia, Tchad, S.Leone, G Bissau, CAR, DRC

- ii. Visiting Senior Scientists Programme to assign scientists to assist with development and implementation of research programmes and initiate mentoring of young scientists.

Targets: Senior NARIS scientists from other African countries

Countries: All countries

- iii. Support professional training of scientists and administrative personnel in key institutions (service providers) in Africa.

Targets: NARIS research scientists and agricultural extension personnel

Countries: Liberia, Tchad, S.Leone, G Bissau, CAR, DRC

- iv. Visiting professionals from the Diaspora: Fellowship programme

Targets: NARIS

Countries: All countries

Agricultural information and communications management

Agricultural communication and Information management is considered to consist of the following components

- Computerized agricultural documentation and Information services, including the capacity of scientists to access information electronically and to contribute to the international agricultural database.
- Management of agricultural information centres and agricultural information networks.

- Communication of agricultural research results to a wide audience including scientists, policy makers, and government officials and the general public.
- Publishing and management of agricultural journals, Technical Bulletins, Newsletters, conference and workshop proceedings– including capacity in professional scientific editing and publishing and website design and management.
- Agricultural information management for effective dissemination of agricultural technologies to farmers, agricultural extension agents and other stakeholders

Principal capacity strengthening activities

- i. Support establishment of agricultural information centres
Targets: NARIS documentation centres
Countries: All countries
- ii. Conduct short-term courses in the management of agricultural information centres
Targets: Documentalists in NARIS documentation centres
Countries: All countries
- iii. Conduct Group training courses in the application of ICT to agricultural information management
Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.
Countries: All countries
- iv. Professional attachment of NARS documentalists and information specialists to CSIR/INSTI and to RESADOC
Targets: Documentalists in NARIS documentation centres
Countries: All countries
- v. Group training courses in agricultural information management
Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.
Countries: All countries
- vi. Group training courses in web design and management.
Targets: Documentalists in NARIS documentation centres.
Countries: All countries

- vii. Conduct group training courses in scientific writing and communication of agricultural research, scientific editing and the management of agricultural journals. **We strongly recommend that this activity should be implemented in close collaboration and partnership with CTA in the Netherlands**

Targets: Research scientists in NARIS; Extension agents; editors and journal managers in NARS

Countries: All countries

Partnerships and collaboration

Principal capacity strengthening activities

The major activity in this theme is to initiate dialogue between all stakeholders in agricultural research, agricultural education and training institutions, Farmers organizations, the Private Sector in the agricultural industry, NGOs and Development partners to formulate a viable and sustainable mechanism for effective collaboration at national level.

- i. Organize national consultation involving all stakeholders (NARIS, Universities, NGOs, Private Sector) to establish a platform for effective collaboration and partnership

Targets: All agricultural research and development stakeholders

Countries: All countries

Emerging issues: IPR, Biodiversity, Institutional change management

Principal capacity strengthening activities

We recommend that these emerging issues require priority attention for capacity building/ strengthening.

- Intellectual Property Rights – could be addressed through contracting this activity to the AATF and the African Union Agency for IPR
- Biodiversity – could be addressed through the full involvement of the CGIAR Centre – Bioversity International.
- Institutional change management. – could be addressed through collaboration with NRI to organize customised management courses for Director Generals and other Senior Agricultural Research Management Personnel

Principal capacity strengthening activities

- i. Conduct Sub–regional workshops to create awareness on IPR

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- ii. Sub-regional workshops to create awareness on Biodiversity

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- iii. Prepare and disseminate Policy Briefs on Agricultural Biodiversity

Targets: NARIS and other stakeholders

Countries All countries

- iv. Create awareness of the importance of Agricultural Science/Technology/Industry Interphase

Targets: NARIS and other stakeholders, especially private sector

Countries All countries

- v. Conduct sub-regional Group training courses in IPR and biodiversity

Targets: NARIS Scientists

Countries All countries

- vi. Facilitate the introduction of agricultural biodiversity topics into agricultural education and training curricula in universities and higher educational institutions.

Targets: Universities and Agricultural education and training institutions; NARIS scientists

Countries All countries

Short term training courses in institutional change management including follow up through shadowing, mentoring, professional collaboration and secondments etc.

Targets: NARIS DGs and senior research scientists and programme leaders

Countries All countries

- viii Organize technical study tours to advanced institutions , collaboration with NRI

Targets: NARIS DG and senior research programme leaders

Countries All countries

Group 2 Countries with NARIS undergoing reforms

Agricultural research management

Principal capacity strengthening activities

- i. Support national consultation workshops to define the agricultural research reform process and prepare implementation schedulers
Targets; DGs of NARIS, Senior Scientists and Administrators, Private sector, development partners
Countries: Nigeria, Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic
- ii. Organize sub-regional and in-country group training courses and self e-learning programmes in agricultural research management, incorporating programme management, human resources management.
Targets; Director Generals of NARIS, Senior Scientists and Administrators
Countries: All countries
- iii. Support national workshops to review and build capacities in the preparation of new national agricultural research policies consistent with reforms
Targets; DGs of NARIS, Senior Scientists and Administrators, Private sector, development partners
Countries: Nigeria, Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic
- iv. Support national workshops to build capacities in the preparation of Agricultural Research Strategies and Implementation Plans
Targets; DGs of NARIS, Senior Scientists and Administrators, Private sector, development partners
Countries: Nigeria, Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic

Scientific capacity

Principal capacity strengthening activities

- i. Support professional training of scientists and administrative personnel in key institutions (service providers) in Africa.
Targets: NARIS research scientists and agricultural extension personnel
Countries: Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo (DRC), Central African Republic

- ii. Partial support for split higher degree training of young scientists in critical research disciplines; training in African universities and in special cases outside Africa

Targets: Young scientists and agricultural extension personnel

Countries: Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic

Agricultural information and communications management

Principal capacity strengthening activities

- i. Support establishment of agricultural information centres
 - Targets: NARIS documentation centres*
 - Countries: All countries*
- ii. Conduct short-term courses in the management of agricultural information centres
 - Targets: Documentalists in NARIS documentation centres*
 - Countries: All countries*
- iii. Conduct Group training courses in the application of ICT to agricultural information management
 - Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.*
 - Countries: All countries*
- iv. Professional attachment of NARS documentalists and information specialists to CSIR/INSTI and to RESADOC
 - Targets: Documentalists in NARIS documentation centres*
 - Countries: All countries*
- v. Group training courses in agricultural information management
 - Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.*
 - Countries: All countries*
- i. Group training courses in web design and management.
 - Targets: Documentalists in NARIS documentation centres.*
 - Countries: All countries*
- ii. Conduct group training courses in scientific writing and communication of agricultural research, scientific editing and the management of agricultural journals. **We strongly recommend that this activity should be implemented in close collaboration and partnership with CTA in the Netherlands**

Targets: Research scientists in NARIS; Extension agents; editors and journal managers in NARS

Countries: All countries

Partnerships and collaboration

Principal capacity strengthening activities

- i. Organize national consultation involving all stakeholders (NARIS, Universities, NGOs, Private Sector) to establish a platform for effective collaboration and partnership

Targets: All agricultural research and development stakeholders

Countries: All countries

Emerging issues

Principal capacity strengthening activities

- i. Conduct Sub-regional workshops to create awareness on IPR

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- ii. Sub-regional workshops to create awareness on Biodiversity

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- iii. Prepare and disseminate Policy Briefs on Agricultural Biodiversity

Targets: NARIS and other stakeholders

Countries All countries

- iv. Create awareness of the importance of Agricultural Science/Research/Technology/Industry Interphase

Targets: NARIS and other stakeholders, especially private sector

Countries All countries

- v. Conduct sub-regional Group training courses in IPR and biodiversity

Targets: NARIS Scientists

Countries All countries

- vi. Facilitate the introduction of agricultural biodiversity topics into agricultural education and training curricula in universities and higher educational institutions.

Targets: Universities and Agricultural education and training institutions; NARIS scientists

Countries All countries

vii. Short term training courses in institutional change management including follow up through shadowing, mentoring, professional collaboration and secondments etc.

Targets: NARIS DGs and senior research scientists and programme leaders

Countries All countries

viii Organize technical study tours to advanced institutions, collaboration with NRI

Targets: NARIS DG and senior research programme leaders

Countries All countries

Group 3 Struggling NARIS countries

Agricultural research management

Principal capacity strengthening activities

i. Organize sub-regional and in-country group training courses and self e-learning programmes in agricultural research management, incorporating programme management, human resources management.

Targets; DGs of NARIS, Senior Scientists and Administrators

Countries: All countries

ii. Support the establishment of financial management system and conduct sub-regional and in-country training courses in financial management.

Targets: Financial staff of NARIS; research programme leaders

Countries: Mauritania, Togo, Niger, Guinea Conakry, Sierra Leone, Ghana, Tchad, Cape Verde, Democratic Republic of Congo (DRC), Central Africa Republic

iii. Conduct national and sub-regional workshops to explore mechanisms for sustainable funding for agricultural research and development

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers

Organizations, Development partners etc)

Countries: All countries

iv. Support technical study tour to CNRA Cote d'Ivoire to study research funding mechanism

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations, Development partners etc)

Countries: All countries

Scientific capacity

- i. Visiting Senior Scientists Programme to assist with development and implementation of research programmes and initiate mentoring of young scientists.

Targets: Senior NARIS scientist from other African countries

Countries: All countries

- ii. Support professional training of scientists and administrative personnel in key institutions (service providers) in Africa.

Targets: Senior NARIS scientist from other African countries

Countries: All countries

- iii. Visiting professionals from the Diaspora for mentoring scheme: Fellowship programme

Targets: NARIS

Countries: All countries

Agricultural information and communications management

Principal capacity strengthening activities

- i. Support establishment of agricultural information centres

Targets: NARIS documentation centres

Countries: All countries

- ii. Conduct short-term courses in the management of agricultural information centres

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- iii. Conduct Group training courses in the application of ICT to agricultural information management

Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.

Countries: All countries

- iv. Professional attachment of NARS documentalists and information specialists to CSIR/INSTI and to RESADOC

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- v. Group training courses in agricultural information management

Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.

Countries: All countries

- vi. Group training courses in web design and management.

Targets: Documentalists in NARIS documentation centres.

Countries: All countries

- vii. Conduct group training courses in scientific writing and communication of agricultural research, scientific editing and the management of agricultural journals. **We strongly recommend that this activity should be implemented in close collaboration and partnership with CTA in the Netherlands**

Targets: Research scientists in NARIS; Extension agents; editors and journal managers in NARS

Countries: All countries

Partnerships and collaboration

Principal capacity strengthening activities

- i. Organize national consultation involving all stakeholders(NARIS, Universities, NGOs, Private Sector) to establish a platform for effective collaboration and partnership

Targets: All agricultural research and development stakeholders

Countries: All countries

Emerging issues

Principal capacity strengthening activities

- i. Conduct Sub–regional workshops to create awareness on IPR

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- ii. Sub–regional workshops to create awareness on Biodiversity

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- viii. Prepare and disseminate Policy Briefs on Agricultural Biodiversity

Targets: NARIS and other stakeholders

Countries All countries

- ix. Create awareness of the importance of Agricultural Science/Technology/Industry Interphase
Targets: NARIS and other stakeholders, especially private sector
Countries All countries
- x. Conduct sub–regional Group training courses in IPR and biodiversity
Targets: NARIS Scientists
Countries All countries
- vi. Facilitate the introduction of agricultural biodiversity topics into agricultural education and training curricula in universities and higher educational institutions.
Targets: Universities and Agricultural education and training institutions; NARIS scientists
Countries All countries
- vii. Short term training courses in institutional change management, including follow up through shadowing, mentoring, professional collaboration and secondments etc.
Targets: NARIS DGs and senior research scientists and programme leaders
Countries All countries
- viii Organize technical study tours to advanced institutions , collaboration with NRI
Targets: NARIS DGs and senior research programme leaders
Countries All countries

Group 4 Stable NARIS countries

Agricultural research management

Principal capacity strengthening activities

- i. Organize sub–regional and in–country group training courses and self e–learning programmes in agricultural research management, incorporating programme management, human resources management.
Targets; DGs of NARIS, Senior Scientists and Administrators
Countries: All countries
- ii. Conduct national and sub–regional workshops to explore mechanisms for sustainable funding for agricultural research and development

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations, Development partners etc)

Countries: All countries

- iii. Support technical study tour to CNRA Cote d'Ivoire to study research funding mechanism

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations, Development partners etc)

Countries: All countries

Scientific capacity

Principal capacity strengthening activities

- i. Partial support for higher degree training of young scientists in critical research disciplines; training in African universities and in special cases outside Africa

Targets: Young scientists and agricultural extension personnel

Countries: All countries

- ii. Support professional training of scientists and administrative personnel in key institutions (service providers) in Africa.

Targets: Senior NARIS scientists from other African countries

Countries: All countries

- iii. Visiting professionals from the Diaspora for mentoring scheme: Fellowship programme

Targets: NARIS

Countries: All countries

Agricultural information and communications management

Principal capacity strengthening activities

- i. Support establishment of agricultural information centres

Targets: NARIS documentation centres

Countries: All countries

- ii. Conduct short-term courses in the management of agricultural information centres

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- iii. Conduct Group training courses in the application of ICT to agricultural information management
Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.
Countries: All countries
- iv. Professional attachment of NARS documentalists and information specialists to CSIR/INSTI and to RESADOC
Targets: Documentalists in NARIS documentation centres
Countries: All countries
- v. Group training courses in agricultural information management
Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.
Countries: All countries
- vi. Group training courses in web design and management.
Targets: Documentalists in NARIS documentation centres.
Countries: All countries
- vii. Conduct group training courses in scientific writing and communication of agricultural research, scientific editing and the management of agricultural journals. **We strongly recommend that this activity should be implemented in close collaboration and partnership with CTA in the Netherlands**
Targets: Research scientists in NARIS; Extension agents; editors and journal managers in NARS
Countries: All countries

Partnerships and collaboration

Principal capacity strengthening activities

- i. Organize national consultation involving all stakeholders (NARIS, Universities, NGOs, Private Sector) to establish a platform for effective collaboration and partnership

Targets: All agricultural research and development stakeholders

Countries: All countries

Emerging issues

Principal capacity strengthening activities

- i. Conduct Sub-regional workshops to create awareness on IPR
Targets: Research scientists in NARIS; Extension agents; The Private sector

- Countries: All countries*
- ii. Sub–regional workshops to create awareness on Biodiversity
Targets: Research scientists in NARIS; Extension agents; The Private sector
Countries: All countries
- ii. Prepare and disseminate Policy Briefs on Agricultural Biodiversity
Targets: NARIS and other stakeholders
Countries All countries
- iii. Create awareness of the importance of Agricultural Science/Technology/Industry Interphase
Targets: NARIS and other stakeholders, especially private sector
Countries All countries
- iv. Conduct sub–regional Group training courses in IPR and biodiversity
Targets: NARIS Scientists
Countries All countries
- vi. Facilitate the introduction of agricultural biodiversity topics into agricultural education and training curricula in universities and higher educational institutions.
Targets: Universities and Agricultural education and training institutions; NARIS scientists
Countries All countries
- vii. Short term training courses in institutional change management, including follow up through shadowing, mentoring, professional collaboration and secondments etc.
Targets: NARIS DGs and senior research scientists and programme leaders
Countries All countries
- viii Organize technical study tours to advanced institutions , collaboration with NRI
Targets: NARIS DGs and senior research programme leaders
Countries All countries

16. The CORAF/WECARD SCRADA Sub–regional Project Management Structure.

It is recommended that the CORAF/WECARD SCARDA project is integrated into and nested within the Capacity Strengthening and Coordination Programme of CORAF/WECARD in the new programme structure approved in for the

CORAF/WECARD Strategic Plan 2007 – 2016. Project implementation entities will consist of a SCARDA sub–regional Technical Advisory Committee, a sub–regional SCARDA coordinator at CORAF/WECARD Secretariat and designated National Focal Points.

17. *Collaborating partners and Service providers* – SCARDA activities will be implemented in close collaboration and partnerships with regional, sub–regional and international organizations and agencies internationally recognized as centres of excellence in specialized areas. Furthermore, a number of NARIS that have developed expertise in specific areas of agricultural research and financial management would be contracted as service providers in specific aspects. Their roles will generally include,

- Conducting specialized individual or group training courses.
- Organising individual or group technical study tours,
- Arranging attachments of agricultural research and extension personnel from NARS to acquire experiences and new skills to improve agricultural research and development performance.
- Universities and other agricultural education and training institutions will accept students for split higher degree training and short term professional training for NARS scientists and extension agents.
- Organising technical study tours and mentoring formats for research scientists.
- Preparing, if necessary, position papers and providing technical advice on monitoring and evaluation processes

18. *Opportunities for implementing CaSt activities* – Several initiatives relevant to the SCARDA project already exist in Africa which provide opportunities for capacity strengthening.

These initiatives include:

- DONATA and RAILS of FARA, ANAFE, the training programmes in agricultural information and communications management offered by CTA in Africa , The Convergence of Sciences (CoS) project, of the University of Wageningen implemented in West Africa,
- Other opportunities are available in African institutions offering a variety of training courses in agricultural research and financial management; a few examples are the African Centre for Capacity Building (ACCB) in Swaziland,

Agricultural and Rural Management Institute (ARMTI) in Nigeria, the CSIR Institute for Scientific and Technological Information, (INSTI) and the Ghana Institute of Management and Public Administration, GIMPA in Ghana, and AGRHYMET in Niamey Niger.

- The Commonwealth of Learning ODL and Tech-MODE projects in Africa for education and training of all categories of agricultural research, and extension personnel
- The SRO Agricultural research Networks

Details of specific responsibilities for provision of services will be negotiated and will form the subject and terms of the Memoranda of Understanding and Service Agreements and Service Contracts to be signed by CORAF/WECARD with the service providers.

19. Potential Partners and Service Providers for implementation of SCARDA

A basic list of potential partners and service providers as follows; many more may be added as the annual work plans are developed and more potential service providers are identified.

Agricultural Research Management

- ARMTI Ilorin, Nigeria
- Natural Resources Institute/University of Greenwich UK
- CNRA Abidjan Cote d'Ivoire – financial sustainability of NARIS
- ISRA Dakar Sénégal

Scientific Capacity

- LANADA Cote d'Ivoire
- AGRHYMET Niamey Niger
- EISMV Dakar Senegal
- Natural Resources Institute/University of Greenwich UK
- African Universities with strong postgraduate programmes
- ANAPHE
- Convergence of Sciences (CoS) project, University of Wageningen
- Université de Dschang Cameroun
- RUFORUM Entebbe Uganda
- IRAD Cameroon
- CNRA Cote d'Ivoire
- LANADA Cote d'Ivoire
- University of Abobo/Adjame Cote d'Ivoire

Agricultural Information and Communications Management

- CTA Wageningen The Netherlands
- CSIR/INSTI Accra Ghana
- FAO Accra Ghana
- RESADOC, Bamako Mali
- AGRHYMET, Niamey Niger
- CNRST Libreville Gabon
- African Center for Capacity Building (ACCB) in Swaziland,
- Commonwealth of Learning COL, Canada
- Natural Resources Institute/University of Greenwich UK

Partnerships and Collaboration

- CTA Wageningen The Netherlands
- Natural Resources Institute/University of Greenwich UK

Emerging Issues– IPR, Bioiversity, Institutional Change Management

- Bioiversity International – CGIAR Center
- OAPI – Organisation Africaine au la Propriete Intellectuelle (African Union, Yaounde Cameroon
- AATF– African Agricultural Technology Foundation, Nairobi Kenya
- Natural Resources Institute/University of Greenwich UK.

Financial proposals

20. Estimates for 3 year global funding allocations are recommended support the principal capacity strengthening themes. We further recommend that following consultation with target NARS, detailed annual work plans and budgets are prepared based on the available funding envelope allocated to each theme and activities.

<i>CaSt Theme</i>	<i>US\$ Financial allocation/3 years</i>
1. Agricultural research management	\$750,000
2. Scientific capacity	\$4,500,000
3. Agricultural information & Communications management	\$1,000,000
4. Partnerships and Collaboration	\$ 800,000
5. Programme management	\$1,236,500
Recommended Grand total budget for CORAF/WECARD SCARDA	\$8,286,250

Concluding Commentary

21. Since the reality is that national governments seem unable to adequately cope with supporting CaSt activities, international technical and financial assistance is required to complement national efforts to build the required individual and institutional capacities for efficient functioning of the national agricultural research systems in the sub-region.

In efforts to strengthen capacities for agricultural research, two major responsibility domains can be recognised, one primarily for national governments and the second for complementary international intervention and support; these responsibility domains include the following:

i. Primary responsibility domain of national governments

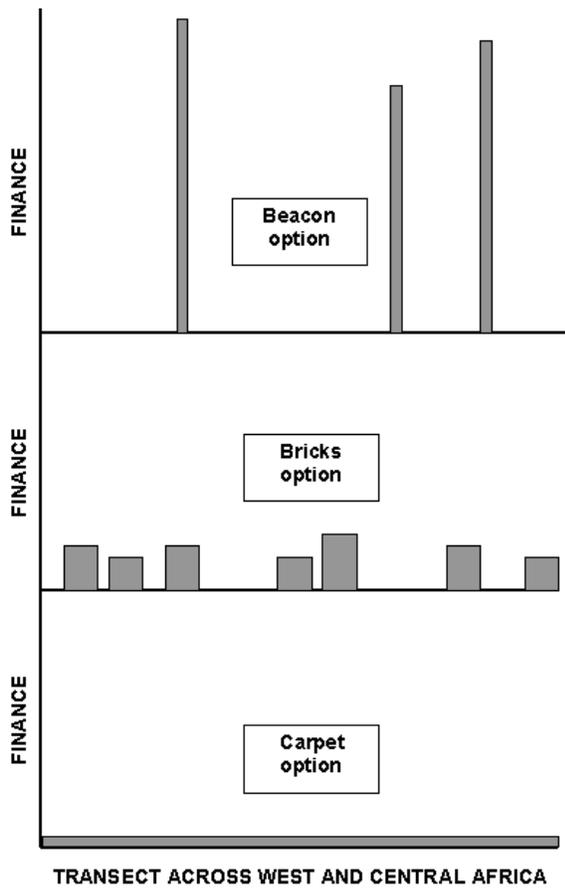
- establishment of national agricultural research and development policies.
- provision of buildings and resources for maintenance of infrastructural facilities for research, including functioning communication facilities.
- guarantees for basic and sustainable financing of national agricultural research through making adequate investments in agricultural research.
- creation of staff positions and recruitment of qualified research personnel.
- creation of conducive agricultural research environment, including staff motivation, recognition and reward systems for agricultural research personnel and institutions.
- Allowing NARIS a reasonable level of autonomy so that NARIS management (Management Boards and DGs) can operate more effectively.

ii. Responsibility domain for complementary international intervention and support (SCARDA)

- Assistance with the development of national agricultural research strategies and implementation plans.
- Supporting capacity building/strengthening in key areas, especially agricultural research management and research leadership, financial management, professional skills training, training in “soft skills”, specialized higher degree training, mentoring young researchers, professional secondments and attachments, visiting scientists programmes, supporting the introduction of innovation systems for IAR4D, as well as training in monitoring, evaluation and impact assessment of agricultural research.

22. It is recommended that SCARDA’s intervention and support may well include organised lobbying and advocacy activities specifically to draw the attention of national governments to the benefits of addressing the issues suggested as their responsibility domains in order to ensure sustainability of the outputs from the implementation of SCARDA.

23. The DFID support for SCARDA is limited, and it is obviously unrealistic to expect that the level of support can cover all the CaSt needs identified. FARA and the SROs would therefore need to adopt an innovative mechanism for the selection of potential beneficiaries and activities that would generate measurable outputs in the initial 3 year life of SCARDA. Initial discussions of the distribution of SCARDA funding suggested three options, (see summary figure 2) namely (i) spreading funding thinly over the whole sub-region (i.e. the carpet option), (ii) concentrate on whole innovation systems within specific targeted countries (the bricks option), or (iii) focus on a very few institutions within a limited number of countries (the beacon option).



Summary Figure 2 Possible Options for the distribution of SCARDA funding.

24. In view of the acute shortage of women agricultural scientists in the NARS, a special SCARDA Fellowship programme for women is advocated to assist NARS to build/strengthen scientific capacity through providing opportunities and support for young women to study for Masters Degrees which can be completed within the 3 year life of SCARDA programme. Selection of candidates would be made jointly by the NARIS and CORAF/WECARD based partly on national assurances for employment at the end of the training. Successful implementation of this fellowship programme will increase the contributions of women scientists to agricultural research and development in Africa.

Chapter1. Introduction

1.1 Background to SCARDA

The results of FARA's assessment of the requirements for efficient, effective and productive national agricultural research systems in Africa identified major individual and institutional weaknesses in four major areas namely, (i) agricultural research management, (ii) scientific capacity and management, (iii) financial capacity and management and (iv) collaboration. These weaknesses continue to seriously constrain the efficient performance and agricultural delivery of African NARS.

Following the publication of the report of this assessment, FARA developed the programme, Strengthening Capacity for Agricultural Research and Development in Africa, (SCARDA) with support from DFID, to address the NARS deficiencies identified through strengthening the priority human and institutional capacities in order to significantly improve agricultural research performance and delivery in Africa. As clearly defined in the project document, the goal of SCARDA is *“to contribute to sustained poverty reduction in Sub-Saharan Africa by empowering institutions and stakeholders involved in agricultural research and development to leverage the full potential of agriculture in sustainable wealth creation”*

SCARDA is a DFID funded initiative and an integral part of the FARA's approved 2007 – 2016 Strategic Plan designed to contribute to one of the five networking support functions of FARA. SCARDA consists of two major components, namely (i) strengthening competences and capacity in agricultural research management and (ii) strengthening capacity for professional development of agricultural scientists and extension workers in agricultural research and development.

The thrust of component one is to improve agricultural research management in all its ramifications, including human resources and financial management through training, attachments and mentoring to equip NARS personnel with the appropriate knowledge and skills for effective management of national agricultural research. Component two aims to advance the knowledge and skills required by scientists and other personnel to conduct high quality and

nationally relevant research to significantly improve agricultural research performance and delivery to achieve the desired impact to end users and intended beneficiaries.

It is envisaged that the successful implementation of the SCARDA programme will significantly contribute to enhancing the efficiency and effectiveness of African NARS so that they can fulfil their national mandates through adopting the innovation systems approach to agricultural research for development and establishing functional and effective partnerships and collaboration with all relevant stakeholders in the agricultural production, marketing and value chain. SCARDA is a FARA programme implemented through the SROs according to the project implementation model, based on the subsidiarity principle and decision making established by FARA and the SROs. The program is designed to be implemented in two phases, an initial but highly essential 6 month Inception phase immediately followed by a 3 year implementation phase. During the inception phase, the SROs are expected to conduct a participatory scoping study with national stakeholders in the different sub-regions to identify the priority capacity strengthening needs that can be supported by SCARDA. It is understood that the major kinds of capacity strengthening needs to be supported will focus attention on professional and skills development of personnel in agricultural research and development organizations and institutions as well as strengthening institutional capacities for enhanced performance.

1.2 The concept of capacity and capacity building/strengthening

The term *capacity building* refers to developing capacities where they do not already exist while *capacity strengthening* is to upgrade, improve or fine tune existing capacities for higher performance and greater effectiveness (Youdeowei, 2007). David Rider Smith and Alistair Sutherland (2002) define “Capacity as the ability to effectively and sustainably perform functions, solve problems and set and achieve objectives.” And according to the ICSU-ISTS-TWAS Consortium *ad hoc* Advisory Group, “capacity building encompasses any activities that enhance the capabilities of individuals, institutions, organizations to contribute to effectively harnessing Science, Technology and Innovation (STI) for sustainable development.”

Capacity building and strengthening activities must therefore address not only individual human resources development but also the policy, regulatory and institutional issues as well as the *capacity to build capacity*. These concepts were borne in mind while collecting information during the scoping study and in developing the recommendations made in this report for effective capacity building/strengthening of the NARS.

1.3. Objectives and expected outputs of the SCARDA Scoping Study

In view of the limitations of available financial resources and time, CORAF/WECARD decided to focus attention in the scoping study and SCARDA project implementation of capacity strengthening activities on the NARIS which constitute the major component of national agricultural research systems.

The primary objectives of the participatory scoping study are as follows:

- i. To visit and consult with national partners and to assemble relevant documentation such as (a) the approved national agricultural development strategy and implementation plans including the national funding patterns for agricultural research (b) poverty reduction strategy document (c) agricultural development policies (d) national food security strategy and other related documents and (e) if available, capacity building strategies and plans for agricultural research.
- ii. To collect relevant information on on-going agricultural research and development programs and projects.
- iii. To consult with senior managers of major agricultural development programmes working with research institutes as well as universities and higher agricultural training institutions in the country.
- iv. If feasible, to organize group consultations with the heads of the relevant institutions to discuss and endorse the priority capacity strengthening needs for agricultural research and development.
- v. To prepare a detailed list of priority capacity strengthening needs that should be addressed to enhance agricultural research delivery – these should include
 - (a) needs for specializations in key areas of agricultural research,
 - (b) needs for strengthening institutional capacities for agricultural research management, including human resources and financial management

(c) needs for strengthening partnerships between research institutions and universities and other training institutions, including technical networks, NGOs and the private sector.

(d) identification of beneficiary targets for capacity strengthening activities

(e) identification of potential service providers for implementation of capacity strengthening activities giving priority to African institutions and Networks.

The **expected output** of this participatory scoping study is a document which outlines the priority individual and institutional capacity needs of NARS for efficient and effective agricultural research performance and delivery in the NARIS of the CORAF/WECARD sub-region. This document will then feed into the process (*illustrated in figure 1*) for developing the SCARDA African Capacity Strengthening Project Implementation Strategy & Business Plan for DFID funding and to be implemented during the next 3 years.

At the end of the scoping study, a SCARDA stakeholders workshop was organized by the CORAF/WECARD Secretariat in Dakar, from July 11 to 12, to review the overall results of the scoping study and to achieve a sub-regional consensus on the priority capacity strengthening needs and activities that would be implemented to address the priority needs.

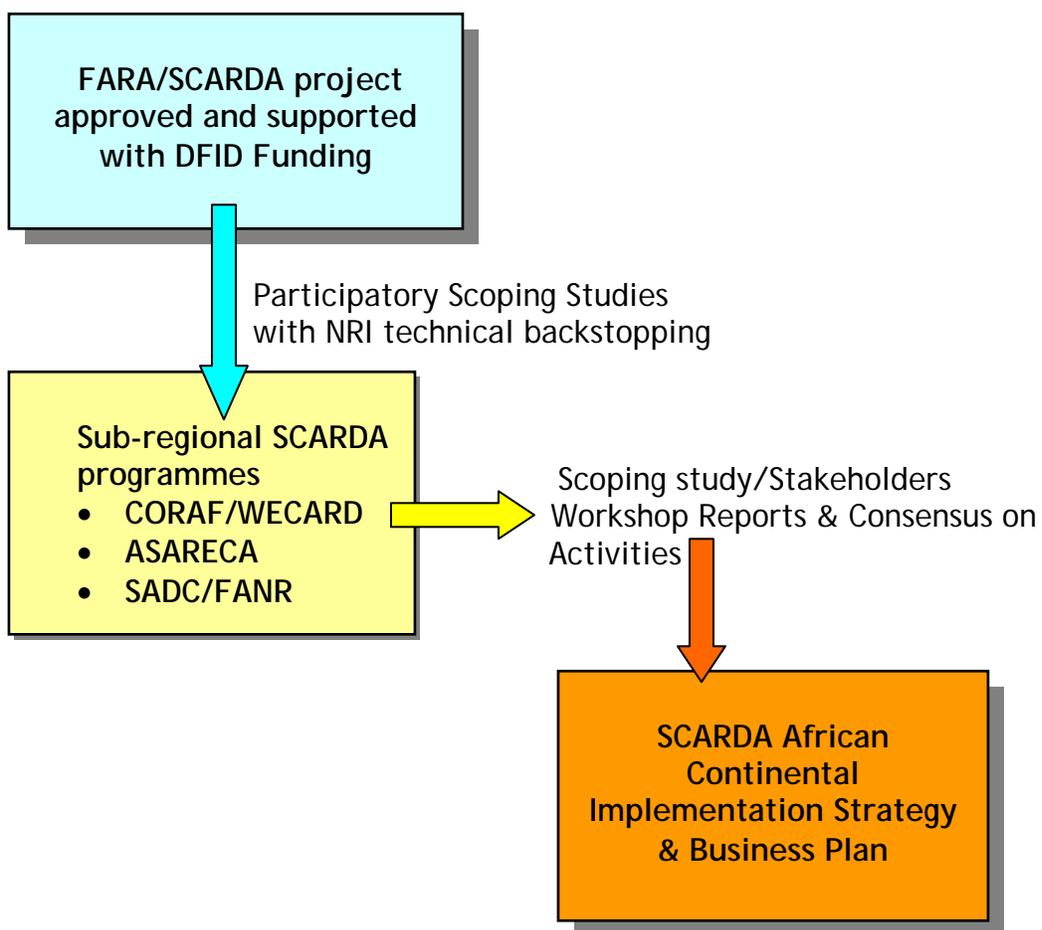


Figure 1 Scoping study process for the development of the SCARDA African continental Implementation Strategy & Business Plan.

1.4 Presentation and navigating this Report

This report is presented as a main report which describes the major findings of the scoping study and an annex which contains the Terms of Reference for this assignment and the working documents prepared for the study. It also includes the conceptual framework, and study instruments (questionnaires) used in the participatory collection of information that guided the recommendations made in the main report. In order to fully understand the import of this report and the background to the recommendations, readers are encouraged to study the working documents provided in the annex. Readers may also study the Briefing Papers that were prepared by authors from the Natural Resources

Institute/University of Greenwich, a collaborating partner for the SCRADA programme, together with other authors from the CORAF/WECARD region. Copies of these papers are available on request from the CORAF/WECARD Secretariat in Dakar Senegal.

1.5 Acknowledgements

Several persons have contributed to the successful completion of this scoping study and space would not permit us to mention all persons or institutions. The Consultants are grateful to CORAF/WECARD and to FARA for the opportunity to conduct this interesting and very important study. We acknowledge and appreciate the full support and assistance received from the Directors General of NARIS and other NARS partners during the field missions.

We are particularly grateful to the CORAF/WECARD Secretariat in Dakar, especially to Paco Sereme and Marcel Nwalozie, the Executive Director and Scientific Coordinator respectively of CORAF/WECARD as well and their staff, for efficiently organising the rather complex travel arrangements and other logistics which facilitated this study.

Finally our appreciation goes to our colleagues, Tim Chancellor, Hans Dobson and Alistair Sutherland at the Natural Resources Institute/University of Greenwich, for providing continuous technical backstopping and contributions to this assignment.

Chapter 2. Methodology and process for The Scoping Study

For this scoping study, CORAF/WECARD made contacts with its national partners through two Consultants, the authors of this report, who undertook extensive consultations with CORAF/WECARD partners during country visits. Thus a strongly participatory approach was adopted for this study, involving the use of carefully designed questionnaires, personal structured interviews with relevant partners and group discussions in all the 22 countries in the CORAF/WECARD mandate zone. A wide spectrum of partners was consulted, consisting of the following: Table 1 gives the details of numbers of different partners encountered.

- Hon Ministers and High Government Officials–Policy makers
- Directors General (DGs) of National Agricultural Research Institutes, NARIS
- Senior research scientists of NARIS and Agricultural Extension Services; a few research scientists from international agricultural research centres.
- Senior management staff of NARIS
- Representatives of Universities and higher agricultural education and training institutions
- Representatives of local NGOs
- Representatives of Farmers Organizations
- Representatives of the private sector
- Representatives of the FAO of the United Nations, the European Union and CEMAC, the regional Economic Community for Central Africa.

This data confirms that consultations were held with a wide range of stakeholders including policy makers at the highest levels of government, with a large number of NARIS researchers, (43%) senior management staff of NARIS(12%), senior personnel in Universities and higher agricultural education and training institutions(15%) as well as NGOs and farmers organizations.

Table 1 Range of national partners consulted during the Scoping Study

Partner type	Numbers encountered	
	Numbers	approx %
Hon Ministers and High Government Officials–Policy makers	18	7%
Directors General of NARIS (including Deputy DGs)	32	12%
Senior research scientists of NARIS	120	43%
Senior management staff of NARIS	32	12%
Senior Personnel of National Agricultural Extension Services	11	3%
Research scientists from international agricultural research centres.	9	3%
Representatives of Universities, higher agricultural education and training institutions	41	15%
Representatives of local NGOs	7	3%
Representatives of Farmers Organizations	6	2%
Representatives of the relevant Private Sector	3	1%
Others	FAO/UN EU CEMAC	

During the country missions, the CORAF/WECARD consultants explained the concept and details of the SCARDA programme and assisted the national partners in completing the questionnaires. They also held technical consultations with a range of stakeholders to arrive at the lists of the priority needs and targets for capacity strengthening for improving agricultural research and extension delivery. Relevant documents such as National Agricultural Research Strategies and Plans, National Agricultural Development Strategies, MoUs for collaborative research and training courses, were collected. These documents are deposited at the CORAF/WECARD Secretariat in Dakar. Inputs by the Natural Resources Institute (NRI) University of Greenwich United Kingdom, assigned as a SCARDA collaborating partner to provide technical backstopping included the following

- Contributing to and facilitating the preparation of working papers, through continuous consultation personally and electronically.
- Maintaining regular contact with the consultants and monitoring progress in the conduct of the participatory scoping study
- Accompanying the CORAF/WECARD consultants on some country visits and contributing to institutional analysis, and identification of priority capacity strengthening needs.
- Preparing strategic Briefing Papers on key topics for the stakeholders workshop
- Participating as Lead Facilitator in the Stakeholders Workshop in Dakar.

Chapter 3 Observations, Findings and Recommendations

Responses to the questionnaires distributed were analysed and the outcome of the analysis were supplemented with observations and some consensus reached with national partners during the country consultations as well as during the stakeholders workshop.

Successful implementation of the recommendations for capacity strengthening activities made in this report is expected to result in significant improvements in the efficiency and effectiveness of agricultural research performance and delivery. But the levels of effectiveness realised will depend largely on the extent to which some critical assumptions hold true for CORAF/WECARD to achieve the desired specific objectives associated with activity results for capacity strengthening targeted in the approved CORAF/WECARD 2007–2016 Strategic Plan. The specific assumptions are

- That adequate research infrastructures are maintained in the NARIS
- Enabling policies and conducive environments exist for promoting agricultural research for development and are sustained.
- Agricultural Extension Services are functional and effective
- Effective platforms for consultation between partners exist
- Adequate resources and enabling environments as well as appropriate investments are made to support research and agricultural technology dissemination
- The prevailing political/economic environment does not negate whatever gains are achieved.

3.1. Guiding principles for identification of priority capacity strengthening needs

Structured identification of capacity strengthening needs was facilitated by adopting a series of key guiding principles which enabled accurate targeting of the most crucial areas for capacity strengthening. The main guiding principles were

- i. Capacity strengthening needs that require attention by national policies and governments will be considered low priority.

- ii. SCARDA support may not cover the entire individual and institutional capacity strengthening needs identified for all the countries.
- iii. SCARDA is not likely to support infrastructural development or the purchase of expensive research/laboratory equipment
- iv. The capacity strengthening needs identified should add immediate value to efforts to develop the critical mass of scientists required to implement specific research programmes.
- v. Capacity strengthening needs would preferably be addressed through sub-regional service providers.

Grouping of National Agricultural Research Institutes

Based on an institutional analysis of the NARIS using the NARIS typology matrix developed for this study(see annex 4) and supplemented with observations and discussions with the Directors General and other partners during the country missions, national agricultural research institutes were grouped in order to facilitate accurate targeting of capacity strengthening activities. Our analysis showed that the NARIS of the CORAF/WECARD sub-region are complex and vary widely in the status of their institutional capacities and organizational structures. This wide diversity in the status of the NARIS is a major determinant of the portfolio of strengthening needs identified.

Generally, 4 main groups of NARIS can be conveniently recognised. It is emphasized that this grouping is not exclusive since some NARIS fall into more than one general group. The groupings were confirmed by the NARS partners at the stakeholders workshop as shown in Tables 2A and Table 2B. Short descriptions of the characteristics of the groupings now follow.

Group1. NARIS Affected by civil conflict: NARIS in countries emerging from civil conflict – these are Liberia, Guinea Bissau, Sierra Leone, Congo Brazzaville, Central African Republic, DRC, and to some extent Cote d’Ivoire. The situation in these countries varies from the worst case scenario of Liberia where there is complete destruction and total absence of a research strategy and infrastructure to Cote d’Ivoire where there is minimum destruction of research infrastructure and disruption of the research system. Therefore special capacity strengthening activities will need to be applied to support these countries to complement their

efforts to re-build their national agricultural research systems, as they emerge from civil conflict.

Group 2. Reforming NARIS: NARIS undergoing major reforms – Exemplified by Nigeria where there is considerable agricultural research capacity which is poorly managed, harnessed and starved of funds. In recognition of this situation, the Nigerian Government has embarked on a major reform of the agricultural research system through the establishment of an Agricultural Research Council to take full responsibility for effective supervision and management of agricultural research for development. The agricultural research systems in the Gambia and Cape Verde are also undergoing reform processes but this exercise is severely constrained by lack of funds to make any significant progress with this effort. In the Gambia and Cape Verde this exercise is virtually halted.

Group 3 Struggling NARIS; NARIS which receive poor support from national governments

These are NARIS especially from small countries, for example Gambia, Mauritania, DRC and Tchad. These NARIS seriously lack research personnel, are under the full control of the Ministry of Agriculture and are poorly funded. While the NARIS of other countries are under supervisory Ministries of Agriculture, or Scientific Research and Higher Education, or Science and Technology, these NARIS maintain a comfortable level of autonomy in financial management and programme implementation.

Group 4 Stable NARIS : NARIS functional but require greater national government support – Typical examples are Cameroon, Senegal, Mali, Niger, and Burkina Faso where well prepared strategic research plans are being implemented, with reasonably high numbers of well trained and experienced agricultural research staff and facilities, strong international donor support, partnerships, but weak national government support.

Table 2 A Grouping of NARIS in the CORAF/WECARD sub-region.

Group Type	Countries
Group 1 NARIS affected by civil conflict <i>NARIS in countries emerging from civil conflict</i>	Cote d'Ivoire, Congo Brazzaville, Sierra Leone, Liberia, Tchad, Guinea Bissau, Democratic Republic of Congo,(DRC), Central Africa Republic
Group 2 Reforming NARIS <i>NARIS undergoing major reforms</i>	Nigeria, Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic, Togo
Group 3 Struggling NARIS : <i>NARIS receiving poor support from national governments</i>	Mauritania, Togo, Niger, Guinea Conakry, Sierra Leone, Ghana, Tchad, Cape Verde, Democratic Republic of Congo (DRC), Central Africa Republic
Group 4 Stable NARIS <i>NARIS functional require greater national government support</i>	Cameroon, Burkina Faso, Mali, Senegal, Niger, Benin, Ghana

*Table 2 B Grouping of NARIS in the CORAF/WECARD sub-region.
(from workshop report)*

NARIS Categorization	1 Post-conflict	2 Reforming	3 Struggling	4 Stable
Benin				✓
Burkina Faso				✓
Cameroon				✓
Cape Verde		✓	✓	
Central Africa Republic	✓	✓	✓	
Congo Brazzaville				
Cote d'Ivoire	✓			
Democratic Republic of Congo (DRC)	✓	✓	✓	
Gabon		✓		
Guinea Conakry			✓	
Guinea Bissau	✓			
Gambia		✓		
Ghana			✓	✓
Liberia	✓			
Mali				✓
Mauritania			✓	
Niger			✓	✓
Nigeria		✓		
Sierra Leone	✓		✓	
Senegal				✓
Tchad	✓	✓	✓	
Togo		✓		

3.3 General Observations on the situation of National Agricultural Research Institutes in the CORAF/WECARD Countries.

From the analysis of observations made during the country visits, together with the interactions and inputs from the validation workshop, the general situation prevailing in the NARS, within the CORAF/WECARD sub-region may be characterized as very diverse in various fields as presented below:

3.3.1 Infrastructures and equipment for research.

Generally, only a few countries have adequate infrastructures and functional laboratories for research. These infrastructures are poorly maintained because of the seriously lack of resources to do so.

In the extreme situations, such as in countries that have emerged from civil conflict or are still in conflict, all the infrastructures for research, including buildings, farm lands, genetic materials, demonstration plots, laboratories, equipment and logistics for monitoring field experiments have been destroyed. For the countries emerging from civil conflict, the principal problem is the rehabilitation, including extension, of buildings maintenance and the construction of specialized buildings, in particular to provide ICT facilities.

Another significant point to be stressed is that of functionality of laboratory equipment for agricultural research, particularly in relation to the use of the ICT and connectivity as working tools for researchers. In this case, the irregularity, unreliability and sometimes total absence of electricity supply constitutes an important and major constraint for daily research activities. In almost all the countries visited, there were frequent several daily electricity cuts or failures which disturbs, degrades or even damages research equipment and experiments, thus compromising the value of work done. In some countries, the Institutes are equipped with electric power generators which do not provide satisfactory power supply.

In relatively more privileged countries, there is still a significant need for refurbishment and modernization of equipment, most of which are obsolete. Few laboratories, which had benefited from recent partnerships, could renew some of their equipment, including computer facilities.

In countries emerging from civil conflict, there is a pressing need for acquisition and installation research equipment and materials, to replace the materials lost through destruction and looting, so that research activities can commence once again.

Modernization and refurbishment of research equipment constitute an important component of the scientific capacity strengthening. It appears, however, that in the countries emerging from civil conflicts, the deplorable conditions in agricultural research calls for a greater attention by national governments through special emergency investments in agricultural research. The SCARDA project could facilitate this process through lobbying and advocacy by CORAF/WECARD and FARA.

3.3.2 Planning of research.

Currently, some countries have made efforts to establish frameworks for agricultural research in the form of strategic plans, which constitute logical frameworks for coherent and sustainable research activities. However, in many countries visited, the coordinated development of national agricultural research strategies and implementation plans is a current issue. The situation, as regards strategic planning of agricultural research varies considerably in the different countries. In all the countries, four situations relating to the need for developing strategic plans can be recognized as follows:

1. Countries which already have developed and are operationalising strategic agricultural research plans.
2. Countries which have developed strategic agricultural research plans but are not able to implement them due to serious lack of basic financial and human resources.
3. Countries which have developed strategic agricultural research plans but have not succeeded in getting it validated by governmental authorities and therefore cannot yet implement them.
4. Countries which have not yet developed strategic agricultural research plans but recognize the need to do so.

3.3.3 Funding Agricultural Research.

The situations of research funding are also different and diverse in the CORAF/WECARD countries. During the 80s and 90s, external funding partners, such as the World Bank, strongly supported the agricultural research.

Thereafter, many of these funding agencies withdrew partially or even sometimes completely. Some countries continue to contribute to the financing of agricultural research, in well defined programs such as PSAOP and PRESAC. In certain countries, the Governments continue funding programmes where partners contribute modestly, or sometimes in a substantial way to finance agricultural research.

It is worth noting that at an African Union Summit, a declaration was made by the African Heads of State, relating to allocating 10% of the national budget for funding agriculture. However, at this moment, this declaration is far from being realized by the member countries of the Union. Despite these declarations, funding of agricultural research still remains strongly dependent on financial support from external donors and development partners which are more inclined to addressing projects rather than well defined programmes. Thus, very often, nationally relevant programs are curtailed when financing seizes.

Nevertheless, it is worth mentioning that certain research institutes have made significant efforts to increase their own resources. In addition, the capacity of researchers in such institutions to mobilize funds for research programmes has been enhanced.

Often, the budget for research equipment from Government is never entirely available. Therefore, in many countries, agricultural research is severely constrained by lack of adequate financial and human resources.

In order to establish an agricultural research system working sustainably, Governments must commit themselves to investing and improving the financing of agricultural research, based on national resources, in a substantial and sustainable manner, especially with regards to personnel recruitment (scientists, technicians and managers) and support of approved research programs.

3.3.4 Management of Financial Resources

The management of financial resources for research which is complex and often characterized by the intervention of many donors each of which has its own particular financial requirements for financial management and reporting.

In most institutes of agricultural research, financial management is the responsibility of the Directorate of Administration and Finance which is also responsible for human resources management. There are some institutes where financial management is done manually because of the absence of financial management software.

Even with this enormous task which is difficult and delicate, the staff in charge of this management unit are inadequate do not have the requisite training and expertise. Besides, there are few institutes which are equipped with computers and appropriate software for quality management (high performing computers, adapted software and personnel that master these new management tools). The modernization of financial management in agricultural research institutes appears to be an urgent matter within the SCARDA programme; it should start with equipping NARIS with tools that facilitate computerized management and the training of personnel.

3.3.5 Management of Research Institutes

Currently various systems are adopted for national coordination and management of agricultural research. The systems are called by different names in the different countries. In some countries agricultural research is coordinated by a National Council of Agricultural Research (NCAR) which provides policy guidance and general oversight for all the national agricultural research institutes. For example, in Senegal, the system is known as a National System of Agro-Slyvo and Pastoral Research; in Guinea Conakry it is known as National System of Agronomic, Zoo technique and Fisheries. In Ghana it is called the Council for Scientific and Industrial Research, CSIR, while in Nigeria it is the Agricultural Research Council of Nigeria, ARCN

In other countries the system is known as National Centre for Scientific and Technological Research (NCSTR) which have as mandates among other things to ensure coordination of all scientific and technological research activities carried out in defined institutes.

The goal of such a structure is to attain coordination in order to organize and create synergies, which should give rise to exchanges between the different institutes involved and lead to economies of scale. All the countries have not yet attained this level of organization.

For more efficient agricultural research, SCARDA must encourage the establishment of National Agricultural Research Systems in countries where such structures do not exist. All countries visited indicated the necessity of creating such a coordination structure.

The agricultural research institutes are headed by Directors or Directors General and heads of the different departments of institutes. In a majority of countries, these research leaders are scientists of very high quality who have proven their worth and have been appointed to such high positions of responsibility.

However, they do not have any special or particular training in management and leadership.

To improve on the efficiency of management of the agricultural research institutes, it is necessary to provide specific management training to high level Managers who are Directors General or Directors and senior research scientists of NARIS.

3.3.6 Managing Research Programmes

In the agricultural research institutes, management of programmes are generally the responsibility of Directors of Research who is usually a researcher of high level who has proven his worth in scientific and agricultural research, but lack training and expertise in management. Facilities to ensure good management of the department are grossly inadequate in terms of human resources as well as logistics (computers, adapted software, means of communication with regional centre).

In some countries a few institutes such as IER in Mali, have established a system of monitoring and evaluation of technical research programmes SCARDA should play a catalytic role in these aspects with the view to institutionalizing a mechanism for monitoring and evaluation of research programmes, for example through facilitating sharing of experiences between countries in the CORAF/WECARD sub-region. Furthermore, there is the need for training, of Directors of Research and senior scientists in monitoring, evaluation and impact assessment of agricultural research.

3.3.7. Management of Human Resources

In many institutes, the Directorate of Administration and Finance is responsible for management of human resources. In some countries, the human resource management unit is equipped with staff specially recruited and trained for this purpose. These units also have facilities (computer facilities including software) needed for the performance of their functions. However, qualified human resources may be insufficient (both quantity and quality wise); this calls for continuous training. In some countries personnel who have been trained by the institute leave because of difficulties of promotion after obtaining qualifications. In some countries, there are no specific units or staff in charge of human resource management. In such instances, this task is assigned to researchers. In addition to the fact that these researchers are not prepared for such assignments, it reduces the number of active researchers available for research. Currently, in some countries there exist many training institutions (public and private) which are involved in human resource management training and in management.

SCARDA should support professional training of NARIS personnel in human resource management and financial management. In institutions where appropriate staff suitable for training does not yet exist, it will be necessary to recruit and train them.

3.3.8 Research environment: Scientific staff and technician statutes.

Among the many causes of brain drain in Africa, is the search for better working conditions. These conditions are related to availability of research tools and working materials to enable the researcher put into practice intellectual aptitudes, while contributing to the creation and dissemination of knowledge. Adequate facilities for high level agricultural research is often lacking in many CORAF/WECARD countries.

Results obtained in Africa with regards to the return of competence scientists after training abroad are still low compared to other regions which recorded very significant results. For example, countries that are recently undergoing industrialization, such as Singapore, the Republic of Korea, China which, have since the 1980s invested immensely in science and technology. Thus, those who come back from training can easily find positions national agricultural research

institutes. The strategy therefore consisted of improving the quality of research and training institutes to make them more attractive. The results are conclusive; while in the 1960s, staff of these countries, trained in USA who came back represented 16%, in 1980s, this increased to 75%. Through the strengthening of institutional capacities, SCARDA will contribute to improve the working environment in Africa to minimize the brain drain..

Another major element of the environment is the possibilities of attractive career prospects offered to researchers. The management of human resources must take into account the management of professional profile with the implementation and the regular follow-up of researcher statutes. In fact, there are some countries where researchers are governed through a statute, which is the same as that of teachers in the Higher education, and with regards to the French speaking countries, we have the CAMES's evaluation. In some countries such statutes exist but are not yet applied, which creates frustrations among researchers. In others, such statutes do not exist and researchers are governed through the traditional civil service statute that does not take into account research specificities which are comparable with those of higher education. SCARDA should be able to develop a standard statute for agricultural researchers and put it at disposal of countries which have not yet set up a statute for researchers.

3.3.9 The Autonomy of research institutes.

In the CORAF/WECARD countries, NARIS are under the supervision of Ministries of Agriculture, Ministry of Scientific Research and Higher Education or the Ministry of Science and Technology. A minimum level of autonomy is desirable for the efficient and effective management of research institutions. However, in some countries, (see NARIS Type Group 3), the Ministry has complete control over the functioning of NARIS by appointing researchers to posts of responsibilities. In some countries, sometimes staff from the central administration, without the required professional qualification, is appointed to head an institute or a research centre and without seeking the opinion of leaders. Sometimes the appointment of Director General follows the same principle with all the inconveniences that it can bring to the harmonious functioning of the institutions.

The establishment of internal platforms for dialogue and consultations should be the rule in NARIS for their good functioning. Such platforms should be responsible for the selection of staff for appointment so that the institution would have a minimum guarantee in the quality of recruited human resources. These platforms should be able to deliberate on conditions and modalities for the promotion of staff. As prevails and being developed slowly but progressively in higher education, National Agricultural Research Institutes should benefit from greater autonomy for internal management in particular with regards to finance and human resources.

3.4 Priority Themes identified for capacity strengthening

From responses to the questions in the questionnaires and consultations during the country missions, the following list of topics for capacity strengthening is compiled (see List 1). This list is further presented in the first two columns of table 3, according to the frequency of demand by the NARIS. Column three of table 3 further lists what we designate as Emerging Issues, which are rapidly becoming vitally important in agricultural research for development but not immediately evident and identified by the NARIS. Only 1 country, Cameroon, identified Intellectual Property Rights (IPR) management, Climate Change and GIS as priority topics for capacity strengthening, but when these topics were mentioned to other NARIS, a majority of them concurred with Cameroon and expressed the need for building capacity in these topics.

In view of the limited funds available and the relatively short project period, it is unrealistic to expect that all the topics identified and requested by the NARS can be addressed satisfactorily. We therefore **recommend that NARS of the CORAF/WECARD countries will need to critically review their identified needs to decide on the most pressing capacity strengthening needs to be targeted. This exercise will be conducted by CORAF/WECARD SCARDA Coordinator, in collaboration with NARIS during the preparation of detailed annual work plans.** Nevertheless in sub-paragraph 3.6, we recommend a series of capacity strengthening activities targeted to the 4 NARIS country classes to guide the decisions of the NARS.

List1. Topics for capacity strengthening

Research management

- Research strategy development
- Monitoring and evaluation
- Human resources development & management
- Programme management workflow, quality, resourcing etc
- Financial management

Capacity building

- Training skills
- Teaching skills
- Mentoring skills
- Collaborating skills
- Resource materials skills

Institutional capacity

- Team working
- Institutional management
- Change management
- Intra-institutional communication
- Institutional memory
- Institutional vision/mission/culture

Soft skills

- Development and management of partnerships
- Facilitation skills
- Negotiation and conflict management
- Interpersonal skills, communication and feedback

Scientific capacity and technical issues: Research performance and research delivery.

- B. Tools for research:
 - Data management
 - Experimental design

- Proposal writing
- Self-teaching skills
- Scientific writing relevant to audience
- Facilitation of technical networks

B. Natural and social science specializations as follows

- Biotechnology
- Biometrics and data management
- Molecular biology
- Integrated Pest Management
- Socio anthropology
- Socio economics
- Systemic Agronomy
- Water and irrigation management
- Drip irrigation
- Environmental Science
- Fisheries management and Aquaculture
- Soil physics
- Soils and fertility management
- Small scale mechanisation
- Value addition
- Quality control of agric. Products
- Innovations Systems for IAR4D
- GIS and Remote Sensing
- Climate change in relation to agric research
- Germplasm introduction and improvement
- Plant Breeding- development of quality seeds and planting materials
- Research programme formulation, planning and implementation
- Agricultural research policy formulation
- Monitoring and Evaluation and Impact assessment
- Livestock breeding, nutrition and management
- Post-harvest technology & Value addition
- Agricultural economics
- Marketing & Rural Economy

Table 3 Grouping of capacity strengthening topics identified by NARS

<i>i. Commonalities – themes identified by all countries</i>	<i>ii. Specificities – topics identified by specific countries</i>	<i>iii. Emerging topics</i>
<p><i>1. Tools for research</i></p> <ul style="list-style-type: none"> • Biometry and Data management • Experimental design • Proposal writing • Self-teaching (e-learning) skills • Scientific writing relevant to audience • Facilitation of technical networks <p><i>2. Agricultural research management</i></p> <ul style="list-style-type: none"> • Research programme formulation, planning and implementation • Research Programme/Project management • Financial sustainability and management • Human resources management <p><i>3. Management of Agricultural information and communication</i></p> <ul style="list-style-type: none"> • Management of agricultural documentation centres and information networks 	<ul style="list-style-type: none"> • Biotechnology • Molecular biology • Integrated Pest Management • Socio anthropology • Socio economics • Systemic Agronomy • Water and irrigation management • Drip irrigation • Environmental Science • Fisheries management and Aquaculture • Soil physics • Soils and fertility management • Small scale mechanisation • Quality control of agric. Products • Innovations Systems for IAR4D • GIS and Remote Sensing • Germplasm introduction and improvement • Plant Breeding– development of quality seeds and planting materials • Agricultural research policy formulation 	<ul style="list-style-type: none"> • Intellectual Property Rights management • Biodiversity • Institutional change management • Climate change in agriculture

<ul style="list-style-type: none"> • Communication of agricultural research <p><i>4. Monitoring, Evaluation and Impact assessment</i></p>	<ul style="list-style-type: none"> • Livestock breeding, nutrition and management • Post-harvest technology • Value addition • Agricultural economics • Marketing & Rural Economy • Computer science • Animal health • Languages (English/French) 	
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The frequency distribution of identification of the specific capacity strengthening topics is shown in table 4 and figure 2. The specific capacity strengthening needs identified is in response to the desire to build the critical mass of research scientists required for effective conduct of research programme activities.

Table 4. Frequency distribution of scientific capacity strengthening topics identified by CORAF/WECARD countries

Topics	Number of countries
1. Drip irrigation	2
2. Farming systems	2
3. Natural Resources Management	2
4. GIS and remote sensing	2
5. Molecular Biology	3
6. Socio anthropology	3
7. Systematic agronomy	3
8. Environmental science	3
9. Climate Change	3
10. Innovations Systems for IAR4D	5
11. Market & Rural Economy	5
12. Veterinary science	6
13. Small scale mechanization	6
14. Quality control of agric produce	6
15. Water and Irrigation Management	8
16. Fisheries Management & Aquaculture	8
17. Research programme planning and formulation	8
18. Agricultural research policy formulation	8
19. Post-harvest technology	8
20. Germplasm introduction and improvement	9
21. Value addition	11
22. Plant breeding-quality seed/planting materials production	11
23. Biotechnology	12
24. Agricultural economics	13
25. Socio economics	14
26. Soil Physics & Soil fertility management	14
27. Livestock breeding nutrition and management	16
28. Integrated Pest Management	17
29. Biometry	22

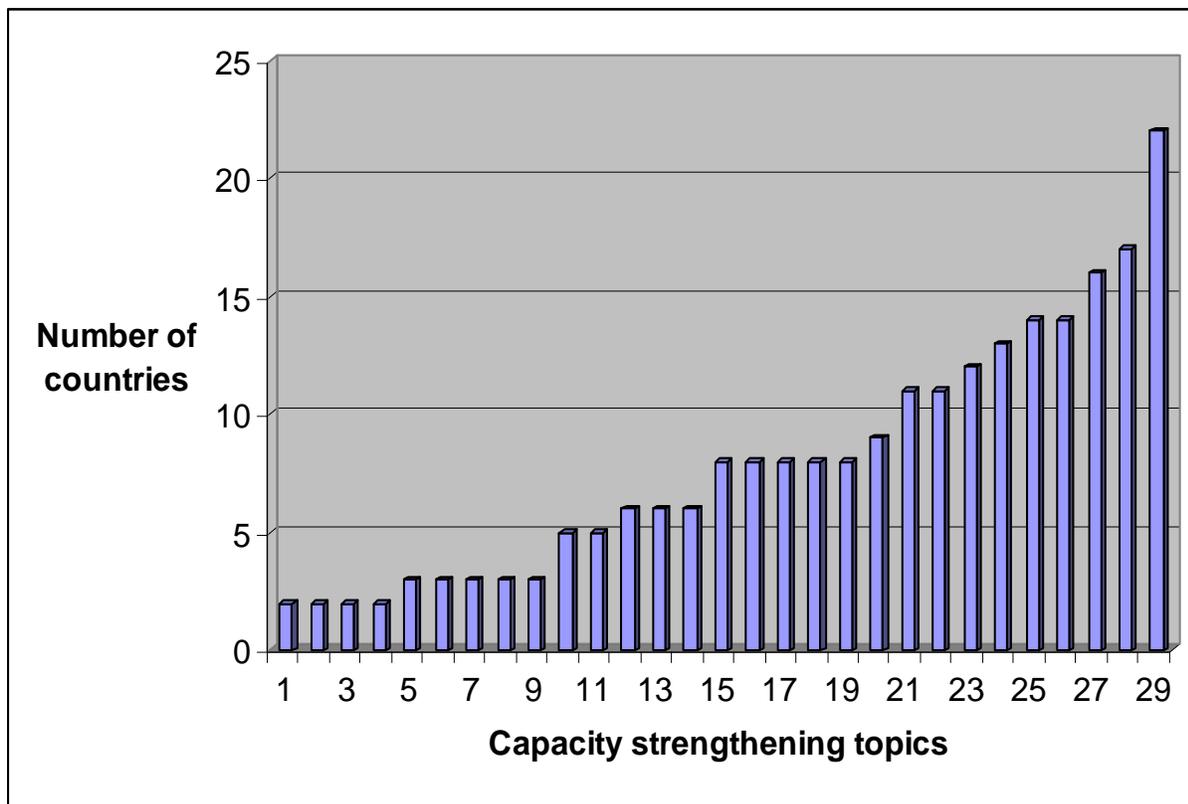


Figure 2. Frequency distribution of scientific capacity strengthening topics identified by CORAF/WECARD countries.(topic names given with numbers in table 4 above).

The 10 most identified topics (see figure 2) for scientific capacity strengthening are as follows: Biotechnology, Biometry, Integrated Pest Management, Socio-economics, Soil physics, Value addition, Agricultural economics, Livestock breeding and management, Germplasm improvement, and Research Programme formulation and planning.

3.5 Categories of strengthening activities

Following the identification of capacity building/strengthening needs, a wide range of training activities, elaborated with explanatory notes, in table 5 is recommended to address the identified deficiencies. Categories of these activities include the following:

*Table 5 Categories of capacity strengthening activities
(Youdeowei & Dobson 2007)*

Increasingly unconventional

<i>Type of Capacity Building/Strengthening</i>	<i>Explanatory notes</i>
University degree training to MSc/MBA, MPhil, PhD level	In-country or external, split or continuous, support may be partial or total. Candidates will be registered in sub-regional universities; or if necessary to universities outside Africa.
Professional skills training * (see list 1 for details)	Formal short courses in specific disciplines for individuals, especially for agricultural research and institutional management
Group training courses	Participants from one or many institutions or countries - establishing professional networks
Training workshops	Participatory, pooling of knowledge and experience, targeted at, and achieving consensus on specific issues, and formulating follow-up activities to ensure maximum use of skills acquired for agricultural research and development
Self-teaching	Through e-learning and other more traditional resources
Seminars	Institutional, national or regional events on specific issues by someone inside or outside the organization. Benefits audience and speaker
Attending (or preferably presenting at) conferences	On key relevant aspects of current research for development
Attachments for professional development	Short term attachments to centres of excellence or advanced laboratories/institutions at National/regional/international levels
Technical study tours	Short term visits to share knowledge and build networks
Visiting scientists programme	Senior scientists, between University and NARIS, or between NARIS and agricultural extension agencies

Mentoring	Within own institution or outside. Includes an element of succession planning; young researchers are under the tutelage and guidance of experienced and nationally or internationally recognized scientists.
Continuous professional training	Long term supportive relationships; as follow up of mentoring
Multidisciplinary collaborations resulting in cross transfer of specializations	Projects that require specialists from different disciplines to help each other results in productive exchange of skills and experiential learning
Facilitation of joint research programmes	Any combination of NARIs, Universities, FBOs. Industry, NGO, CBOs, farmers, national, regional international. National Platforms or Forums for demand-articulation by industry, researchers and farmers.
Visiting professionals from the Diaspora	Experienced and motivated professionals return to Africa motivates local scientists for varying periods.
Teaching junior staff/schools/extension staff/farmers	Teaching a subject requires drawing on existing knowledge and skills, gap-filling, then organising these assets for coherent delivery at an appropriate level. A good way to self-teach.
Writing for popular publications – newspapers, newsletters, radio, television, websites	Requires distillation of scientific research results and presentation at appropriate level
Secondment for varying periods with extension services	Sharp end experience might help focus research on real needs. Build skills in communicating with farmers
Role of Group Leader rotated to all scientific staff in turn	Promotes ability to play different roles and communicate at different levels in the organization
Team building activities	Simulated problem-solving scenarios – physical and intellectual. Principle of Outward Bound courses for staff and management training. Bonds teams, breaks down hierarchical barriers, fosters pooling of thoughts



3.6 Targeting capacity strengthening needs: Recommendations on capacity strengthening activities.

Group 1 Countries emerging from civil conflict

The effect of civil conflict on the situation of the research infrastructure and research system varies widely in the different countries. For example, the situation in Liberia is characterized by total destruction of the research infrastructure and the research systems, in Congo Brazzaville, the physical infrastructure is reasonably intact, but requires some rehabilitation to improve functionality but the research system is in place. Table 6 summarises the situation of NARIS in these countries and from which the extent of this diversity can be appreciated.

Table 6 Summary of the situation of NARIS in Group 1, conflict countries

<i>Status of NARIS</i>	<i>Liberia</i>	<i>Tchad</i>	<i>G.Bissau</i>	<i>DRC</i>	<i>C.Brazz</i>	<i>CAR</i>	<i>C.I</i>	<i>S.Leone</i>
1. Research staff seriously lacking	X	X	X	X		X		X
2. Research staff available					X		X	
3. Research system destroyed	X	X		X		X		
4. Research system revived & operational			X		X		X	X
5. Research infrastructure/ facilities completely destroyed	X	X	X	X		X		X
6. Research infrastructure/ facilities minimally destroyed					X		X	

Agricultural research management

Principal capacity strengthening activities

- i. Organize sub-regional and in-country group training courses and self e-learning programmes in agricultural research management, incorporating programme management, human resources management.
Targets; DGs of NARIS, Senior Scientists and Administrators
Countries: All countries
- ii. Support consultants to assist with preparation of a National Agricultural Research Policy, 10 year Agricultural Research Strategy and 5 year Implementation Plan
Targets: NARIS
Countries: Liberia, Tchad, DRC, CAR
- iii. Support the establishment of financial management system and conduct sub-regional and in-country training courses in financial management.
Targets: Financial staff of NARIS; research programme leaders
Countries: Liberia, Tchad, DRC, CAR, S.Leone, G.Bissau,
- iv. Conduct national and sub-regional workshops to explore mechanisms for sustainable funding for agricultural research and development
Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations, Development partners etc)
Countries: All countries
- v. Support technical study tour to CNRA Cote d'Ivoire to study research funding mechanism
Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations, Development partners etc)
Countries: All countries

Scientific capacity

Principal capacity strengthening activities

- i. Partial support for higher degree training of young scientists in critical research disciplines; training in African universities and in special cases outside Africa
Targets: Young scientists and agricultural extension personnel
Countries: Liberia, Tchad, S.Leone, G Bissau, CAR, DRC

- ii. Visiting Senior Scientists Programme to assign scientists to assist with development and implementation of research programmes and initiate mentoring of young scientists.
Targets: Senior NARIS scientists from other African countries
Countries: All countries
- iii. Support professional training of scientists and administrative personnel in key institutions (service providers) in Africa.
Targets: NARIS research scientists and agricultural extension personnel
Countries: Liberia, Tchad, S.Leone, G Bissau, CAR, DRC
- iv. Visiting professionals from the Diaspora: Fellowship programme
Targets: NARIS
Countries: All countries

Agricultural information and communications management

Agricultural communication and Information management is considered to consist of the following components

- Computerized agricultural documentation and Information services, including the capacity of scientists to access information electronically and to contribute to the international agricultural database.
- Management of agricultural information centres and agricultural information networks.
- Communication of agricultural research results to a wide audience including scientists, policy makers, and government officials and the general public.
- Publishing and management of agricultural journals, Technical Bulletins, Newsletters, conference and workshop proceedings– including capacity in professional scientific editing and publishing and website design and management.
- Agricultural information management for effective dissemination of agricultural technologies to farmers, agricultural extension agents and other stakeholders

Principal capacity strengthening activities

- i. Support establishment of agricultural information centres
Targets: NARIS documentation centres
Countries: All countries

- ii. Conduct short-term courses in the management of agricultural information centres
Targets: Documentalists in NARIS documentation centres
Countries: All countries
- iii. Conduct Group training courses in the application of ICT to agricultural information management
Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.
Countries: All countries
- iv. Professional attachment of NARS documentalists and information specialists to CSIR/INSTI and to RESADOC
Targets: Documentalists in NARIS documentation centres
Countries: All countries
- v. Group training courses in agricultural information management
Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.
Countries: All countries
- vi. Group training courses in web design and management.
Targets: Documentalists in NARIS documentation centres.
Countries: All countries
- vii. Conduct group training courses in scientific writing and communication of agricultural research, scientific editing and the management of agricultural journals. **We strongly recommend that this activity should be implemented in close collaboration and partnership with CTA in the Netherlands**
Targets: Research scientists in NARIS; Extension agents; editors and journal managers in NARS
Countries: All countries

Partnerships and collaboration

Principal capacity strengthening activities

The major activity in this theme is to initiate dialogue between all stakeholders in agricultural research, agricultural education and training institutions, Farmers organizations, the Private Sector in the agricultural industry, NGOs and Development partners to formulate a viable and sustainable mechanism for effective collaboration at national level.

i. Organize national consultation involving all stakeholders (NARIS, Universities, NGOs, Private Sector) to establish a platform for effective collaboration and partnership

Targets: All agricultural research and development stakeholders

Countries: All countries

Emerging issues: IPR, Biodiversity, Institutional change management

Principal capacity strengthening activities

We recommend that these emerging issues require priority attention for capacity building/ strengthening.

- Intellectual Property Rights – could be addressed through contracting this activity to the AATF and the African Union Agency for IPR
- Biodiversity – could be addressed through the full involvement of the CGIAR Centre – Bioversity International.
- Institutional change management. – could be addressed through collaboration with NRI to organize customised management courses for Director Generals and other Senior Agricultural Research Management Personnel

Principal capacity strengthening activities

i. Conduct Sub–regional workshops to create awareness on IPR

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

ii. Sub–regional workshops to create awareness on Biodiversity

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

iii. Prepare and disseminate Policy Briefs on Agricultural Biodiversity

Targets: NARIS and other stakeholders

Countries All countries

iv. Create awareness of the importance of Agricultural Science/Technology/Industry Interphase

Targets: NARIS and other stakeholders, especially private sector

Countries All countries

v. Conduct sub–regional Group training courses in IPR and biodiversity

Targets: NARIS Scientists

Countries All countries

- vi. Facilitate the introduction of agricultural biodiversity topics into agricultural education and training curricula in universities and higher educational institutions.

Targets: Universities and Agricultural education and training institutions; NARIS scientists

Countries All countries

- vii. Short term training courses in institutional change management including follow up through shadowing, mentoring, professional collaboration and secondments etc.

Targets: NARIS DGs and senior research scientists and programme leaders

Countries All countries

- viii Organize technical study tours to advanced institutions, collaboration with NRI

Targets: NARIS DG and senior research programme leaders

Countries All countries

Group 2 Countries with NARIS undergoing reforms

Agricultural research management

Principal capacity strengthening activities

- i. Support national consultation workshops to define the agricultural research reform process and prepare implementation schedulers

Targets; DGs of NARIS, Senior Scientists and Administrators, Private sector, development partners

Countries: Nigeria, Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic

- ii. Organize sub-regional and in-country group training courses and self e-learning programmes in agricultural research management, incorporating programme management, human resources management.

Targets; Director Generals of NARIS, Senior Scientists and Administrators

Countries: All countries

- iii. Support national workshops to review and build capacities in the preparation of new national agricultural research policies consistent with reforms

Targets; DGs of NARIS, Senior Scientists and Administrators, Private sector, development partners

Countries: Nigeria, Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic

- iv. Support national workshops to build capacities in the preparation of Agricultural Research Strategies and Implementation Plans

Targets; DGs of NARIS, Senior Scientists and Administrators, Private sector, development partners

Countries: Nigeria, Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic

Scientific capacity

Principal capacity strengthening activities

- i. Support professional training of scientists and administrative personnel in key institutions (service providers) in Africa.

Targets: NARIS research scientists and agricultural extension personnel

Countries: Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo (DRC), Central African Republic

- ii. Partial support for split higher degree training of young scientists in critical research disciplines; training in African universities and in special cases outside Africa

Targets: Young scientists and agricultural extension personnel

Countries: Gambia, Cape Verde, Tchad, Gabon, Democratic Republic of Congo(DRC), Central African Republic

Agricultural information and communications management

Principal capacity strengthening activities

- i. Support establishment of agricultural information centres

Targets: NARIS documentation centres

Countries: All countries

- ii. Conduct short-term courses in the management of agricultural information centres

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- iii. Conduct Group training courses in the application of ICT to agricultural information management

Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.

Countries: All countries

- iii. Professional attachment of NARS documentalists and information specialists to CSIR/INSTI and to RESADOC

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- iv. Group training courses in agricultural information management

Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.

Countries: All countries

- v. Group training courses in web design and management.

Targets: Documentalists in NARIS documentation centres.

Countries: All countries

- vi. Conduct group training courses in scientific writing and communication of agricultural research, scientific editing and the management of agricultural journals. **We strongly recommend that this activity should be implemented in close collaboration and partnership with CTA in the Netherlands**

Targets: Research scientists in NARIS; Extension agents; editors and journal managers in NARS

Countries: All countries

Partnerships and collaboration

Principal capacity strengthening activities

- i. Organize national consultation involving all stakeholders (NARIS, Universities, NGOs, Private Sector) to establish a platform for effective collaboration and partnership

Targets: All agricultural research and development stakeholders

Countries: All countries

Emerging issues

Principal capacity strengthening activities

- i. Conduct Sub-regional workshops to create awareness on IPR
Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- ii. Sub-regional workshops to create awareness on Biodiversity
Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- iii. Prepare and disseminate Policy Briefs on Agricultural Biodiversity
Targets: NARIS and other stakeholders

Countries All countries

- iv. Create awareness of the importance of Agricultural Science/Research/Technology/Industry Interphase
Targets: NARIS and other stakeholders, especially private sector

Countries All countries

- v. Conduct sub-regional Group training courses in IPR and biodiversity
Targets: NARIS Scientists

Countries All countries

- vi. Facilitate the introduction of agricultural biodiversity topics into agricultural education and training curricula in universities and higher educational institutions.

Targets: Universities and Agricultural education and training institutions; NARIS scientists

Countries All countries

- vii. Short term training courses in institutional change management including follow up through shadowing, mentoring, professional collaboration and secondments etc.

Targets: NARIS DGs and senior research scientists and programme leaders

Countries All countries

- viii. Organize technical study tours to advanced institutions, collaboration with NRI

Targets: NARIS DG and senior research programme leaders

Countries All countries

Group 3 Struggling NARIS countries

Agricultural research management

Principal capacity strengthening activities

- i. Organize sub-regional and in-country group training courses and self e-learning programmes in agricultural research management, incorporating programme management, human resources management.

Targets; DGs of NARIS, Senior Scientists and Administrators

Countries: All countries

- ii. Support the establishment of financial management system and conduct sub-regional and in-country training courses in financial management.

Targets: Financial staff of NARIS; research programme leaders

Countries: Mauritania, Togo, Niger, Guinea Conakry, Sierra Leone, Ghana, Tchad, Cape Verde, Democratic Republic of Congo (DRC), Central Africa Republic

- iii. Conduct national and sub-regional workshops to explore mechanisms for sustainable funding for agricultural research and development

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers

Organizations, Development partners etc)

Countries: All countries

- iv. Support technical study tour to CNRA Cote d'Ivoire to study research funding mechanism

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations,

Development partners etc)

Countries: All countries

Scientific capacity

- i. Visiting Senior Scientists Programme to assist with development and implementation of research programmes and initiate mentoring of young scientists.

Targets: Senior NARIS scientist from other African countries

Countries: All countries

- ii. Support professional training of scientists and administrative personnel in key institutions (service providers) in Africa.

Targets: Senior NARIS scientist from other African countries

Countries: All countries

- iii. Visiting professionals from the Diaspora for mentoring scheme: Fellowship programme

Targets: NARIS

Countries: All countries

Agricultural information and communications management

Principal capacity strengthening activities

- i. Support establishment of agricultural information centres

Targets: NARIS documentation centres

Countries: All countries

- ii. Conduct short-term courses in the management of agricultural information centres

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- iii. Conduct Group training courses in the application of ICT to agricultural information management

Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.

Countries: All countries

- iv. Professional attachment of NARS documentalists and information specialists to CSIR/INSTI and to RESADOC

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- v. Group training courses in agricultural information management

Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.

Countries: All countries

- vi. Group training courses in web design and management.

Targets: Documentalists in NARIS documentation centres.

Countries: All countries

- vii. Conduct group training courses in scientific writing and communication of agricultural research, scientific editing and the management of agricultural journals. **We strongly recommend that this activity should be implemented in close collaboration and partnership with CTA in the Netherlands**

Targets: Research scientists in NARIS; Extension agents; editors and journal managers in NARS

Countries: All countries

Partnerships and collaboration

Principal capacity strengthening activities

- i. Organize national consultation involving all stakeholders(NARIS, Universities, NGOs, Private Sector) to establish a platform for effective collaboration and partnership

Targets: All agricultural research and development stakeholders

Countries: All countries

Emerging issues

Principal capacity strengthening activities

- i. Conduct Sub–regional workshops to create awareness on IPR

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- ii. Sub–regional workshops to create awareness on Biodiversity

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- iii. Prepare and disseminate Policy Briefs on Agricultural Biodiversity

Targets: NARIS and other stakeholders

Countries All countries

- iv. Create awareness of the importance of Agricultural Science/Technology/Industry Interphase

Targets: NARIS and other stakeholders, especially private sector

Countries All countries

- v. Conduct sub–regional Group training courses in IPR and biodiversity

Targets: NARIS Scientists

Countries All countries

- vi. Facilitate the introduction of agricultural biodiversity topics into agricultural education and training curricula in universities and higher educational institutions.

Targets: Universities and Agricultural education and training institutions; NARIS scientists

Countries All countries

- vii. Short term training courses in institutional change management, including follow up through shadowing, mentoring, professional collaboration and secondments etc.

Targets: NARIS DGs and senior research scientists and programme leaders

Countries All countries

- viii Organize technical study tours to advanced institutions , collaboration with NRI

Targets: NARIS DGs and senior research programme leaders

Countries All countries

Group 4 Stable NARIS countries

Agricultural research management

Principal capacity strengthening activities

- i. Organize sub-regional and in-country group training courses and self e-learning programmes in agricultural research management, incorporating programme management, human resources management.

Targets; DGs of NARIS, Senior Scientists and Administrators

Countries: All countries

- ii. Conduct national and sub-regional workshops to explore mechanisms for sustainable funding for agricultural research and development

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers

Organizations, Development partners etc)

Countries: All countries

- iii. Support technical study tour to CNRA Cote d'Ivoire to study research funding mechanism

Targets: All NARS partners (Policy makers in national governments; NARIS Staff, NGOs, Private Sector agricultural industry, Farmers Organizations, Development partners etc)

Countries: All countries

Scientific capacity

Principal capacity strengthening activities

- i. Partial support for higher degree training of young scientists in critical research disciplines; training in African universities and in special cases outside Africa

Targets: Young scientists and agricultural extension personnel

Countries: All countries

- ii. Support professional training of scientists and administrative personnel in key institutions (service providers) in Africa.

Targets: Senior NARIS scientists from other African countries

Countries: All countries

- iii. Visiting professionals from the Diaspora for mentoring scheme: Fellowship programme

Targets: NARIS

Countries: All countries

Agricultural information and communications management

Principal capacity strengthening activities

- i. Support establishment of agricultural information centres

Targets: NARIS documentation centres

Countries: All countries

- ii. Conduct short-term courses in the management of agricultural information centres

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- iii. Conduct Group training courses in the application of ICT to agricultural information management

Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.

Countries: All countries

- iv. Professional attachment of NARS documentalists and information specialists to CSIR/INSTI and to RESADOC

Targets: Documentalists in NARIS documentation centres

Countries: All countries

- v. Group training courses in agricultural information management

Targets: Documentalists in NARIS documentation centres; Research scientists in NARIS.

Countries: All countries

- vi. Group training courses in web design and management.

Targets: Documentalists in NARIS documentation centres.

Countries: All countries

- vii. Conduct group training courses in scientific writing and communication of agricultural research, scientific editing and the management of agricultural journals. **We strongly recommend that this activity should be implemented in close collaboration and partnership with CTA in the Netherlands**

Targets: Research scientists in NARIS; Extension agents; editors and journal managers in NARS

Countries: All countries

Partnerships and collaboration

Principal capacity strengthening activities

- i. Organize national consultation involving all stakeholders (NARIS, Universities, NGOs, Private Sector) to establish a platform for effective collaboration and partnership

Targets: All agricultural research and development stakeholders

Countries: All countries

Emerging issues

Principal capacity strengthening activities

- i. Conduct Sub-regional workshops to create awareness on IPR

Targets: Research scientists in NARIS; Extension agents; The Private sector

Countries: All countries

- ii. Sub-regional workshops to create awareness on Biodiversity

Targets: Research scientists in NARIS; Extension agents; The Private sector

- Countries: All countries*
- iii. Prepare and disseminate Policy Briefs on Agricultural Biodiversity
Targets: NARIS and other stakeholders
Countries All countries
- iv. Create awareness of the importance of Agricultural Science/Technology/Industry Interphase
Targets: NARIS and other stakeholders, especially private sector
Countries All countries
- v. Conduct sub-regional Group training courses in IPR and biodiversity
Targets: NARIS Scientists
Countries All countries
- vi. Facilitate the introduction of agricultural biodiversity topics into agricultural education and training curricula in universities and higher educational institutions.
Targets: Universities and Agricultural education and training institutions; NARIS scientists
Countries All countries
- vii. Short term training courses in institutional change management, including follow up through shadowing, mentoring, professional collaboration and secondments etc.
Targets: NARIS DGs and senior research scientists and programme leaders
Countries All countries
- viii. Organize technical study tours to advanced institutions , collaboration with NRI
Targets: NARIS DGs and senior research programme leaders
Countries All countries

Chapter 4 Institutional arrangements for the CORAF/WECARD SCARDA Project Management Structure: Recommendation

4.1 The CORAF/WECARD SCARDA Sub-regional Project Management Structure.

In this section, we present recommendations for an operational model of institutional arrangements for the implementation of SCARDA project activities in the CORAF/WECARD sub-region. The project management structure is designed to be integrated into and nested within the new programme structure approved in the new CORAF/WECARD Strategic Plan 2007 – 2016.

Implementation of this sub-regional SCARDA project will be coordinated within the Capacity Strengthening and Coordination Programme of CORAF/WECARD. Figure 3 presents a graphical illustration of the recommended project management structure, which consists of clearly defined implementation entities, lines of authority and reporting for effective management of project implementation. Technical oversight for the SCARDA programme will be provided by CORAF/WECARD Secretariat supported by the following CORAF/WECARD SCARDA project implementation entities.

4.2 SCARDA Sub-regional Project Institutional arrangement – based on the principle of subsidiarity already established by FARA and the SROs, governance and oversight of the sub-regional SCARDA activities will be direct responsibility of the CORAF/WECARD Secretariat headed by the Executive Director.

4.3 The sub-regional CORAF/WECARD SCARDA coordinator – To supervise and monitor progress in the implementation of the sub-regional SCARDA project, CORAF/WECARD should appoint a full time sub-regional CORAF/WECARD SCARDA Coordinator to manage and coordinate project implementation and to establish effective functional linkages with SCARDA programme activities in the other SROs.

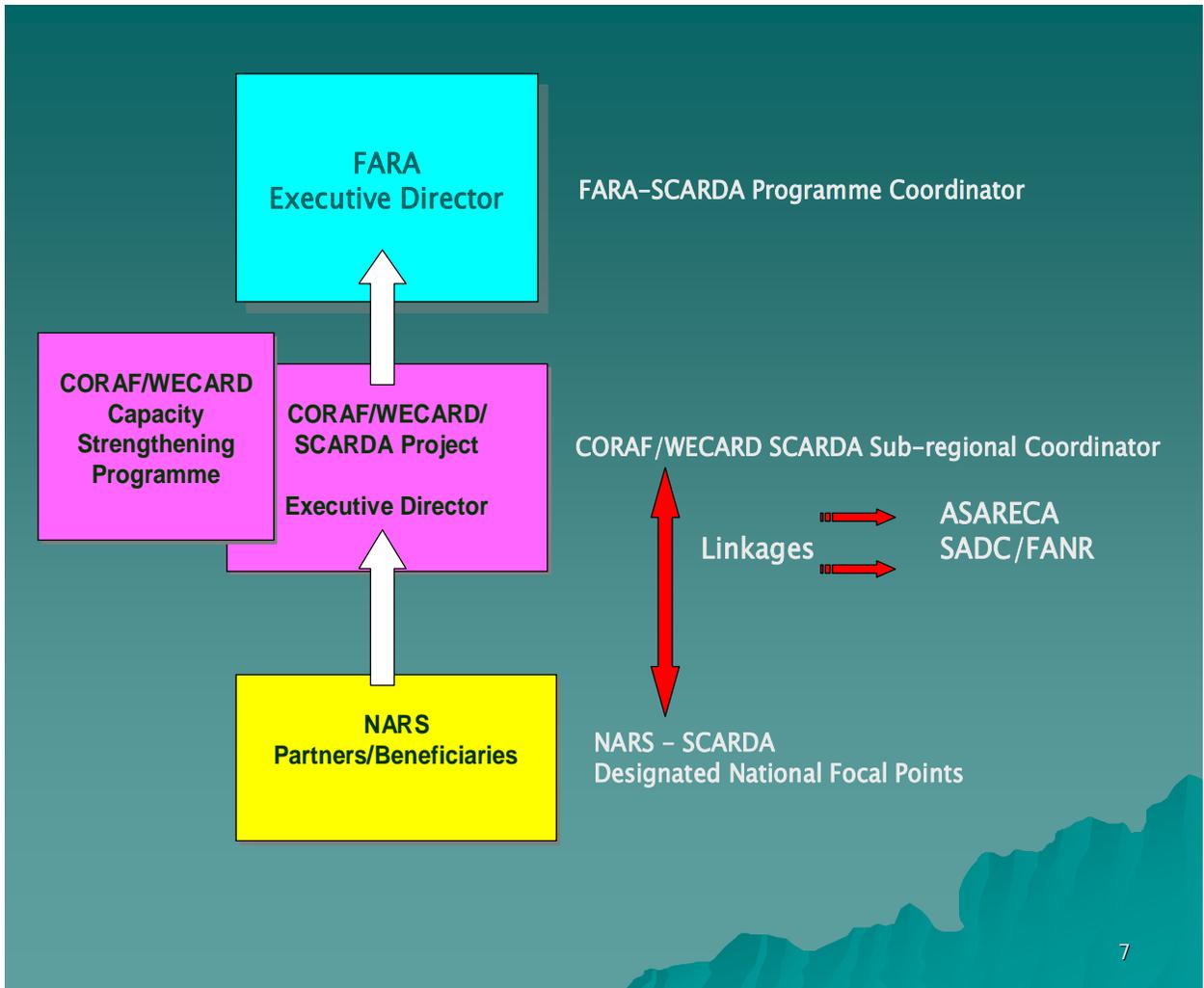


Figure 3 Recommended project management structure and line of authority and reporting for the CORAF/WECARD sub-regional SCARDA programme.

The following terms of reference **recommended** for the sub-regional CORAF/WECARD SCARDA Coordinator.

- Coordinating the implementation of SCARDA activities in the CORAF/WECARD sub-region
- Assisting in the formulation of the national plan of action for capacity strengthening activities based on the identified capacity strengthening needs.

- Assisting in the identification of participating institutions and the national and sub–regional service providers for implementation of SCARDA activities.
- Establishing functional partnerships for the sub–regional SCARDA programme.
- Monitoring progress and conducting evaluation of the impact of the SCARDA project on beneficiaries.
- Compiling relevant data on the SCARDA project as well as preparing technical reports on SCARDA activities to the SRO Project Advisory Committee
- Providing logistic support for implementation of sub–regional SCARDA activities

4.4 The CORAF/WECARD SCARDA National Focal Points – Following the selection of countries to benefit from the SCARDA project activities, each country will designate a SCARDA National Focal Point to assist the sub–regional CORAF/WECARD SCARDA Coordinator in the on–site implementation of SCARDA project activities. CORAF/WECARD already has national focal persons in the different countries who may be assigned this task. Since the National Focal Points are already employed by the NARS, the main financial implication is to cover the operational expenses directly associated with the SCARDA activities. Specifically, the duties of *the National Focal Points* will include the following

- Coordinating the implementation of SCARDA activities in the country
- Providing logistic support for implementation of national SCARDA activities
- Assisting in the preparation of the national plan of action for capacity strengthening activities
- Identification of national participating institutions and potential service providers for implementation of SCARDA activities.
- Assisting in monitoring progress of the impact of the SCARDA project activities on beneficiaries at national level.
- Preparing technical reports on national SCARDA activities for the CORAF/WECARD SCARDA Sub–regional Coordinator

4.5 CORAF/WECARD SCARDA Project Technical Advisory Committee

Responsibility for providing overall policy guidance and general oversight for the successful implementation of the sub-regional SCARDA project will be vested in a CORAF/WECARD SCARDA Project Technical Advisory Committee. This Committee could be formed as a sub-committee of the existing 12 member CORAF/WECARD Scientific and Technical Committee which is one of the governing organs of CORAF/WECARD. Membership of this committee could be expanded by co-opting other specialists to achieve greater representation of the stakeholders and considering the financial implications for cost-effectiveness of the functioning of the committee.

The recommended Terms of Reference for this CORAF/WECARD SCARDA Project Technical Advisory Committee are to act on behalf of, and report to the CORAF/WECARD Scientific and Technical Committee, and perform the following functions:

- Provide general policy guidance and oversight for the sub-regional SCARDA project activities
- Approve Annual Work plans and Budget for the sub-regional SCARDA project
- Receive and review progress and annual technical and financial reports of sub-regional SCARDA project activities and approve them for transmission to FARA
- Consider and approve functions and responsibilities of participating countries and service providers for the sub-regional SCARDA project
- Approve the terms of partnerships with collaborating organizations and agencies and the details of the Memoranda of Understanding to be signed with development partners.
- Approve modalities and systems for monitoring, evaluation and impact assessment of the sub-regional SCARDA Project activities, review and approve reports of these activities.

Chapter 5 Collaborating Partners and Service Providers: Recommendation

5.1 The roles of collaborating partners and service providers

Implementation of capacity strengthening activities will be done in close collaboration and partnerships with regional, sub-regional and international organizations and agencies internationally recognized as centres of excellence in specialized areas. Furthermore, a number of NARIS which have developed expertise in specific areas of agricultural research and financial management could be contracted as service providers in specific aspects. Their roles will generally include,

- Conducting specialized individual or group training courses.
- Organising individual or group technical study tours,
- Arranging attachments of agricultural research and extension personnel from NARS to acquire experiences and new skills to improve agricultural research and development performance.
- Universities and other agricultural education and training institutions will accept students for split higher degree training and short term professional training for NARS scientists and extension agents.
- Organising technical study tours and mentoring formats for research scientists.
- Preparing, if necessary, position papers and providing technical advice on monitoring and evaluation processes

Several initiatives relevant to the SCARDA project already exist in Africa which provide opportunities for capacity strengthening.

These initiatives include:

- FARA projects, namely DONATA and RAILS which address capacity building for agricultural research and technology dissemination as well as agricultural communication and information management.
- ANAFE for enhancing agricultural education for development in Africa.
- The Technical Centre for Agricultural and Rural Cooperation (CTA) in Wageningen, the Netherlands, established under the Lomé Convention between the ACP Group of States and the European Union Member States,

conducts several group training courses to build/strengthen capacities in agricultural information management for agricultural and rural development in Africa, Caribbean and the Pacific.

CTA also provides services that improve access to information for agricultural and rural development and strengthens the capacity of ACP countries to produce, acquire, exchange and utilize information in this area.

- The Convergence of Sciences (CoS) project, of the University of Wageningen implemented in two West African countries, Benin and Ghana. This project addresses identification of the “windows of opportunity” of small resource-poor farmers to improve their incomes and rural livelihoods. It explores how an enabling environment can be created for farmers to influence scientists’ research agenda in line with the philosophy of ‘democratizing science’ (Arnold van Huis, 2006). Capacity building in the understanding and adoption of the CoS concept has involved higher degree training of 9 PhD students. An expanded second phase of CoS, involving four West African countries, has been formulated.
- Institutions offering a variety of training courses in agricultural research and financial management; a few examples are the African Center for Capacity Building (ACCB) in Swaziland, Agricultural and Rural Management Institute (ARMTI) in Nigeria, the CSIR Institute for Scientific and Technological Information, (INSTI) and the Ghana Institute of Management and Public Administration, GIMPA in Ghana, and AGRHYMET in Bamako Mali.
- The Commonwealth of Learning ODL and Tech-MODE projects in Africa for education and training of all categories of agricultural research, and extension personnel and the L3 (Life Long Learning) mode for enhancing extension and farmer education and training in agriculture.
- The SRO Agricultural research Networks– promoting agricultural research linkages and collaboration as well as human and institutional capacity strengthening through specialized group training courses.

Details of specific responsibilities for provision of services will be negotiated and will form the subject and terms of the Memoranda of Understanding and Service Agreements and Service Contracts to be signed by CORAF/WECARD with

rms of
the collaborating

partners.

5.2 Potential Partners and Service Providers for Implementation of SCARDA

During the scoping study, we identified the following basic list of potential partners and service providers as follows; many more may be added as the annual work plans are developed and more potential service providers are identified.

Agricultural Research Management

- ARMTI Ilorin, Nigeria
- Natural Resources Institute/University of Greenwich UK
- CNRA Abidjan Cote d'Ivoire – financial sustainability of NARIS
- ISRA Dakar Sénégal

Scientific Capacity

- LANADA Cote d'Ivoire
- AGRHYMET Niamey Niger
- EISMV Dakar Senegal
- Natural Resources Institute/University of Greenwich UK
- African Universities with string postgraduate programmes
- ANAPHE
- Convergence of Sciences (CoS) project, University of Wageningen
- Université de Dschang Cameroun
- RUFORUM Entebe Uganda
- IRAD Cameroon
- CNRA Cote d'Ivoire
- LANADA Cote d'Ivoire
- University of Abobo/Adjame Cote d'Ivoire

Agricultural Information and Communications Management

- CTA Wageningen The Netherlands
- CSIR/INSTI Accra Ghana
- FAO Accra Ghana
- RESADOC, Bamako Mali
- AGRHYMET, Niamey Niger
- CNRST Libreville Gabon
- African Center for Capacity Building (ACCB) in Swaziland,
- Commonwealth of Learning COL, Canada
- Natural Resources Institute/University of Greenwich UK

Partnerships and Collaboration

- CTA Wageningen The Netherlands
- Natural Resources Institute/University of Greenwich UK

Emerging Issues– IPR, Bioiversity, Institutional Change Management

- Bioiversity International – CGIAR Center
- OAPI – Organisation Africaine au la Propriete Intellectuelle (African Union, Yaounde Cameroon
- AATF– African Agricultural Technology Foundation, Nairobi Kenya
- Natural Resources Institute/University of Greenwich UK

Chapter 6 The CORAF/WECARD Sub–regional Stakeholders Workshop

6.1 Organization of the Stakeholders workshop

The CORAF/WECARD sub–regional stakeholders workshop was successfully organized by the CORAF/WECARD secretariat at the Hotel Fiaherbe, Dakar Senegal from July 11 to 12, 2007. Participants were drawn from 20 of the 22 NARS CORAF/WECARD countries; representation includes mainly the Director Generals of NARIS and a limited number from NGOs, higher agricultural education and training institutions, the private sector and farmers' organizations.

NRI contribution to this workshop included the participation of Hans Dobson and Alistair Sutherland who lead the team of Workshop Facilitators, which included the two CORAF/WECARD Consultants. NRI staff in collaboration with other experts prepared a series of Briefing Papers which provided information to guide the discussion at the workshop. The NRI partners, in collaboration with staff from CORAF/WECARD Secretariat were responsible for preparing the workshop report which is available from the CORAF/WECARD Secretariat on request.

6.2 Objectives and expected outputs of the Stakeholders Workshop

Objectives:

The objectives of this stakeholders workshop are outlined as follows:

- 1 To develop and achieve a common understanding and shared vision of the SCARDA project in the context of national, sub–regional and regional perspectives for agricultural development.
- 2 Receive reports of the findings of the scoping studies and build consensus on the priorities for strengthening capacities in agricultural research and development in Africa.
- 3 Obtain agreement on the overall portfolio of activities for strengthening capacities in agricultural research and development in the CORAF/WECARD sub–region.

- 4 Develop institutional arrangements for CORAF/WECARD SCARDA project management implementation strategy, including linkages with FARA Secretariat and the other SROs.
- 5 Recommend the next steps for SCARDA implementation in the CORAF/WECARD sub-region.

Expected outputs

The major outputs expected from this workshop are as follows:

- 1 A clear and common understanding of the implications of the successful implementation of the SCARDA project for agricultural development in Africa.
- 2 An overall list of activities for the implementation of the SCARDA project in the sub-region
- 3 A project management framework for implementation of SCARDA in the CORAF/WECARD sub-region.

6.3 Summary of the outcome of the Stakeholders Workshop

This section draws extensively from the report of the stakeholders workshop and provides only a brief of aspects of the stakeholders workshop. Further details of the proceedings of the workshop are contained in the Stakeholders Workshop prepared by the Facilitators.

6.3.1 Summary of findings of the CORAF/WECARD SCARDA Scoping study

The interim report of the CORAF/WECARD SCARDA scoping study conducted by two consultants in the CORAF/WECARD region consisting of 22 countries of West and Central Africa was presented.

- The study captured the perceived capacity strengthening needs of NARIS (focusing on NARIS) and an assessment of needs by the consultants themselves.
- The scoping study indicated a strong need for capacity strengthening aligned with the two main SCARDA research themes, namely (i) agricultural research management and (ii) scientific research capacity.

- The report also highlighted the need for support in the area of partnerships, networks and agricultural communication and information management.
- Specific topics for support are identified in the report and the emerging areas of Intellectual Property Rights, Biodiversity and Institutional Change Management are earmarked for special attention.
- CORAF/WECARD countries were grouped into 4 broad categories based on a NARIS typology matrix developed during the scoping study. In an exercise to identify priority beneficiaries for the SCARDA programme, representatives from each country were asked to assign their NARIS to one or more of four broad categories: those in countries emerging from civil conflict; those undergoing major reform; struggling NARIS with little government support; and stable NARIS with some support from national government. Only 7 out of 22 countries were classified as stable, while 7 others were in countries emerging from civil conflict and the rest (8) were struggling and/or in the process of reform.
- Implementation of capacity strengthening activities will be by service providers from African Institutions and networks wherever possible, but these have not yet been identified.
- The scoping study consultants proposed institutional arrangements for management of SCARDA. The recommendation includes involving national focal points in each participating country and a CORAF/WECARD SCARDA technical advisory committee, to provide policy guidance and oversight for effective and successful project implementation.
- Participants at the workshop provided useful feedback on the scoping study draft report, suggesting some additions and modifications to the identified capacity strengthening needs and the orientation of the report. However, it was accepted that there had been little time between the end of the scoping study visits and the workshop for a full analysis of the findings. As a result, the scoping study report was endorsed during the workshop as a pre-draft, on the understanding that the consultants would prepare a full draft for circulation by the end of July 2007.
- NRI is currently developing a database into which the institutional and capacity strengthening needs can be entered. When completed it will be possible to filter and display information in a variety of ways – for

example to show all countries that have identified M&E as a capacity strengthening priority.

6.3.2 Findings from the workshop sessions

Participants were asked to identify the requirements for innovative and effective research from the perspective of three main stakeholder groups – research managers, researchers and intermediaries (e.g. extension, NGOs, private sector). Research managers identified leadership and innovation culture as being important, as well as finance (procurement and sustainability of funding and financial management), research needs identification, communication and monitoring and evaluation. Researchers and intermediaries also judged identification of producers' research needs to be crucial and specified that these needs should be elaborated through participatory activities in the innovation system and treating producers as clients 'ordering' research (and possibly participating in its funding), rather than simply as beneficiaries. Their capacity also needs to be strengthened in order to facilitate this process. However, research should also be orientated towards the attainment of strategic objectives of the country in question. It was considered important to build on indigenous knowledge systems where appropriate, and to reinforce skills in technical disciplines, negotiation, communication and dissemination.

At the policy level, centralization of research coordination was recommended to avoid duplication, as well as the reduction of bureaucratic constraints and bottlenecks in order to limit waste of time. Specific areas identified for capacity strengthening were organising stakeholders to participate in policy-making, creating awareness that producers are integrated partners in research, training in Good Agricultural Practice and translation of production manuals/protocols into local languages.

Participants then reflected on their own experiences of the benefits of capacity strengthening and to identify the factors that made them a success. These factors were clustered in categories: key factors relating to a favourable institutional environment were finance, incentives for researchers, credibility of NARIS and strong political will. Important linkage factors were between researchers, extensionists and other stakeholders (to aid problem identification

and dissemination of outputs) and with funding agencies and international scientific partners. Capacity strengthening methods used ranged from formal training, through multidisciplinary collaborations to mentoring/shadowing and exchange visits. The actors and organisations targeted included farmers, extensionists, NGO staff, scientists (especially younger ones) and research managers. The topics for capacity strengthening topics ranged from specific technical areas like fish production to skills of partnering, leadership, negotiation, farmer group formation, communication and financial and human resource management.

These workshop activities highlighted the broad range of stakeholders, beneficiaries, topics, methods and other factors that can contribute to the success of innovation systems.

Various resource documents were prepared and distributed at the workshop, including lists of possible topics for capacity strengthening, and methods of achieving it (conventional through to unconventional). Five draft briefing papers prepared by NRI and authors from the CORAF/WECARD sub-region were also distributed to help inform debate on gender and diversity, agricultural innovation systems, agricultural information management, biotechnology and biosafety and climate change. It is hoped that there will be feedback from workshop participants to ensure that these papers take into account sub-regional specificities.

6.3.3 Follow up actions

The next steps in the SCARDA inception phase were discussed and agreed during the closing session. The consultant's draft scoping study report will be prepared by 27 July and circulated, with a view to finalising it during early August for presentation at the FARA Regional workshop to be scheduled towards the end of August 2007.

The stakeholder workshop report will be drafted by 23 July, circulated and finalised by 31 July. During August, the CORAF/WECARD SCARDA implementation plan will be developed on the basis of the scoping study and workshop findings, to be integrated with the implementation plans from the two other sub-regions for submission as a unified implementation plan to DFID by 14 September 2007.

Chapter 7 Financial Proposals for the CORAF/WECARD SCARDA project

The financial proposals recommended here represent global estimates of 3 year global funding allocations to the different budget line items according to the principal capacity strengthening themes. We further recommend that following consultation with target NARS, detailed annual work plans and budgets are prepared based on the available funding envelope allocated to each theme and activities.

Capacity strengthening Themes	Financial Allocation 3 years
<i>1. Agricultural Research Management</i> <i>Capacity strengthening activities</i> <ul style="list-style-type: none"> I. Professional skills development ii. Grants for Self teaching e-learning iii. Professional attachments iv. Group training courses v. Technical study tours 	US\$ 750,000
<i>2. Scientific capacity</i> <i>Capacity strengthening activities</i> <ul style="list-style-type: none"> i. Research fellowships for advanced/higher Degree split training ii. Fellowships for visiting scientists & scholars iii. Professional training for Women iv. Grants for mentoring v. Fellowships for visiting scientists from the Diaspora vi National/sub-regional Workshops & Seminars vii. Technical study tours viii. Scientists/Professionals NARIS Exchange programme ix. Short-term Professional skills development x Grants for attending scientific meetings xi. Grants for Self teaching e-learning 	US\$ 4,500,000

3. Agricultural information & communications management US\$ 1,000,000

Capacity strengthening activities

- i. Establishing communication centres
- ii. Professional skills development
- ii. Professional attachments
- iii. National/sub-regional Workshops & Seminars
- iv. Technical study tours
- v. NARIS Professionals Exchange programme
- vi. Grants for attending scientific meetings

4. Partnerships and collaboration US\$ 800,000

Capacity strengthening activities

- i. Professional attachments
- ii. National Workshops & Seminars
- ii. Technical study tours
- iii. Professional skills development
- iv. Grants for attending scientific meetings

A. Grand Total NARS Capacity strengthening activities ...US\$ 7,050,000

5. Project management

Items	US\$
i. Project officer	225,000
ii. Secretarial support	50,000
iii. Administrative support	65,000
iv. Operational costs (travel, NFP communication etc) ...	400,000
v. Consultants @ 25,000 x 8 mm.....	200,000
vi. Technical advisory Committee meetings	
x 3 meetings/year	135,000
vii. CORAF Admin overheads	161,250

B. Total SCARDA Project management costs. US\$ 1,236,250

Grand Total NARS Capacity strengthening activities

$$A + B = \text{US\$}7,050,000 + 1,236,250 = \text{US\$}8,286,250$$

Chapter 8 Concluding Commentary

8.2 Commentary

1. The results of this scoping study elaborate on and highlight the enormity and diversity of the capacity strengthening (CaSt) needs of the national agricultural research systems in the CORAF/WECARD sub-region. It is recognised that national governments have the primary responsibility for meeting these needs in order to improve agricultural research performance and delivery for agricultural research to fulfil its role in promoting socio-economic development. But the reality is that national governments seem unable to adequately cope with this matter. Therefore international technical and financial assistance is required to complement national efforts to build the required individual and institutional capacities for efficient functioning of the national agricultural research systems in the sub-region.

2. In efforts to strengthen capacities for agricultural research, two major responsibility domains can be recognised, one primarily for national governments and the second for complementary international intervention and support; these responsibility domains include the following:

i. Primary responsibility domain of national Governments

- establishment of national agricultural research and development policies.
- provision of buildings and resources for maintenance of infrastructural facilities for research and training, including functioning communication facilities.
- guarantees for basic and sustainable financing of national agricultural research through making adequate investments in agricultural research.
- creation of staff positions and recruitment of qualified research personnel.
- creation of conducive agricultural research environments including staff motivation, recognition and reward systems for agricultural research personnel and institutions.
- Allowing NARIS a reasonable level of autonomy so that NARIS management (Management Boards and DGs) can operate more effectively.

ii. Responsibility domain for complementary international intervention and support (SCARDA)

- Assistance with the development of national agricultural research strategies and implementation plans.
- Support for capacity building/strengthening in key areas, especially agricultural research management and research leadership, financial management, professional skills training, specialized higher degree training, mentoring young researchers, professional secondments and attachments, training in “soft skills”, supporting the introduction of innovation systems for IAR4D, as well as training in monitoring, evaluation and impact assessment of agricultural research.

3. It is recommended that SCARDA’s intervention and support may well include organised lobbying and advocacy activities specifically to draw the attention of national governments to the benefits of addressing the issues suggested as their responsibility domains in order to ensure sustainability of the outputs from the implementation of SCARDA.

4. Since the DFID support for SCARDA is limited, it is obviously unrealistic to expect that the level of support can cover all the CaSt needs identified. Therefore FARA as the executing agency, and the SROs as implementing agencies for SCARDA, would need to adopt an innovative mechanism for the selection of potential beneficiaries and activities that would generate measurable outputs in the initial 3 year life of SCARDA. To address this issue, discussion of the distribution of SCARDA funding was initiated at the stakeholders workshop (see workshop report for details) and it was acknowledged that decisions have to be taken on whether to spread the funding thinly over the whole sub-region (see carpet option in Figure 4), to concentrate on whole innovation systems within specific targeted countries (bricks option), or to focus on very few institutions within a limited number of countries (see the beacon option).

5. In view of the acute shortage of women agricultural scientists in the NARS, a special SCARDA Fellowship programme for women is advocated. Such a programme will assist NARS to build/strengthen scientific capacity through providing opportunities and support for young women to study for Masters Degrees which can be completed within the 3 year life of SCARDA programme. Selection of candidates would be made jointly by the NARIS and CORAF/WECARD based partly on national assurances for employment at the end of the training. Successful implementation of this fellowship programme will

increase the contributions of women scientists to agricultural research and development in Africa.

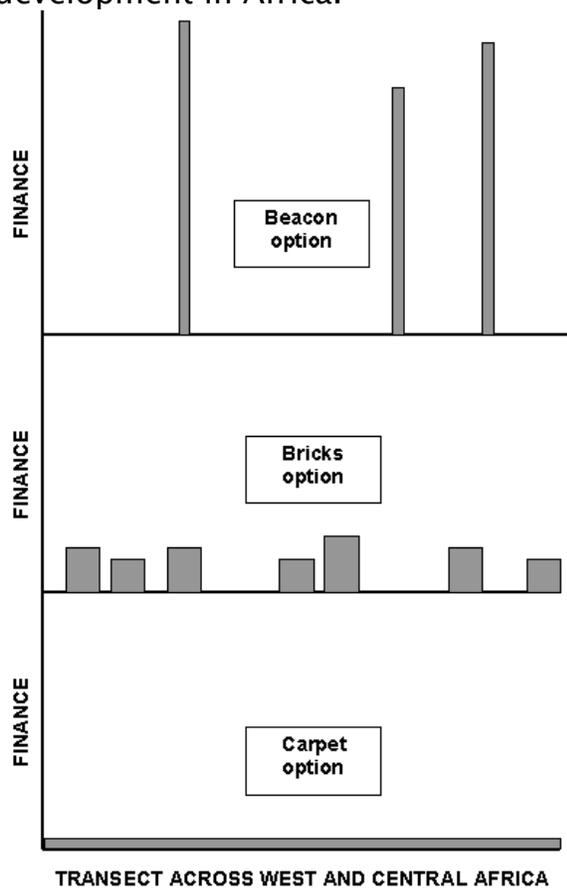


Figure 4 Possible Options for the distribution of SCARDA funding (from workshop report)

6. For cost effective implementation of the recommended SCARDA activities, the identification and engagement of local, sub-regional and regional service providers should be encouraged. A few examples have been cited in this report but service providers require some minimal SCARDA intervention to upgrade their facilities in order to enhance their capacities to provide the required services. Such service providers will then be adequately strengthened to continue providing CaSt services even after the SCARDA project is completed and phased out. In this way CaSt activities could be mainstreamed into the programmes of NARS.

7. SCARDA's CaSt activities would need to deliberately address not only individual human resources development but also the policy, regulatory and institutional issues as well as the *capacity to build capacity*.

8.2 The Next Steps

According to the plan established by FARA secretariat for the SCARDA programme, and illustrated in figure 1 of this report, the next steps for CORAF/WECARD action are defined as follows:

- Step 1. Acceptance of this Sub-regional Scoping study Report and the outcome of the sub-regional SCARDA stakeholders workshop.
- Step 2. Submission of the CORAF/WECARD sub-regional SCARDA document to FARA Secretariat.
- Step 3. Participation at the SCARDA workshop involving all the 3 sub-regional organizations, CORAF/WECARD, ASARECA and SADC/FANR at FARA Headquarters.
- Step 4. Contributing to the preparation of a consolidated SCARDA Implementation and Business Plan for submission to DFID

Principal documents consulted in the preparation of this report

1. CORAF/WECARD (2006) Annual Report for 2005
2. CORAF/WECARD (2007) The Strategic Plan 2007 – 2016
3. D. R. Smith and A. Sutherland (2002) Institutionalising IMPACT Orientation; Building performance management approach that enhances the impact orientation of research organizations.
Natural Resources Institute, Chatham, University of Greenwich, UK
4. FARA 2006. Agricultural Research Delivery in Africa: An assessment of the requirements for efficient, effective and productive African NARS.
Forum for Agricultural Research in Africa, Accra Ghana
5. FARA. 2007 Report of the SCARDA Inaugural Workshop Planning Inception Phase Activities
FARA Workshop Report Accra Ghana 20 – 21 February 2007
6. ASARECA 2007. Strengthening Capacity for Agricultural Research and Development (SCARDA)
Synthesis Report Stakeholders Workshop for the ASARECA sub-region Entebbe Uganda 4 – 6 June 2007
7. Anthony Youdeowei, 2007. Building Africa's Human and Institutional Capacity for the agricultural industry to meet its potential to contribute to the achievement of the MDGs.
Keynote Speech for the 4th FARA General Assembly, Johannesburg, South Africa, June 2007

Annexes

Strengthening Capacities for Agricultural Research
and Development in Africa (SCARDA)

**Participatory scoping study for the
identification of priority capacity
strengthening needs of NARS of the
CORAF/WECARD Sub-region.**

FINAL REPORT.

Annexes and Working Papers

Anthony Youdeowei
Ahmadou Lamine Ndiaye

31 July 2007

CORAF/WECARD Secretariat Dakar, Senegal

The contents of this Annex

This Annex presents details of the Terms of Reference of the Scoping Study and the set of Working Papers which were prepared by the CORAF/WECARD Consultants, in consultation with and technical assistance and inputs from staff of the Natural Resources Institute (NRI) of the University of Greenwich. These working papers were used to guide the thinking and process for conducting the participatory scoping study. NRI of the United Kingdom has been appointed a FARA Collaborating Partner to provide technical backstopping and facilitation for the implementation of the SCARDA project.

The Annex also includes the 3 scoping study instruments, namely the structured questionnaires which were designed to collect data and relevant information from key national partners and stakeholders for the study.

These documents thus provide a complete perspective of the principles adopted and the background information which guided the process for conducting the scoping study and developing the recommendations.

Annex 1 Terms of Reference for the Scoping study

Consultants Terms of references for the study on Strengthening capacity for Agricultural Research and Development in Africa

Activity

- To conduct a scoping study of institutional capacity strengthening in the CORAF country members and organise sub-regional stakeholder consultation meetings that will together provide a needs analysis and detailed structures and procedure for implementation of the SCARDA programme in the sub-region.
- Contribute to producing a consolidated SCARDA programme that takes advantage of continent-wide visions and opportunities to add value to activities at the sub-regional level.

Duration of appointment: For 60 days between April 1 to May 30 2007

1. Terms Of Reference

Working closely with the Supervisor appointed by CORAF/WECARD two Consultants (one working in Franco-phone countries and another in Anglo-phone countries) will fulfil the following terms of reference:

A) Sub-regional Scoping Studies

The studies conducted by the consultants will commence by April 1, 2007 and last through May, 2007. Specifically the following are expected:

- Conduct participatory scoping studies in CORAF/WECARD member countries of NARS and SROs and involving African capacity development institutions such as ANAFE, RUFORUM and ISNAR to analyse the capacity needs and strategies for addressing them
- Propose partnerships and roles of various actors in meeting the capacity strengthening needs

- Suggest Programme management and operational structures consistent with the CORAF/WECARD modes and requirements.
- Propose a Monitoring and Evaluation mechanism for the program
- Draw as may be may be required, on support from Northern institutions including NRI.
- Developing the terms of reference for the CORAF/WECARD focal points
- Developed draft agreements to be signed with selected partner organisations for the implementation of the programmes activities.
- Identify capacity strengthening requirements in each of the agreed pilot countries.
- Contribute to developing an approach to institutional analysis to be applied in the implementation phase that will be used in prioritising institutions for SCARDA support and the package of capacity strengthening activities that they need to sustainably meet their objectives
- Prepare a detailed SCARDA strategy and fully budgeted set of activity work-plans completed for the implementation phase in the CORAF sub-region.
- Prepare and submit a comprehensive report which should fit into the SCARDA strategy.

B) Stakeholder Consultation Meeting

At an appropriate date to be determined, CORAF/WECARD will organise a professionally facilitated consultation workshop during which the consultants' reports will be validated. The consultants will act as resource persons during the workshop. The general objective of the workshop will be to:

Validate the report of the consultants, share and brainstorm on findings of the scoping studies with the aim of strengthening ownership of the program by sub-regional stakeholders. The workshop will also examine the Monitoring & Evaluation framework, communication strategy and provide inputs for the development of a comprehensive SCARDA strategy for the sub-region.

The stakeholder Consultation workshop's objectives will specifically:

- i. Gather stakeholder views from national, sub regional and regional perspectives
- ii. Report findings of scoping studies and secure agreement on the Programme's priorities
- iii. Agree on implementation strategies
- iv. Develop a logical framework (outputs, performance indicators and means of verification) and roles and responsibilities of the various actors.

2) Reports:

The two Consultants will submit one harmonized report to CORAF/WECARD. The report must contain a table of contents, Executive Summary, and the main report, with references and annexes where appropriate. Include in the annex your detailed plan of action – field visits and methodology used during the consultation. The harmonized report will be submitted on the following dates:

- Interim report- 15th May, 2007
- Final report- two weeks after the validation workshop

Annex 2: A Model Memorandum of Understanding for the implementation of SCARDA activities.

It is established and signed between:

SCARDA Programme represented here by the regional Coordinator, named the customer

And Institution..... represented here by....., named the provider of service

The following Memorandum of understanding:

Article1. Objective of the Memorandum.

The objective of this memorandum is to define the framework and to specify terms of implementation and of the mission that the customer entrusts to the provider of service;

Article 2. Definition of the programme.

The customer entrusts to the provider of service the responsibility to implement in best conditions the training programme describes below :

- A
- B
- C
- D
- E
- Etc.

Article 3. Terms of the implementation.

The technical terms of implementation and the financial management of the programme will be made into a document, signed by the two parties and

annexed to the present memorandum. This document will specify in particular the aims and objectives, the duration of the implementation, expected results and means to be used (human resources, infrastructure, material equipments).

Article 4. Budget.

The customer places at the disposal of the service provider a budget for the implementation of the mission. To this end, a budget proposal is proposed by the provider of the service, discussed and concluded by a common agreement and signed jointly. This budget which indicates modalities of payment is annexed to the present memorandum.

Article 5. The follow-up of the mission implementation.

The follow-up of the programme implementation is entrusted to the SCARDA Advisory technical committee from information which the customer communicates to him.

To this end:

The client receives from the service provider a quarterly progress report with encountered difficulties.

The customer receives from the service provider a final report at the end of the programme implementation.

The customer reserves the right to pay visits in the field during programme implementation, either by himself or by an expert of his choice. A visit report will be produced.

Article 6. Cancelling of the memorandum.

If events beyond control of one of the two parts came to suddenly compromise the good implementation of the programme, the party concerned can, by a written notification to the other party, to request for the annulations of the memorandum within thirty days.

Article 7. Litigation.

Any litigation which will occur in the implementation of the clauses of this memorandum will be amicable regulated, between the two contracting parties. If the disagreement persists, the implication of the proficient authorities of the two contracting parts will be requested.

Article 8. Entry into force.

This present agreement enters into force after the signature by the two contracting parties from the approval date by the proficient authorities of the two contracting parties.

Annex 3 Working Documents

i. Conceptual Framework

Conceptual Framework for the scoping study for capacity strengthening requirements for agricultural research in the NARS of the CORAF/WECARD Sub-region.

by

Anthony Youdeowei & Ahmadou Lamine Ndiaye

Background

The results of FARA's assessment of the requirements for efficient, effective and productive national agricultural research systems in Africa identified major weaknesses constraining the performance and agricultural delivery of NARS. As a follow up of this assessment, FARA developed the SCARDA project, with support from DFID, to address the NARS deficiencies identified through strengthening the priority human and institutional capacities in order to significantly improve agricultural research performance and delivery in Africa. The goal of SCARDA is "to contribute to sustained poverty reduction in Sub-Saharan Africa by empowering institutions and stakeholders involved in agricultural research and development to leverage the full potential of agriculture in sustainable wealth creation" SCARDA is designed to consist of two major components, namely (i) strengthening competences and capacity in agricultural research management and (ii) strengthening capacity for professional development of agricultural scientists and extension workers in agricultural research and development.

The thrust of component one is to improve agricultural research management in all its ramifications, including human resources and financial management through training, attachments and mentoring to equip NARS personnel with the appropriate knowledge and skills for effective management of national agricultural research. Component two aims to advance the knowledge and skills required by scientists and other personnel to conduct high quality and nationally relevant research to significantly improve agricultural research performance and delivery to achieve the desired impact to end users and intended beneficiaries.

Thus it is envisaged that the successful implementation of SCARDA will significantly contribute to enhancing the efficiency and effectiveness of African NARS so that they can fulfil their national mandates through adopting the innovation systems approach to agricultural research for development and establishing functional and effective partnerships and collaboration with all relevant stakeholders in the agricultural production, marketing and value chain.

SCARDA is a FARA program implemented through the SROs according to the project implementation model established by FARA and the SROs. The program is designed to be implemented in two phases, a 6 month Inception phase immediately followed by a 3 year implementation phase. During the inception phase, the SROs are expected to conduct a scoping study with national stakeholders to identify the priority capacity strengthening needs that can be supported by SCARDA. In this regard, it is understood that the major kinds of capacity strengthening needs to be supported will focus attention on professional and skills development of personnel in agricultural research and development organizations and institutions as well as strengthening institutional capacities for enhanced performance. SCARDA will not likely support issues related to institutional infrastructural development or long term higher degree training.

In view of the limitations of time and available financial resources, CORAF/WECARD has decided to focus implementation of capacity strengthening activities on the NARIS which constitute the major component of national agricultural research systems.

Methodology and Process for the Scoping study

Characterisation of Stakeholders

The Consultants undertaking the scoping study in the ASARECA sub-region have identified five categories of interacting institutional and organizational stakeholders in NARS as follows:

1. Policy institutions – providing policy guidance, including policy makers in the Ministries of Agriculture, Science and Technology
2. Demand side institutions – the ultimate beneficiaries of agricultural research for development.

3. Supply side institutions – national and private research institutions, including universities, that conduct agricultural research for development
4. Intermediary organizations – playing a facilitating role, these include advisory/extension service providers, input suppliers, value addition and chains and marketing systems.
5. Capacity building institutions – institutions, including networks, which have relevant experience and are involved in building capacity to build capacities.

The CORAF/WECARD scoping study will also adopt this categorization of stakeholders

Methodology

For this scoping study, CORAF/WECARD decided to make contact with and undertake extensive consultations with its national partners through two Consultants assigned to conduct this scoping study. Thus a strongly participatory approach is being adopted for this study, involving the use of carefully designed questionnaires, personal structured interviews with relevant partners and group discussions in all the 22 countries in the CORAF/WECARD mandate zone.

The anticipated output of the consultations with CORAF/WECARD NARS is a document that outlines the priority individual and institutional capacity needs for efficient and effective agricultural research performance and delivery in the NARIS. This document will then feed into the African continental capacity strengthening implementation strategy and business plan for DFID funding and implementation during the immediate and following three years.

NARS partners will be expected to participate fully in this scoping study, including providing the following assistance to the consultants

- vi. identify and appoint a local contact person who will work full time with the consultants during the study.
- vii. complete as much as possible, the questionnaires already distributed by the CORAF/WECARD secretariat.
- viii. assemble relevant documentation such as (a) the approved national agricultural development strategy and implementation plans including the national funding patterns for agricultural research (b) poverty

- reduction strategy document(c) agricultural development policies(d) national food security strategy and other related documents.
- ix. prepare briefs on the universities and higher agricultural training institutions in the country.
 - x. prepare briefs on the major agricultural development partners working with research institutes.
 - xi. prepare briefs on the on-going agricultural research and development programs and projects.
 - xii. prepare a detailed list of priority capacity strengthening needs that should be addressed to enhance agricultural research delivery – these should include
 - (a) needs for specializations in key areas of agricultural research,
 - (b) needs for strengthening institutional capacities for agricultural research management, including human resources and financial management
 - (c) needs for strengthening partnerships between research institutions and universities and other training institutions, including technical networks, NGOs and the private sector.
 - (d) if available, capacity building strategies and plans for agricultural research.
 - vii. organize group meetings of the heads of the relevant institutions with the consultants to discuss and endorse the priority capacity strengthening needs for agricultural research. It is proposed that at least 2 meetings will be held to finalize this issue.

ii. Typology of African NARIS

Typology of NARIS. A framework for institutional analysis for the identification of capacity strengthening requirements for effective agricultural research in NARS of the CORAF/WECARD Sub-region.

by

Anthony Youdeowei

Introduction

The national agricultural research institutes, NARIS, of African NARS vary considerably in the levels of development of their scientific capacities. This was elaborated in detail by the recent FARA assessment of the efficiency and the effectiveness of agricultural research delivery of African NARS. The on-going scoping study for the SCARDA project is a capacity diagnosis of the priority strengthening needs which are specific to each NARS of the CORAF/WECARD countries, and which will form the basis for developing capacity strengthening activities targeted to the identified needs of the NARS.

CORAF/WECARD decided to focus attention on the NARIS as the major component of NARS, therefore a preliminary institutional analysis of the typology of NARIS could form a useful framework for identification of the specific kinds of capacity strengthening that would be most beneficial to different NARIS.

Typology of NARIS

Based on the results of the 2005 NARS assessment conducted by FARA, and observations during the scoping study, NARIS can be categorized according to the following three basic criteria

- Availability of adequate agricultural research capacity as related to achievement of critical mass of well trained and experienced scientists for effective execution of agricultural research programmes: the concept of RY
(RY = equivalent of one full time trained and experienced researcher for one year)
- Level to which available agricultural research capacity is harnessed to address national issues, such as food security, poverty reduction, gender, and HIV/AIDS : the concept of maximum use of scientists in the NARIS,

Universities and other development partners effectively collaborating to conduct agricultural research for national development.

- Level of national government support for agricultural research, as related to the level of annual funding of the NARIS: the concept of national government allocation of adequate funds, provision of an enabling agricultural research environment and other resources for effective agricultural research.

Based on these criteria, Anthony Youdeowei and Hans Dobson developed a NARIS Typology Matrix as shown in figure 1.

<i>Capacity factor</i>	<i>NARIS Typology Class</i>							
	1	2	3	4	5	6	7	8
1. Scientific Research Capacity	S	S	S	W	W	W	S	W
2. Harnessing of capacity	S	S	W	W	S	S	W	W
3. National government support	S	W	W	S	S	W	S	W

*Figure 1 NARIS Typology Matrix (Anthony Youdeowei & Hans Dobson 2007)
(Legend S = strong; W = weak)*

This matrix shows that, according to the three basic criteria, eight typology classes of NARIS can be identified. Through an institutional analysis, NARIS can be appropriately pigeonholed into any one of these typology classes.

This matrix can be further simplified to arrive at five major NARIS types as illustrated in figure 2. The countries emerging from civil conflict, namely Guinea Bissau, Liberia and Sierra Leone are considered as a special NARIS typology type.

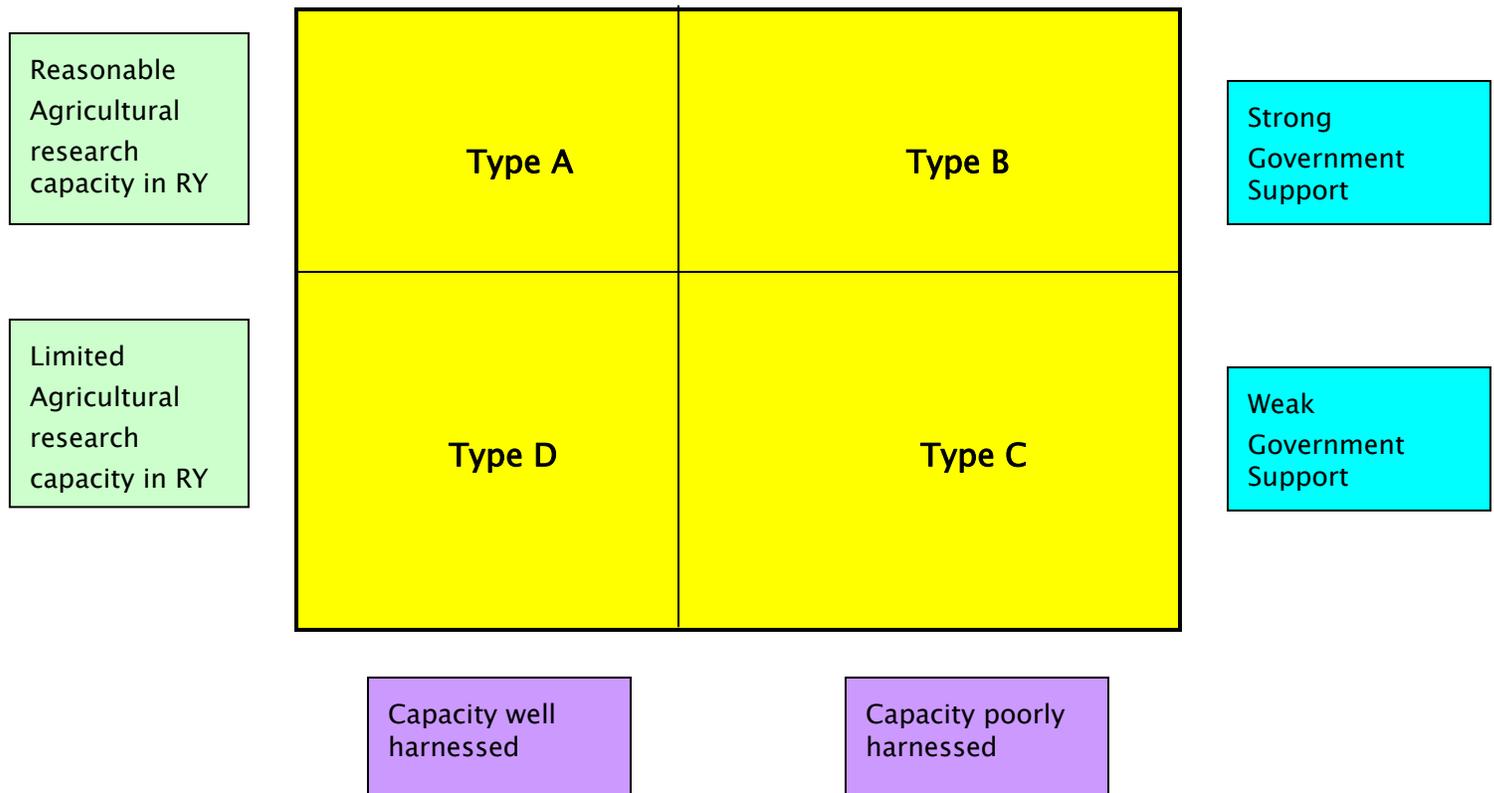


Figure 2 Typology of African National Agricultural Research Institutes, NARIS

The types of NARIS can be described as follows:

Type A – NARIS with reasonable agricultural research capacity, poorly harnessed and with weak national government support.

Type B – NARIS with reasonable agricultural capacity, well harnessed and with strong national government support.

Type C – NARIS with limited agricultural research capacity, poorly harnessed and weak national government support.

Type D – NARIS with limited agricultural research capacity, well harnessed, and with strong national government support.

Special Type E – NARIS of countries emerging from civil conflict; these approximate to typology class 8.

Using this typology matrix for capacity diagnosis, NARIS can be characterized according to type in order to arrive at an operational framework to facilitate identification of the most appropriate specific capacity building/strengthening portfolios that would be required to improve agricultural research performance and delivery.

The following process can be adopted for identification of the capacity building/strengthening areas of NARIS

- a. Conduct a detailed institutional analysis and capacity diagnosis
- b. Pigeonhole NARIS into the appropriate class in the typology matrix.
- c. To facilitate the identification of the most specific and appropriate areas for capacity building/strengthening
- d. Design the capacity building/strengthening portfolio that would be required to improve agricultural research performance and delivery

iii. Categories of capacity strengthening activities

prepared by (*Youdeowei & Dobson 2007*)

Increasingly unconventional

<i>Type of Capacity Strengthening</i>	<i>Explanatory notes</i>
University degree training to MSc/MBA, MPhil, PhD level	In-country or external, split or continuous, support may be partial or total
Professional skills training * (see next page for details)	Formal short courses in specific disciplines for individuals *
Group training courses	Participants from one or many institutions or countries – establishing professional networks



Training workshops	Participatory, pooling of knowledge and experience, targeted at, and achieving consensus on specific issues, formulating follow-up activities
Self-teaching	Through e-learning and other more traditional resources
Seminars	Institutional, national or regional events on specific issues by someone inside or outside the organisation. Benefits audience and speaker
Attending (or preferably presenting at) conferences	On key relevant aspects of current research for development
Attachments for professional development	National/regional/international
Technical study tours	Short term visits to share knowledge and build networks
Visiting scientists programme	Senior scientists, between University and NARIs
Mentoring	Within own institution or outside. Includes an element of succession planning
Continuous professional training	Long term supportive relationships
Multidisciplinary collaborations resulting in cross transfer of specialisms	Projects that require specialists from different disciplines to help each other results in productive exchange of skills and experiential learning
Facilitation of joint research programmes	Any combination of NARIs, Universities, FBOs. Industry, NGO, CBOs, farmers, national, regional international. Forums for demand-articulation by industry and farmers.
Visiting professionals from the Diaspora	Motivated professionals return to motivate scientists (hopefully not to leave!)



Teaching junior staff/schools/extension staff/farmers	Teaching a subject requires drawing on existing knowledge and skills, gap-filling, then organising these assets for coherent delivery at an appropriate level. A good way to self-teach.
Writing for popular publications – newspapers, newsletters, radio, television, websites	Requires distillation of scientific research results and presentation at appropriate level
Secondment for varying periods with extension services	Sharp end experience might help focus research on real needs. Build skills in communicating with farmers
Role of Group Leader rotated to all scientific staff in turn	Promotes ability to play different roles and communicate at different levels in the organisation
Team building activities	Simulated problem-solving scenarios – physical and intellectual. Principle of Outward Bound courses for staff and management training. Bonds teams, breaks down hierarchical barriers, fosters pooling of thoughts

* Topics for professional skills training

Research management

4. Research strategy development
5. Monitoring and Evaluation
6. Human resources
7. Programme management workflow, quality, resourcing etc
8. Financial management
9. Change management

Research delivery

10. All natural and social science specialisms
11. Tools for research:

- Data management
 - Experimental design
 - Research Proposal writing
 - Self-teaching skills
 - Scientific writing relevant to audience
 - Managing the publication of Agricultural Journals
 - Facilitation of technical networks
- Capacity building
 - Training skills
 - Teaching skills
 - Mentoring skills
 - Collaborating skills
 - Resource materials skills

In addition??:

Research equipment procurement	computers, software, lab equipment, communication facilities, access to ejournals
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Annex 3 Scoping study instruments– Questionnaires

i. Information to Partners

CORAF/WECARD–SCARDA Scoping study – Capacity strengthening for agricultural research for development

Dear Friends and Colleagues,

By now you must have hopefully received information about the CORAF/WECARD SCARDA scoping study which is being undertaken towards formulating a DFID supported capacity project for agricultural research and about my visit to your country and institution. As soon as the flight schedules are finalized in the next few days, you will be informed about the details of my arrival in your country.

Because we are desperately short of time for this activity, I am writing to suggest how we could proceed so that we achieve as much as possible during the short visit.

The primary **output of this mission** is to hopefully finalize a document that outlines the priority individual and institutional capacity needs for efficient and effective agricultural research performance and delivery in your country. This document will then feed into the sub–regional capacity strengthening proposal which will be formulated for DFID funding.

In addition to the logistic arrangements (hotel bookings, local transportation and other local logistical arrangements and contacts with relevant persons and institutions) requested by CORAF to be made for the visit, I shall be most grateful for the following arrangements.

Since it will not be possible to visit all the agricultural research institutes and other partners, may I suggest that we adopt the following procedure?

- xiii. identify and appoint a local contact person who will work full time with me during the mission
- xiv. complete as much as possible, the questionnaires already distributed to you by the CORAF secretariat
- xv. collect relevant documentation (if available) such as (a) the approved national agricultural development strategy and implementation plans including the national funding patterns for agricultural research (b) poverty reduction strategy document

- (c) agricultural development policies(d) national food security strategy and other related documents
- xvi. prepare briefs on the universities and higher agricultural training institutions in the country
 - xvii. prepare briefs on the major agricultural development partners working with research institutes
 - xviii. prepare briefs on the on-going agricultural research and development programs and projects
 - xix. prepare a detailed list of priority capacity strengthening needs that should be addressed to enhance agricultural research delivery – these should include (a)needs for specializations in key areas of agricultural research, (b) needs for strengthening institutional capacities for agricultural research management, including human resources and financial management
 - (c) needs for strengthening partnerships between research institutions and universities and other training institutions, including technical networks, NGOs and the private sector.
 - (d) if available, capacity building strategies and plans for agricultural research.
 - xx. Organize group meeting of the heads of the relevant institutions to discuss and endorse the priority capacity strengthening needs for agricultural research. It is proposed that at least 2 meetings will be held to finalize this issue.

Please let me know as soon as possible by email, if you require clarifications on any of these matters and the proposed procedure for the mission. On behalf of CORAF/WECARD, may I thank you very much for your efforts in facilitating this mission and look forward to working with you in the weeks ahead.

With good wishes

Sincerely

Anthony Youdeowei

International Consultant – CORAF/WECARD

ii. Questionnaires

1. CORAF/WECARD – SCARDA project Scoping Study – Questionnaire to NARIS

Background to this study

As a follow up of a recent FARA assessment of the efficiency and effectiveness of NARS in agricultural research, CORAF/WECARD is conducting a scoping study during the inception phase of the DFID supported FARA SCARDA project to identify the priority areas where support is needed to strengthen the capacities of NARS for agricultural research. To facilitate this process, CORAF/WECARD partners are kindly requested to provide detailed information on the following areas by completing this questionnaire.

1. Name of Organization

2. Full contact address

- Postal address
- Email
- Telephone
- Fax

3. Name of Director/ Head of Organization

4. Major funding mechanism

.....
.....

5. Current agricultural research and development Programmes (please attach extra sheets) especially addressing the following issues

- Food production and food security(including livestock, fisheries and forestry)
- Poverty reduction
- Natural resources management
- HIV/AIDS
- Women in development
- Community development

.....
.....
.....
.....
.....

6. Details of capacity strengthening needs in the following areas

- Agricultural Research delivery
- Agricultural scientific research management
- Human resources management
- Financial management
- Institutional capacities for efficient research support

7. Capacity strengthening of research personnel

- Number of research staff in specific research areas
- Competencies of staff in specific areas of research
- Research staff requirements for approved agricultural research programmes – the issue of critical mass of scientists for research programmes

8. Does your organization have a human capital development Plan ?
Yes or NO

9. If YES, give details of this plan

10. Provide details (numbers, areas of specialization) of the human capacity retention as against strengthened capacity over the last 5 years.

11. Give details of the current five year staff training plan (if available) for

- research scientists
- other institute staff
- where the training took place (in or out side Africa)

12. Partnerships:

- Names of research and development partners
- Objectives of the partnerships

- Detailed activities of each partner
- Duration of partnership
- Ways of Funding the partnership
- Staff complement of the different partners, including their areas of specialization
- Are there any emerging partnerships that require strengthening?
- What areas of strengthening are needed?

13. Linkages with other organizations

- list the major research networks to which your organization is associated
- Give details of the activities of the research networks
- State the priority needs of your organization for strengthening participation in the activities of the networks

14. List any other needs for strengthening agricultural research capacities in your organization.

15. Monitoring and Evaluation mechanism

- Give details of the M&E mechanism in your institution
- What are the plans to improve the M&E mechanism

2. CORAF/WECARD – SCARDA project Scoping Study – Questionnaire for Universities and other agricultural training institutions.

Background to this study

As a follow up of a recent FARA assessment of the efficiency and effectiveness of NARS in agricultural research, CORAF/WECARD is conducting a scoping study during the inception phase of the DFID supported FARA SCARDA project to identify the priority areas where support is needed to strengthen the capacities of NARS for agricultural research.

This questionnaire is concerned with identifying potential capacity providers of strengthening amongst which the universities and other agricultural training institutions are major and very important stakeholders. This complements

another questionnaire that is seeking to identify agricultural research and advisory institutions in need of capacity and what they require.

The major objective of this aspect of the scoping study is to identify institutions that have the training capacities, facilities and resources for providing MSc training, fellowship attachments, mentoring in science and research management and short courses on specialised skills.

CORAF/WECARD partners are kindly requested to provide detailed information on the following areas by completing this questionnaire.

1. Name of Institution
2. Full contact address
 - Postal address
 - Email
 - Telephone
 - Fax
3. Name of the Head of Institution
4. List the postgraduate courses offered in agriculture
5. For each course named, provide information on the specific areas of specialization/strength in
 - i. Agricultural research
 - ii. Professional training in agricultural research
 - iii. Joint/ collaborative research programmes
 - iv. Postgraduate supervision – (give detail records of higher degree supervision over the past 5 years)
6. What are the current opportunities for postgraduate fellowships tenable in your institution for
 - i. Studies within Africa
 - ii. Studies outside Africa

7. Does your institution offer opportunities for the following? If Yes give details

- i. Short specialized courses in agricultural research for development (list the courses and their duration)
- ii. Short term attachments
- iii. In-service training for serving agricultural research officers
- iv. Short courses in agricultural research management
- v. Short courses in financial management for agricultural research
- vi. Short courses in general agricultural research management
- vii. Short courses in human resources management
- viii. Systems and/or personal mastery skills

8. Which institutions in your country offer the following?

- i. Attachments for professional training in agricultural research management
- ii. Research project development and research proposal preparation
- iii. Participatory approaches to agricultural research with farmers and other beneficiaries
- iv. Innovations systems approaches to agricultural research
- v. Application of Information and Communication Technologies for agricultural research
- vi. Communication of agricultural research results
- vii. Monitoring and Evaluation of agricultural research

9. What are the critical capacities needed by your institution to improve performance; categorize them in the following areas

- i. Institutional infrastructure
- ii. Human resources
- iii. Technical support
- iv. Training resources
- v. Internet access
- vi. Documentation services

10. Name the institutions/organizations/ networks that your institution collaborates with

i. Within Africa

ii. Outside Africa

What is the nature of collaboration and what are the major strengths of each collaborating institution.

Annex 4. CORAF/WECARD – SCARDA project Scoping Study:

Questionnaire on criteria for selecting countries and institutions to be included in the SCARDA Programme

I. Selection of focal countries

1. It is a country emerging from civil conflict?
 - Yes
 - No

2. National agricultural research institutions (NARIS) are present:
 - Yes
 - No

3. How strong are the NARIS ?
 - Very strong
 - Medium
 - Weak
 - Very weak

4. Efficacy of the staff:
 - Staff with adequate capacities
 - Staff need more training

II. Selection of candidate institutions to be included in the programme

1. The institution has agricultural research for development programmes:
 - Yes
 - No

2. Are the research programmes aligned with the national agricultural development strategies and plans?

Yes

No

3 Do the major issues addressed by these programmes include the following ?

- Food production
- Poverty reduction
- Natural resources management
- HIV/AIDS
- Women in development
- Community development
- Others (specify)

4. How well are these programmes adapted to addressing the needs of women farmers?

- Very well
- Not very well
- Not adapted

5. Are there women research staff included in the programme?

- Yes
- No

6. What is the status of women research staff?

- Institution Manager
- Scientist
- Technician

7. Institutional weaknesses are mainly related to:

- Scientific capacity of the research staff
- Managerial capacity of leaders
- Infrastructure
- Financial management

8. Status of financial stability of the institution

- Very weak – mainly external donor dependent

- Weak – partly nationally funded
- Strong – mainly nationally funded with strategic external funding

9. Can institutional weaknesses be addressed by SCARDA

- Yes
- No

III. Selection of candidate institutions to be visited

1. How old is the institution?

- Newly created (less than 5 years)
- From 5 to 10 years old
- More than 10 years old

2. Has the institution ever been surveyed for need assessment?

- Never
- Once
- Many times
- All the time

3. Are all necessary details known from the institution?

- No
- Yes

IV. Selection of institutions to be included in the Implementation phase

1. Does the institution have very important institutional weaknesses?

- Yes
- No

2. Are these weaknesses more related to:

a) Managerial capacity?

- Yes
- No

- b) Scientific capacities?
 - Yes
 - No

- c) Others
 - yes
 - No

- d) Can SCARDA address these weaknesses?
 - Yes
 - No

Criteria for Selecting Service Provider Institutions to be Included in the SCARDA Programme

1. What kind of agricultural institution is it?
 - a. International institution
 - b. National institution
 - c. Regional institution

2. Where is it located?
 - a. In Africa
 - b. In Europe
 - c. In Asia
 - d. In America

3. How old is it?
 - a. Less than 5 years
 - b. Up to 10 years
 - c. More than 10 years

4. In what kind of activities is it involved in?
 - a. Research
 - b. Undergraduate Training
 - c. Msc and PhD Training

- d. Extension
 - e. Other (precise)
5. Is it a Network of institutions?
- a. Yes
 - b. No
6. Who are the members?
- a. African universities/research centers
 - b. European universities/research centers
 - c. American universities/research centers
 - d. Asian universities/research centers
 - e. African and European universities/research centers
 - f. Africa, European and American universities/research centers
7. How many member institutions does it have?
- a. 1 – 5
 - b. 6 – 10
 - c. 11 – 15
 - d. 20 – 50
 - e. More than 50
8. Does the institution's work cover the following domains?
- a. Agricultural production
 - b. Natural resources Management
 - c. HIV/AIDS
 - d. Community development
 - e. Women in development
 - f. Human resources management
 - g. Conflict resolution
 - h. Others (specify)
9. What are the institution's major achievements?

Annex 5. Concept note for the CORAF/WECARD SCARDA Scoping Study Stakeholders Workshop

by

Anthony Youdeowei & Ahmadou Lamine Ndiaye

Dates July 11 – 12.

Venue CORAF/WECARD Headquarters Dakar Senegal

Background to SCARDA

The results of FARA's assessment of the requirements for efficient, effective and productive national agricultural research systems in Africa in 2005 identified major weaknesses constraining the performance and agricultural delivery of NARS.

As a follow up of this assessment, FARA developed the SCARDA project, with support from DFID, to address the NARS deficiencies identified through strengthening the priority human and institutional capacities in order to significantly improve agricultural research performance and delivery in Africa. The goal of SCARDA is *“to contribute to sustained poverty reduction in Sub-Saharan Africa by empowering institutions and stakeholders involved in agricultural research and development to leverage the full potential of agriculture in sustainable wealth creation”* SCARDA is designed to consist of two major components, namely (i) strengthening competences and capacity in agricultural research management and (ii) strengthening capacity for professional development of agricultural scientists and extension workers in agricultural research and development.

The thrust of component one is to improve agricultural research management in all its ramifications, including human resources and financial management through training, attachments and mentoring to equip NARS personnel with the appropriate knowledge and skills for effective management of national agricultural research.

Component two aims to advance the knowledge and skills required by scientists and other personnel to conduct high quality and nationally relevant research to

significantly improve agricultural research performance and delivery to achieve the desired impact to end users and intended beneficiaries.

Thus it is envisaged that the successful implementation of SCARDA will significantly contribute to enhancing the efficiency and effectiveness of African NARS so that they can fulfil their national mandates through adopting the innovation systems approach to agricultural research for development and establishing functional and effective partnerships and collaboration with all relevant stakeholders in the agricultural production, marketing and value chain. SCARDA is a FARA program implemented through the SROs according to the project implementation model established by FARA and the SROs. The program is designed to be implemented in two phases, a 6 month Inception phase immediately followed by a 3 year implementation phase. During the inception phase, the SROs are expected to conduct a scoping study with national stakeholders to identify the priority capacity strengthening needs that can be supported by SCARDA. In this regard, it is understood that the major kinds of capacity strengthening needs to be supported will focus attention on professional and skills development of personnel in agricultural research and development organizations and institutions as well as strengthening institutional capacities for enhanced performance. SCARDA will not likely support institutional infrastructural development or long term higher degree training.

In view of the limitations of time and available financial resources, CORAF/WECARD has decided to focus implementation of capacity strengthening activities on the NARIS which constitute the major component of national agricultural research systems. But other entities of the NARS such as Universities, NGOs, the Private Sector and Farmers organizations will be involved to a limited extent.

Characterisation of Stakeholders

Five categories of interacting institutional and organizational stakeholders to participate in SCARDA have been identified in NARS as follows:

6. Policy institutions – providing policy guidance, including policy makers in the Ministries of Agriculture, Science and Technology

7. Demand side institutions – the ultimate beneficiaries of agricultural research for development.
8. Supply side institutions – national and private research institutions, including universities, that conduct agricultural research for development
9. Intermediary organizations – playing a facilitating role, these include advisory/extension service providers, input suppliers, value addition and chains and marketing systems.
10. Capacity building institutions – institutions, including networks, which have relevant experience and are involved in building capacity to build capacities.

The Scoping study

To define and prioritize the capacity strengthening needs of NARIS, and to facilitate the design activities for the capacity strengthening portfolio for different NARIS, CORAF/WECARD commissioned a scoping study in all the 22 countries in the CORAF/WECARD region to work with the national partners to formulate a SCARDA Implementation plan. During this study, CORAF/WECARD consultants worked closely with national partners to identify the priority capacity strengthening needs for agricultural research specific for the country. A concise briefing on the outcome of this study will be presented as the working document for the proposed stakeholders workshop.

Objectives of the Stakeholders Workshop

The objectives of this stakeholders workshop are therefore as follows:

- 6 To develop and achieve a common understanding and shared vision of the SCARDA project in the context of national, sub-regional and regional perspectives for agricultural development.
- 7 Build consensus on the priorities for strengthening capacities in agricultural research and development in Africa.
- 8 Obtain agreement on the overall portfolio of activities for strengthening capacities in agricultural research and development in the CORAF/WECARD sub-region.

- 9 Develop institutional arrangements for CORAF/WECARD SCARDA project management implementation strategy, including linkages with FARA Secretariat and the other SROs.
- 10 Recommend the next steps for SCARDA implementation in the CORAF/WECARD sub-region.

Expected outputs

The major outputs expected from this workshop are as follows:

- 1 A clear and common understanding of the implications of the successful implementation of the SCARDA project for agricultural development in Africa.
- 2 An overall list of activities for the implementation of the SCARDA project in the sub-region
- 3 A project management framework for implementation of SCARDA in the CORAF/WECARD sub-region.

Arrivals

All workshop participants are expected to arrive in Dakar on 10 July 2007. The Consultants and the Facilitators are will arrive in Dakar at least 2 days (i.e. 9 July) before the start date to finalize preparations for the workshop.

Tentative Workshop Programme

Day 1 – June 11

- Opening
- Workshop Briefing – the SCARDA project; Workshop objectives; expected outputs
- Overview of the Output from the Scoping study – from a Working Document
- Discussion of the Scoping Study outputs
- Working Group activities

Day 2 – June 12

- Presentation of Reports from Working Groups
- Discussion of working group reports
- Discussion of CORAF/WECARD SCARDA project management structure
- Synthesis and Consensus
- Closing

Consultants proposed list of Stakeholders workshop participants

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- 32 PARTICIPANTS CORAF

