#### Annex 1

# WARDA 5th EPMR Panel Composition and Biodata

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## **TOLLENS, Eric (BELGIUM)**

**Position**: Since 1983 Professor of Agricultural Economics and Head of the Centre for Agricultural and Food Economics, Katholieke Universiteit Leuven, Belgium.

**Expertise**: Agricultural Economics, Agricultural Marketing, African Agricultural Research.

**Education**: Ph.D. Agricultural Economics, Michigan State University (1975); M.A. Economics, Michigan State University (1971); Agricultural Engineer, K.U.Leuven (1967).

Experience: 2001-present: Member Scientific Committee of the Sahel Institute (INSAH), Bamako, and Regional Centre AGRHYMET, CILLS, Niamey; 2001-present: Member Scientific and Technical Council of ISRA, Dakar; 2001: Member of the Evaluation Team of PRASAC, DGCID, Paris; 2000: Consultant to the World Bank on the rice market situation in Liberia and the scope for a rice market information system; 2000: Participation in GFAR meeting in Dresden as Belgian representative; 1999-present: Member Scientific Committee PRASAC, now ARDESAC, N'Djaména; 1998-2004: Member of the Jury, King Baudouin Prize for Development Cooperation; King Baudouin Foundation, Brussels; 1998: Member of the External Evaluation Teams of PSI-C0RAF, Dakar; 1997-1999: Member IFAD External Research and Development Panel; 1995-1997: Vice-President and Treasurer of NATURA; 1997-present: Member of the Advisory Committee of CTA, Wageningen; 1985-present: Vice-President of the NGO ACT, now TRIAS; 1983-present: Professor of Agricultural Economics, K.U.Leuven; 1979-1983: Administrator, Commission of the European Communities, EUROSTAT, Luxemburg; 1977-1979: Professor of Agricultural Economics, K.U.Leuven; 1971-1977: Professor of Agricultural Economics, Université Lovanium and Université Nationale du Zaïre, Yangambi.

CGIAR: From 2007: Member of the Board of ICRAF, Nairobi; 2006: Member Technical Team, Independent External Evaluation of FAO; 2005: Member of the NATURA-ECART monitoring mission to ICRISAT (biotechnology), India and Kenya, for the EC; 2004: Member of the NATURA-ECART monitoring mission to WorldFish Center, genetic improvement of fish, Malaysia and Philippines, for the EC; 2003: Member of the NATURA-ECART monitoring mission to CIP, Peru and Bolivia, project 7B (genetic resources), for the EC; 2000-2001: Member WARDA 4th EPMR Panel; 1998-2004: Member of the Board of Trustees, IITA, Ibadan; 1989-1990: Member IITA External Program Review; 1990-1995: Member European Scientific Advisory Committee IFPRI; 1988-1991: Consultant CGIAR Task Force on sub-Sahara Africa (maize and cassava).

## **COURTOIS, Brigitte (FRANCE)**

**Position**: Since 2000: Cirad-AMIS, France: Crop geneticist, head of the Bioinformatics team of CIRAD Biotechnology Unit

**Expertise**: Plant breeding and genetics rice; genetic data analyses, project management.

**Education**: PhD in Genetics and Plant Breeding (1981), University of Montpellier, France, Thesis on "Variability of the progenies of 3 rice crosses fixed by anther culture and single seed descent"; MSc in Plant Breeding (1978), ENSA Montpellier, France. Thesis on "Genetic improvement of apricot and almond tree earliness by gamma irradiation"

**Experience:** 20 years of experience in plant breeding and genetics, mostly on rice (genetic resources management, conventional breeding, molecular genetics, quantitative genetics, marker-aided selection; participatory plant breeding; biostatistics) with focus on drought resistance, disease resistance, interference with weeds, and grain quality. 1999-1993: Cirad-CA upland rice breeder and geneticist seconded at the International Rice Research Institute, Los Baños, Philippines; 1985-1992: Cirad-CA, Upland rice breeder, Guadeloupe, French West Indies. Published on genetic improvement of rice and other tropical crops (cocoa, cotton, oil palm, sorghum, sugar cane, taro).

# MENETE, Zelia (MOZAMBIQUE)

**Position**: Since Oct 2005: Director General of the Manica Polytechnic Institute; since 2006 Associate Professor at the Faculty of Agronomy and Forestry Engineering at the Eduardo Mondlane University (UEM).

**Expertise**: Southern Africa, soil science, water management, rice yields and soil research, environmental issues, higher education systems, remote sensing and GIS

**Education**: 2005 PhD in Strategies for improving rice yields on salt-affected soils of the Chokwé irrigation system, Mozambique, Dept Crop and Soil Sciences, Cornell University, Ithaca, New York; 1993 MS in Soil & Water Management specializing in Land Evaluation & Soil Survey Remote Sensing and GIS, Wageningen Agricultural University, The Netherlands; 1990 BS Hons. in Agronomy Eduardo Mondlane University (UEM), Maputo, Mozambique

2005-2002 Environmental and capacity building adviser at Matola City Council (2003-Experience: 4); Assistant Professor and Advisor to the mayor of Matola in all environmental and capacity building aspects, specifically on environmental planning and management, staff training, laws and regulations; 2001-1998 Director of Studies at the Department Rural Engineering at the Faculty of Agronomy and Forestry Engineering (FAEF) and coordinator of GRNB (Grupo de Gestao de Recursos Naturais e Biodiversidade) - a Faculty consultancy group; 2000-1998: Part-time councillor for rural development and environment at Matola City Council; 1997-1994: Assistant Professor at UEM and consultant for GRNB; 1997-1996: Part-time technical advisor of Finnagro (Finish organization) at SATIM Project in Boane, Mozambique; 1991-1990 Lecturer at UEM, Faculty of Agronomy and Forestry Engineering (FAEF); 1988-1989 Teaching assistant UEM. Has also done consultancies for the Ministry for Environmental Affairs, Ministry of Education, Maputo-Mozambique, ACOPS, Swiss Development Cooperation (SDC), the Irish Embassy in Maputo, DGIS in the Netherlands Embassy in Maputo, Helvetas (ONG), The World Bank trough a project in Ministry of Planning and Finance and also with the Ministry of Higher Education Science and Technology. Member of the Scientific Committee in Agriculture (advises the Government of Mozambique in Agriculture related issues) and the Soil Science Society of America (SSSA).

## SACHDEVA, Pammi (USA)

**Position**: Independent Consultant, since 2001

**Expertise**: Program and institutional assessment, recruitment, and human resource management in the agricultural research and public health sectors

**Education**: Ph.D., Social Systems Sciences, the Wharton School, University of Pennsylvania, Philadelphia, 1988. Specialization in systems approach to organizational analysis, planning and management. MBA, the Indian Institute of Management, Ahmedabad, 1971. Major in organizational behaviour and human resource management.

Experience: Recent clients include the World Bank, FAO, WHO, Islamic Development Bank, and the Global Water Partnership. Prior to this, he worked for over twenty years in the World Bank and the CGIAR, retiring in 2001 as adviser. At the CGIAR Secretariat, he undertook or facilitated comprehensive assessments (EPMRs) of the governance, strategy, programs, organization, and management of twelve of the fifteen CGIAR-supported international agricultural research Centers; and served as member of the CGIAR gender and diversity advisory board, and of various CGIAR task forces and working groups. At ISNAR, he served as Chair of HRM working group and head of training program; and led a research project on the organization and structure of national agricultural research systems in developing countries. He has undertaken work-related travel to over thirty developing countries.

# HASEGAWA, Toshihiro (JAPAN)

**Position**: Since 2006: Senior Researcher Agro-Meteorology Division, National Institute for

Agro-Environmental Sciences **Expertise**: Rice, agronomy

**Education**: Doctor of Agriculture (1996), Thesis on: Modeling the effect of nitrogen on rice growth and development; Masters of Agriculture 1988, Bachelor of Agriculture 1985; all from Kyoto University.

Experience: 2003 Chief, Atmospheric Impacts Unit, Department of Global Resources, National Institute for Agro-Environmental Sciences; 1999 Associate Professor, Graduate School of Agriculture, Hokkaido University; 1997 Assistant Professor, Faculty of Agriculture Hokkaido University; 1994 Assistant Professor, School of Agriculture, Kyushu Tokai University; 1990 Research Instructor, School of Agriculture, Kyushu Tokai University; Crop Science Society of Japan Research Award for Young Scientists (1998): "Modeling the effects of nitrogen nutrition on rice growth and development". Widely published on rice management and improvement Member of the Crop Science Society of Japan; American Society of Agronomy; Society of Agricultural Meteorology of Japan

# NCUBE, Mary (ZAMBIA)

**Position**: Since 1997: Chief Executive, M T Ncube and Associates **Expertise**: Auditing, financial management, corporate governance

**Education**: 1988-1984 Associate of the Chartered Institute of Certified Accountants (ACCA), London School of Accountancy/ Zambia Centre for Accountancy Studies; BA, Economics 1982, University of Zambia

Experience: Ms. Mary Ncube has over 23 years working experience as a consultant, accountant and auditor. She spent sixteen years with KPMG Peat Marwick, Zambia where she began as an Audit Assistant in 1982. In 1991 she was promoted to Audit Manager, and was admitted to Partnership in 1995. She is the first female of African descent to have been admitted to Partnership in KPMG globally. In addition to accountancy and finance related work, Ms Ncube has worked with a number of organizations on assignments related to economic and organizational development and management of aid and project funds including USAID, NORAD, World Bank, UNDP and UNHCR. Professional memberships: fellow member of the Association of Chartered Certified Accountants (ACCA); Fellow member Zambia Institute of Chartered Accountants (ZICA); member of the Institute of Directors of Zambia and the Economics Association of Zambia. Also a Council member of the Medical Council of Zambia: a Tribunal Member of the Zambia Revenue Tax Appeals Tribunal Board

Medical Council of Zambia; a Tribunal Member of the Zambia Revenue Tax Appeals Tribunal, Board member to the HIVOS, Zambia; Chair Bank Audit Committee- Stanbic Bank Zambia, Director Energy Regulation Board of Zambia, Director on M.T.N. Special Engagements Limited (a consultancy firm) and M.T.N. Boardroom and Conferences Limited; and a member of the UN Conference on Trade and Development (UNCTAD) Group of experts on International Standards of Accounting and Reporting. Previous Directorships include: Director on Zamnet Communications Systems Board; Council member, Zambia Institute of Chartered Certified Accountants; Chairperson ZAMCOM Lodge Board; Treasurer, Zambia Women's Lobby; Chairperson, Audit Committee of Lusaka International Community School; Chairperson, Women's Capital Development Fund, Steering Committee of Securities and Exchange Commission (SEC).

#### Annex 2

a. Guidelines for External Programmed and Management Reviews of CGIAR Centers, including Terms of Reference for External Programmed and Management Reviews of CGIAR Centers

#### INTRODUCTION

In June 2005 the CGIAR approved the policy document, *Monitoring and Evaluation System for the CGIAR Centers*. The new components of the monitoring and evaluation (M&E) system include annual performance measurement (PM), Center Board Commissioned External Reviews (CCER) and streamlined External Program and Management Reviews (EPMR).

EPMRs are commissioned by the SC on behalf of the Group and organized jointly by the SC and the CGIAR Secretariat. They are conducted every five years for each Center. These Guidelines are to be used in implementing the EPMR as part of the new M&E process. They incorporate the Terms of Reference for EPMRs (TOR) as endorsed by the Group in 1997. They do, however, bring new approaches to the EPMR based on an enhanced Center Board Program for CCERs. The guiding principles for the Center Boards to implement CCERs are attached (Annex 2).

In the new M&E system, EPMRs continue to provide a measure of central oversight and serve as an essential component of the CGIAR's accountability system. The EPMRs bring to a closure a five-year review cycle. They complement the annual Science Council (SC) assessment of the MTPs, the annual self-assessment mechanisms of the PM, and the CCER Program of the Boards, covering the Center's research Program and management.

These Guidelines have been designed for review of a Center. A companion Guideline will be developed for the External Reviews of Challenge Programs based on the same principles.

# TERMS OF REFERENCE FOR EPMRS<sup>115</sup>

## Objectives and Scope

EPMRs seek to inform CGIAR members that their investment is sound, or recommend measures to make it so. Members of the CGIAR and other stakeholders can be informed whether the Center is doing its work effectively and efficiently. EPMRs are both retrospective and prospective and help ensure the Centers' excellence, relevance and continued viability, and the CGIAR System's coherence. Each review is expected to be strategic in orientation and as comprehensive as the situation warrants.

The broad objectives of EPMRs are to: a) provide CGIAR members with an independent and rigorous assessment of the institutional health and contribution of a Center they are supporting; and b) to provide the Center and its collaborators with assessment information that complements or validates their own evaluation efforts, including the CCERs.

The EPMR Panel is specifically charged to assess the following:

- The Center 's mission, strategy and priorities in the context of the CGIAR's priorities and strategies:
- The quality and relevance of the science undertaken, including the effectiveness and potential impact of the Center's completed and ongoing research;
- The effectiveness and efficiency of management, including the mechanisms and processes for ensuring quality; and
- The accomplishments and impact of the Center's research and related activities.

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<sup>&</sup>lt;sup>115</sup> As endorsed by the CGIAR in 1997.

# Topics to be covered

## Mission, Strategy and Priorities

- The continuing appropriateness of the Center's mission in light of important changes in the Center and its external environment since the previous external review.
- The policies, strategies, and priorities of the Center, their coherence with the CGIAR's goals (of poverty alleviation, natural resources management, and sustainable food security), and relevance to beneficiaries, especially rural women.
- The appropriateness of the roles of relevant partners in the formulation and implementation of the Center's strategy and priorities, considering alternative sources of supply and the benefits of partnerships with others.

## Quality and Relevance

- The quality and relevance of the science practiced at the Center.
- The effectiveness of the Center's processes for planning, priority setting, quality management (e.g., CCERs, peer reviews and other quality and relevance assurance mechanisms), and impact assessment.

# Effectiveness and Efficiency of Management

- The performance of the Center's Board in governing the Center, the effectiveness of leadership throughout the Center, and the suitability of the organization's culture to its mission.
- The adequacy of the Center's organizational structure and the mechanisms in place to manage, coordinate and ensure the excellence of the research programs and related activities.
- The adequacy of resources (financial, human, physical and information) available and the effectiveness and efficiency of their management.
- The effectiveness of the Center's relationships with relevant research partners and other stakeholders of the CGIAR System.

## Accomplishments and Impact

- Recent achievements of the Center in research and other areas.
- The effectiveness of the Center's programs in terms of their impact and contribution to the achievement of the mission and goals of the CGIAR.

## **CONDUCTING EPMRs**

In the new M&E system, EPMRs become increasingly an audit of the other components: annual PM and CCERs. Beyond the broad objectives stated in the TOR, the EPMRs are meant to provide Centers with independent recommendations and advice on how to improve the efficiency and effectiveness of the Center in pursuit of its mission and goals. Thus, the EPMR report is both an audit on past performance and a strategic document with a focus on the Center's future. Specifically, EPMR needs to advise on what changes the Center might consider in terms of its programmatic strategy and objectives; what new avenues of collaboration and partnership it might consider; and what structural changes the Center might consider in pursuing more efficiently and effectively its mission and goals.

The EPMRs are designed to complement and build on the CCERs by providing a more strategic overview of the performance of the Center. The PM provides inputs to both CCERs and EPMRs. To be credible and acceptable, all CCERs and EPMRs must strive to be objective and transparent. While the EPMR process must be participatory to enhance mutual understanding of all the important issues,

the distance between the Panel and the Center must be observed to protect the Panel's integrity and independence. The reports must be direct, explicit and frank. These principles are observed throughout the review process.

## The Participants

The participants in an EPMR are: the EPMR Panel Chair and members; the CGIAR Members, the SC, the SC Secretariat and the CGIAR Secretariat; the Panel Secretary; members of the Center's Board, management and staff; the Panel's support team of external consultants and resource persons; Chairs of CCERs (as resource persons where possible); and the Center's many partners at the local, national, regional and international levels.

# Strategic Issues to be addressed by the Panel

In addition to the generic TOR for each EPMR which have been approved by the Group, the SC identifies a set of Center specific issues to be addressed by the Panel. The SC does this by canvassing views from SC members, CGIAR Members, the Center under review, other CGIAR Centers and the CGIAR Secretariat. Items are also drawn from the CCERs and the SC assessment of the Center's Medium-Term Plans. The list of issues is shared with the Center and the Panel as specific strategic issues to be addressed during the review.

## **Implementation**

The SC and the CGIAR Secretariat jointly organize the EPMRs. The SC focuses on all programmatic aspects and the CGIAR Secretariat focuses on Center management and governance aspects of the review. Consulting with the Center management as necessary, they determine review design and Panel composition.

The SC and CGIAR Secretariats provide a resource person for the respective aspects of the review. A staff member of the SC Secretariat serves as Panel Secretary and resource person for programmatic issues. S/he assists in organizing the review in consultation with the CGIAR Secretariat, the Center, the Panel Chair and members.

The EPMR relies heavily on Board commissioned CCERs, which are expected to greatly improve the efficiency of the EPMR process.

The EPMR schedule consists of the pre-implementation phase (preparation by the Center, SC and the CGIAR Secretariat), Panel interaction with the Center Board, usually through attendance at a Board meeting; Initial Phase visit to the Center HQ, which may take place back-to-back with the Board meeting; visits to selected field sites as deemed necessary by the Panel Chair; and a Main Phase also at the Center HQ during which the Panel completes all the chapters of the report.

## The Pre-implementation Phase

The pre-implementation phase of the EPMR begins with the Board ensuring they have in place an adequate cluster of CCERs. The *Principles* suggest that CCER to be effective for the EPMR should be reasonably current, i.e. within 3 years of the EPMR. The following steps are needed: The SC Director will send a formal letter to the Center three years before the EPMR begins with a request to the Board to provide a schedule of the CCERs to be conducted during the three year period leading into the review.

The CCER reports, including the Panel membership and their qualifications, and an account of the follow-up actions planned or taken by the Center Management and Board are made available to the SC and CGIAR Secretariats at the onset of planning of the EPMR.

#### The EPMR Panel Profile

The design of the EPMR and the Panel composition depend on the coverage and quality of the CCERs. The SC and CGIAR Secretariats brief the Panel Chair on the strategic issues raised and on the information available from the CCERs. The final design of the EPMR, including the Panel profile and size, will be adjusted with the aim of not duplicating the CCERs. The Panel will consider the CCERs and assess their quality as input to the EPMR.

#### **Panel Chair and Panel Members**

The quality of the outcome of the EPMR depends critically on the quality of the Panel Chair and the Panel members. In order to engage highly competent professionals, the EPMR process must be efficient, including timely planning. The Panel Chair and member selection process follows procedures established by the SC and the CGIAR Secretariat. The process of identifying a Chair begins about one year before the EPMR. The Panel Chair should be a recognized expert in a relevant area of research with considerable experience in research management and understanding of international agricultural research in the development context, have excellent analytical and leadership capability, and excellent command of English. S/he should have served on an EPMR or equivalent review outside the CGIAR and demonstrated capacity to lead an independent and objective review.

The Panel Chair is involved in determining the Panel profile and composition. For doing this, s/he is i) informed of the Center's and the SC's suggestions regarding Panel profile; ii) briefed by the Panel Secretary and CGIAR Secretariat resource person on the coverage of CCERs and whether they meet general criteria for quality; and iii) provided with a long list of potential Panel candidates. Direct contact with the CCER Panel Chairs by the SC Secretariat, CGIAR Secretariat or Panel Chair is advised. The Panel Chair is also briefed by the SC Chair about the overall goals and conduct of the review.

The Panel size should not exceed four, including the Chair. The Panel Chair will judge the need for consultants with specific skills to address particular aspects of the TOR. Panel members are generally selected for their ability to focus on the institution-wide issues relating to the Center's mission, strategy, priorities, programs, governance, and management. The Panel members should be drawn from a pool that has maximum regional and gender diversity; they are to be recognized experts in their field of expertise and the context of its application to solve problems; they must have good analytical skills and ability to write clearly and concisely in English.

The Panel Chair ensures that the Panel undertakes its assessment and completes the task in accordance with the general TOR and addressing the Center-specific strategic issues. The Chair assigns duties to each Panel member and encourages members to contribute to all aspects of the review report so that the report reflects the judgment of the whole Panel. S/he conducts the EPMR in a manner that is objective, analytical and constructive, and in a manner of mutual respect with the Center. The Panel Chair shares factual information with the Center for verification while maintaining independence in judgment.

#### The Center

The Center's Board, management and staff play a crucial role in the conduct of the review. They are closely involved in planning and organizing the review. Throughout the process, the collaboration and inputs of Center management and staff are essential for the review to run smoothly and for the report to be credible and acceptable. The Center should appoint one senior contact officer to facilitate the implementation of the review including compilation of all documents and information.

In preparation for the EPMR, the Board is expected to make available to the Panel a list of issues relevant to the EPMR. For this, the Board is encouraged to draw from the findings of CCERs and other

relevant reports. The Center management provides appropriate material for the Panel following the instructions provided by the SC Secretariat and CGIAR Secretariat. Some of the material is expected to be readily available, while other documentation needs to be prepared specifically for the EPMR. The main documents include:

- The Strategic Plan of the Center or a strategic report from the Board on the Center's vision and goals showing how the Center will contribute to the CGIAR goals;
- An aggregate analysis of impact of the Center activities showing how the investment in the Center has contributed to outcomes and impact;
- A portfolio analysis on Center research including recent planning, i.e. the MTP reports for the period under review; and,
- Results of self-assessment processes including PM reports, CCERs and other relevant reports. All donor review reports should also be made available to the Panel.

A detailed list of documents and other materials to be provided to the Panel by the Center, SC and CGIAR Secretariats is given in Annex 1. The materials will be placed on a restricted Web site established for the EPMR, and distributed to the Panel on a CD-ROM prior to the Initial Phase. The Panel Chair and Secretary advise Panel members on specific reading tasks.

#### Center Stakeholders

Representatives of national agricultural research systems (NARS, including NGOs, universities and the Private Sector), regional and sub-regional organizations, bilateral and multilateral agencies, other researchers and managers of other Centers and Challenge Programs and advanced research institutions are important partners of CGIAR Centers, and their inputs are essential for the quality of the EPMR review process. As part of the review, these stakeholders' views on the Center's strategy, programs and collaboration and outputs and outcomes are gauged through two processes, which the Panel Chair defines in consultation with the Center and Panel members: a) Stakeholder survey by phone or e-mail, the results of which ought to be available to the Panel early on (the Panel may adjust its own survey if results of a recent Center conducted stakeholder survey are available); and b) Field visits. These consultations are intended to facilitate the assessment of the Center's role in the CGIAR and in the global context.

#### Assessment of the Board

Interactions between the Center Board and the Panel form an essential component of the review. Thus early in the process, preferably prior to the first visit of the full Panel to the Center (Initial Phase)<sup>116</sup>, the Panel Chair and Panel member specializing on governance issues attend a Board meeting and interview Trustees about the Board and Center matters. These interactions contribute to the Panel's assessment of the Board's efficiency and operations, and the rigor of the Board's oversight of research quality and relevance, management and finances, including the implementation of the CCERs. The Panel should observe the content and dynamics of Board procedures, Board and Management relations and evidence of the Board being fully engaged with all key matters, including setting the vision and goals, monitoring and evaluating performance, setting policies, preparing contingency plans and ensuring that resources are used effectively and efficiently.

The Panel members attending the Board meeting need to review both the documentation provided by the CGIAR Secretariat on CGIAR governance, the Center on legal matters, and documents provided to the Board, including some recent Board Minutes. In addition to following the Board meeting, they need to observe the Board committees in action.

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 $<sup>^{\</sup>rm 116}$  The Board meeting and EPMR Initial Phase should not coincide.

#### **Initial Phase**

The Initial Phase usually takes about a week. The Center, Panel Chair and Panel Secretary design the agenda of the Initial Phase. The visit includes sessions and discussions with Center management and key staff members in order for the Panel to obtain an overview of the Center's current activities and future plans, to identify strategic issues and formulate hypothesis for key findings. The key senior Center staff should be available in person during the Initial Phase.

Before and during the Initial Phase the Panel receives detailed briefings from the SC and CGIAR Secretariats on relevant recent developments in the CGIAR and the Center being reviewed, covering both technical and programmatic matters, and matters on governance, organization, finance and human resources.

The Panel holds internal briefings throughout the Initial Phase and, by the end of the visit, produces an outline of the report, including assignments for drafting the report sections. The recommendations of the previous EPMR and the Center's initial and updated responses to them are the Panel's point of departure, and the Panel provides an assessment of the progress on implementation in an appendix to the report.

During the Initial Phase the Panel Chair should request from the Center any additional information and documents deemed necessary for the Panel's work.

#### **Field Visits**

The Panel conducts a limited number of field visits as judged necessary by the Panel Chair in consultation with the Center. The CCER panel itineraries may influence the choice of the EPMR field visits. Small Panel sub-groups conduct these visits, each visit lasting about 3 days. The purpose of these visits is to provide a realistic assessment of the Center's field operations, working conditions, and interactions with NARS and others in the region. The Panel is encouraged to prepare a check lists for the visits so that the sub-groups gather similar information relevant for the report's conclusions.

One purpose of the field visit is for the Panel to interact with Center staff posted outside of HQ. Center staff are also responsible for logistical arrangements. However, Center staff does not participate in substantive discussions with country officials, clients or stakeholders. Center HQ staff do not accompany the Panel during field visits.

## Main Phase

The Main Phase of the review lasts about 10 days and takes place at the Center HQ. By the time the Panel gathers for the Main Phase, first drafts of virtually every section of the report will have been shared with the entire Panel. It is desirable that comments to the first drafts will also have been circulated among the Panel. This is essential to enhance the Panel members' contributions to and agreement of the contents of the entire report and to free time for Panel discussions on the most important strategic issues, findings, conclusions and recommendations. The Panel members also need time to interact with key staff members for validating their hypotheses and confirming the information that forms the basis of their assessment. All Panel members need to agree on the final chapter drafts which are then shared with the Center management to ensure their accuracy and factual correctness. The Chapter relating to Board function is shared in confidence with the Board Chair for factual correctness. Also an executive summary and the key recommendations are shared with the Center management before the formal presentation to the Center staff.

At the end of the visit the Panel Chair presents the main findings and recommendations to the Center management and staff. The Center may invite a Board member to be present. The report is not distributed to the Center.

The final report is completed within two weeks from the main visit. It is expected that the Panel has fully finished writing the chapters and what remains to be done is editing, formatting and compilation of the annexes. The Panel Chair and Secretary finalize the report interacting with the members as necessary. The Panel Chair submits the report to the SC Chair and the CGIAR Director, copied to the Center.

# The Panel's Report

The report is expected to be succinct (less than 100 pages) and written in plain language, focusing on assessment of Center performance, in terms of research performance, management and governance, and strategic issues. The Panel is expected to make an independent assessment based on its own observations and other information available to it, particularly the evidence provided through CCERs.

The report comments on the effectiveness of the Center's internal review system on which the EPMR was based, and on how well the Center has addressed the recommendations of the other reviews commissioned by the Center. Every EPMR should have sections briefly addressing these two topics.

The report should make a limited number of clear recommendations on the most significant issues faced by the Center (or the CGIAR) to act upon. The recommendations should be clearly articulated, realistic and doable in terms of implementation. Where those recommendations require additional resources, the Panel will also recommend what activities could be foregone. EPMR Panel may also identify areas of Center activity where a follow-up study (e.g. CCER) would be desirable.

## Assessment of Quality and Relevance of Research

Assessment of the quality and relevance of the Center and its research programs are among the most important components of an EPMR. Furthermore, the PM system requires an assessment of the quality of Center research. The SC will provide the Panel with a set of criteria to be used by them to provide this assessment. In order to strengthen a systematic approach to this assessment by very different Panels evaluating very different Centers, the SC requests the Panel to provide both a qualitative and quantitative assessment for each criterion. The SC will use the Panel's assessment to provide the input into the PM process.

## Response and Follow-up

The Center Board and Management submit a formal written response to the EPMR report, addressed to the SC Chair and the CGIAR Director. Their response states the Center's agreement, or otherwise, with each recommendation and outlines the actions proposed for implementing the recommendations.

The SC discusses the report and the Center response in the presence of the Panel Chair, Center Board Chair and Director General. The SC prepares a commentary focusing on the programmatic aspects of the Report, and the CGIAR Secretariat prepares commentary focusing on governance and management. The commentary should provide an assessment of the quality of the EPMR report and an endorsement of all the recommendations or justification for not endorsing specific recommendations.

The EPMR report, the Center response, the SC commentary and the CGIAR Secretariat commentary are then submitted to the ExCo, which formulates its recommendations to the CGIAR for discussion and endorsement at AGM.

In the subsequent MTPs, the Center will report on actions taken to implement the Group-endorsed recommendations, including real changes in the MTPs of the projects and programs, until

recommendations have been fully implemented. The SC and the CGIAR Secretariat will include an assessment on the implementation of the EPMR recommendations in their MTP commentary to ExCo and the Group.

The Panel's assessment of the Center's research quality will be incorporated into the PM process and be effective for the period between EPMR reviews. In the case where the PM assessment is poor, the SC will, based on the evidence of change at the Center review the PM assessment in the interval between the EPMR process.

A Mid-Term Review can be considered as an appropriate mechanism to monitor closely the Center's handling of major concerns raised by the EPMR.

#### Annex 2

# b. Terms of Reference for the Financial Management Consultancy

Within the context of the Terms of Reference (TOR) for the external review of the Africa Rice Center (ARC/WARDA), the review panel requires an independent expert review of financial resource and risk management aspects of the Center's overall operations.

To aid the panel in its work, the Consultant will review and critically assess the efficiency, effectiveness, and overall soundness of the management of ARC/WARDA's financial, physical, and informational resources.

This review is expected to take approximately 12 working days (of which at least 5 days will be spent at the ARC-WARDA headquarters in Cotonou, Benin).

The review will specifically address the following topics:

- The adequacy of the Center Board's oversight of financial management issues;
- the adequacy of the Center's financial controls, records and record-keeping, funds management, investment guidelines, banking arrangements, and the reporting of financial information throughout the organization;
- The sufficiency, quality, integrity, and cost-effectiveness of the Center's internal and external audits. The reviewer will examine recent reports, including Management Letters, to judge relevance, completeness, and compliance by management with the recommendations contained therein;
- An assessment of the financial aspects of the Center's human resource management practices and policies,
- A review of the adequacy of current provisions for repairs, maintenance and replacement of physical plant and equipment; and
- A review of the risk management process or system in place (by both Center Board and Management).

The Consultant will commence work in Cotonou around March 26, 2007 in conjunction with the visit by the ARC-WARDA Review Panel. He/she will work closely with and report directly to the panel member with overall responsibility for reviewing Center governance/ management/finance aspects, and submit a written report that summarizes the findings and any recommendations, in an agreed format, by April 15, 2007.

# Annex 3 Strategic Issues for the 5th Africa Rice Center EPMR

What is the quality of WARDA science?

Does WARDA have the critical mass to extend reach of activities into east and southern Africa (ESA)? What will be the opportunity cost to research for the WACA region? As IRRI is engaged in ESA also, what are the respective comparative advantages of the two centers in this region?

Does WARDA have the right research balance among the rice ecosystem in Africa? Where is the most potential for impact? What should be WARDA's research on cropping systems of the inland valleys where the great productivity potential remains untapped? Is WARDA's research on irrigated rice appropriate to the policy environment of Africa?

To what degree has WARDA assessed the constraints to the adoption of NERICAs (and technical and institutional action needed to address these constraints)?

Is WARDA facilitating the maximum gene discovery and mining from the African rices through collaboration, particularly in molecular science? How well is the capacity building program at WARDA set-up, not only for uptake of crop genomics, but for imparting such technology to collaborating universities is SSA? Are there notable research contributions to rice comparative genomics/proteomics from studies on NERICA rices? Is there a well-articulated plan to build a bioinformatics platform for rice and other cereal crops West Africa?

Does WARDA have a "business plan" to use molecular information for routine screening?

Does WARDA's INRM research have a strategic foundation, and clear issues identified where the Center can add value that has more than just local relevance? Has a clear impact pathway been developed?

Is WARDA taking full advantage of IITA's expertise and critical mass in IPM? Is WARDA's 'recommendations' approach in both IPM and in soil management appropriate, or should this be the job of NARS? What is the progress on weed management as a major limiting factor to improving labor productivity?

In the partnership with AVRDC and others for diversifying rice-based production systems with livestock, fish and vegetables, is the work carefully focused, so that it does not dilute WARDA's efforts, and is it supported by appropriate socioeconomic research? Does WARDA have a clear rationale for its involvement in the diversification and move in this direction?

In its partnership with IRRI, is WARDA capturing the "non-African" specific products and knowledge from the improvement of upland, rainfed and irrigated rice, especially since this is critical for such constraints as drought and, perhaps, nutritional enhancement, which are generic to all continents?

Is WARDA taking full advantage of potential for collaboration with the Harvest Plus CP, for example on genetic engineering activities related to Golden Rice in West Africa?

To what degree is WARDA's research focused on the Center's comparative advantage and generation of IPGs, particularly in the Consortium for the Sustainable Development of Inland Valley Agro-Ecosystems in Sub-Saharan Africa (IVC), the Systemwide Initiative on HIV/AIDS and Agriculture (SWIHA), and Project 6 on Climate Change modeling?

Should WARDA continue Project 4 on Integrated Management of Drought in Rainfed Rice Ecosystems in Africa as a separate effort from Projects 1 and 2 on upland and lowland rice production systems, respectively, given that Project 4 is conceptually orthogonal to both projects, which aim to enhance and sustain productivity in rainfed rice?

Availability of good quality seed is a bottleneck in taking the fruits of WARDA's research to farmers. How effectively is WARDA collaborating with NGOs, farmer organizations and the private sector to promote the development of 'seed systems' designed to enhance the delivery of promising NERICA lines?

What should be the focus of further progress of the WARDA-IITA alignment process? What should be WARDA's alignment process with the WCA, ESA and SSA CP MTPs?

Is a strong case for compliance of member state funding commitments being made effectively, and on the basis of country-specific impact assessment? WARDA has had the highest indirect cost ratio among the CGIAR Centers during the past several years. What measures could the Center take to address this issue?

Does WARDA have an appropriate plan of action regarding infrastructure and installations left behind in Ivory Coast? What further steps should WARDA take regarding its planned return to the Ivory Coast?

Has WARDA enabled the establishment of an efficient and transparent system of financial management of partnerships? For example, what actions if any should WARDA take to solve Phase II of the Inland Valley Consortium project's problems regarding financial management and cash flow problems, both at the level of WARDA and the Regional Coordinating Unit (RCU) host institutes?

# Annex 4 Itinerary of the EPMR Panel (Schedule of the Initial and Main Phases, and Field Visits)

19-23 March	Initial contact with BoT: Panel Chair and G&M Panel member, in
	WARDA headquarters in Cotonou.
24 March-	Field visits: Chair visited Ivory Coast WARDA HQ Station at M'bé,
30 March	discussed with the CNRA dg and the Ivorian authorities. Chait visited
	WARDA's Council of Ministers president, the Federal Minister of
	Agriculture and Water Resources in Abuja, the Agricultural Research
	Council, the World Bank office in Abuja, the executive director of the
	National Cereals Research Institute who is chairman of NEC, and
	discussed WARDA's operations in Nigeria
2-6 April 2007	Initial phase: Entire Panel, plus the two Panel consultants (Finance-
	Mary Ncube, and Rice Physiology—Toshihiro Hasegawa) plus the Panel
	secretary, visited WARDA headquarters in Cotonou, Benin. Visit
	consisted mainly of Program Presentations by the Panel and initial
	interviews with staff.
11-15 June 2007	Field visits: Eric Tollens and Zelia Menete, Uganda
24-30 June 2007	Field visits: Eric Tollens, Zelia Menete, Brigitte Courtois, visited
	WARDA's operations in Senegal, Mali, and Mauritania.
9-21 July 2007	Main Phase: entire Panel, plus Panel Secretary visited WARDA
-	headquarters in Cotonou, Benin.

# Annex 5 People Contacted/Interviewed by the Panel

## WARDA regional staff

Dr. Vincent Bado, St. Louis Station Chief, Senegal

Dr. Ajayi Olupomi, Coordinator WARDA Nigeria at IITA, Ibadan

Dr. Ashura Luzi-Kihupi, Regional coordinator ECARRN for ASARECA, Tanzania

Dr. Sitapha Diatta, WARDA representative in Côte d'Ivoire

## **Advanced Research Institutions**

Bruno LIDON, UMR GEDO, Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), France

Dr. Alain Ghesquiere, Geneticist and Research Director, Institut de Recherches pour le Développement (IRD), France

Dr. Tim Chancellor, Head - Plant, Animal and Human Health Group, Natural Resources Institute, University of Greenwich at Medway, UK

Susan McCouch, Associate Professor, Plant Breeding and Plant Biology, Cornell University, USA

Dr. May-Guri Saethre, Bioforsk, Norwegian Institute for Agricultural Environmental research, As, Norway

# **Development Organizations and NGOs**

Kayaayo Battson, Program Director, Sasakawa Global 2000, Uganda

Akande, Samuel Oyetunji, Professor of Agricultural Economics, Nigerian Institute of Social and Economic Research (NISER), Nigeria

Dr. Takashi Kumashiro, Director, Biological Resources Division, Japan International Research Center for Agricultural Sciences (JIRCAS), Japan

Mrs. Peinda Gueye Cissé, FEPRODES, Senegal

Dr. Tareke Berhe, Director Rice Program, SAA/SG2000, Addis Ababa, Ethiopia

Yacouba Coulibaly, Nyeta Conseils, Nioni, Mali

Idrissa Diawarra, directeur général adjoint, Office du Niger, Ségou, Mali

Moussa Kané, Centre de recherche, Office du Niger, Ségou, Mali

Salif Diarra, directeur général OMA, Bamako, Mali

Seiny Ndao, directeur du développement rural, SAED, St. Louis, Senegal

Sarr Malick, directeur général adjoint, SAED, St. Louis, Senegal

Le directeur regional du SONADER Trarza, Rosso, Mauritania

Breun Gouyor, president coopérative Trarza, Rosso, Mauritania

Ahmed Ould Bah, directeur général SONADER, Nouakchott, Mauritania

Diop, responsable de la mise en valeur, SONADER, Nouakchott, Mauritania

#### Donor

Marc Debois, Directorate General Development Unit DEV/B/4: Environment and Rural Development, Directorate General Development EU, Belgium

Helene Corneau, Director, United Nations and Commonwealth Division, Canada

Dr. Kanayo Nwanze, Vice-president IFAD, Rome

Cheikh Sourang, Senior Programmed Manager, IFAD, Rome

Mr. Mohammed Béagovui, directeur PA division (WCA), IFAD, Rome

Dr. Akin Adesina, Rockefeller Foundation, Nairobi

Dr. Peter Matlon, Rockefeller Foundation, Nairobi

Mr. Robert Kargbo, Senior Agricultural Advisor, USAID/WARP, Ghana

Robert. Anyang, USAID/APEP, Uganda

Clice Drew, USAID/APEP, Uganda

David Kamukama, manager SME Agribusiness, USAID/APEP, Uganda

Jaap Blom, Agribusiness Development Component, Agricultural Sector Programmed Support, Danida, Kampala, uganda

Mr. Yoshio HORIUCHI and Mr. Mitsutaka UCHIJIMA, Regional Chief Representatives, Ouagadougou, Burkina Faso, JICA, Japan

Dr. J. Devries, Rockefeller Foundation, Nairobi

Dr. Simon Ehui, Lead economist, The World Bank, Abuja

Ms. Marjorie Meis, Programmed Manager, Associate Expert Programmed (DSI/MY), Ministry of Foreign Affairs, The Netherlands

Ruth Haug, Director, Agricultural University of Norway, Norway

Dr. Staffan Wiktelius, Senior Research Advisor, Swedish International Development Cooperation Agency, Sweden

Thomas Lumpkin, Director General, AVRDC, Taiwan

Roy Metherell, Central Research Department - Department for International Dev., UK

Eija Pehu, Advisor, Agric. and Rural Dev. Department (ARD) The World Bank, USA

# **National Agricultural Research Institutes**

Monsieur le Directeur, Institut de l'Environnement et des Recherches Agricoles (INERA), Burkina Faso

Monsieur le Directeur Général, Institut Centrafricain de Recherche Agronomique ICRA, Central African Republic

Dr. Adama Traore, secrétaire exécutif SNRA, Comité National de la recherché Agricole, Bamako, Mali

Dr David Arodokoun, Directeur Général, Institut National de Recherches Agronomiques du Bénin (INRAB), Bénin

Dr. Djegui Narcisse, Directeur Général INRAB, Bénin

Alavo Antonin, Coordonnateur programme d'appui au développement des filières agricoles, Bénin

Youssouf Dembele, Chef Programmed Riz, INERA - Farako-bâ, Burkina Faso

Prof. Gnissa Konaté, Director, Institut de l'Environnement & des Recherches Agricoles (INERA), Burkina Faso

Julius Takow, Chief of Station, IRAD-Barombi-Kang, Cameroun

Monsieur le Directeur Général, Institut de Recherche Agricole pour le Développement (IRAD), Cameroun

Dr Namba Yallah, Directeur Général, Institut Tchadien de Recherche Agronomique (ITRAD), Chad

Wongbé A. Yté, Head of Program, CNRA, Cote d'Ivoire

Dr. Yo Tiémoko, Directeur Général, Centre National de Recherche Agronomique (CNRA), Côte d'Ivoire

Mr Joseph B. Mateso, Chief of National Rice Research Programmed, INERA, Kshasa, DRC

Dr Getachew D. Alemayehu, Director General, Amhara Regional Agricultural Research Institute (ARARI), Ethiopia

Dr Musa Bojang, Director General, National Agricultural Research Institute (NARI), Gambia

Ansumana Gibba, Research Officer, NARI, Gambia

Dr Sékou Béavogui, Directeur Général, Institut de Recherche Agronomique de Guinée (IRAG) Guinea

Baourou Mansaré, Agronomist, IRAG, Guinea

Dr Simao, Président Instituto Nacional de Pesquisa Agraria (INPA), Guinea Bissau

Dr G. Simao, Président/Chairman, Instituto Nacional de Pesquisa Agraria (INIPA), Guinea Bissau

Ebenezer Annan-Afful, Research Officer, CSIR-CRI, Ghana

Dr. Emmanuel Owusu-Bennoah, Director General, Council for Scientific & Industrial Research (CSIR), Ghana

Mrs Winfred A. O. Kore, KARI- KIBOS, Kenya

The Director General, Central Agricultural Research Institute (CARI), Liberia

Dr Rabeson Raymond, FOFIFA Rice Research Department, Madagascar

Abdoulaye Hamadoun, Director CRRA Sikasso, IER, Mali

Dr Bino Témé, Directeur Général, Institut d'Economie Rurale (IER), Mali

Brehima Kamissoko, Seed Production, CRRA, Mali

Jean-Luc, Sanogo, Agronomist, CRRA, Mali

Brenna Guindo, PRI-CRRA, Mali

Lassana Diarra, Researcher rice program, CRRA, Mali

Hamady Sissoko, Chief Accountant, CRRA, Mali

Dr Cheikh Ould Dih, Directeur Général, Centre National de Recherche Agronomique et de Développement Agricole (CNRADA), Mauritania

Ngam Abou Ouman, directeur adjoint, CNRADA, Nouakchott

Dr Mahaman Issaka, Directeur Général, Institut National de Recherches Agronomiques du Niger (INRAN), Niger

Dr. A. A. Ochigbo, Director/Chief Executive, National Cereals Research Institute (NCRI) Badeggi, Nigeria

Oladela Bakare, Research Officer, NCRI-Badeggi, Nigeria

Mr John Jagwe, Post Harvest and Market Research Network of ASARECA, Uganda

Mr Patrice Hakizimana, ISAR-Rubona, Rwanda

Mamadou Khouma, Chef LNRPV, ISRA, Senegal

Dr. Macoumba Diouf, Directeur Général, ISRA, Senegal

Dr. Alioune Fall, ISRA, St. Louis, Senegal

Dr. Souleymane Diallo (weed specialist), ISRA, St. Louis, Senegal

Dr. Madaima Cisse (agronomist), ISRA, St. Louis, Senegal

Dr. Moussa Faye (soil specialist), ISRA, St. Louis, Senegal

Mr. Malick Sarr, Deputy Director General, SAED (irrigation agency), Senegal

Prof. Edward Rhodes, Director, National Agricultural Research Coordinating Council (NARCC) Sierra Leone

Mohamed Kandeh, Director, LWDD, Sierra Leone

Dr Evelyne A. Lazaro, Sokoine University of Agriculture, Tanzania

Soklou Worou, Head of Program, ITRA/DG, Togo

Dr Atsu Comlan Agbobli, Directeur Général, Institut Togolais de Recherche Agricole (ITRA), Togo

Godfrey Asea, Breeder Cereals Program, NARO, Uganda

Cyprien Ebony, director of quality assurance, NARO, Uganda

Robert Anguzu, public relations officer, NARO, Uganda

J. Magyembe Mwesigwa, coordinator, competitive fund scheme, NARO, Uganda

Dr. Michael Ugen, acting director, NARO, Namulonge, Uganda

Jimmy Lamo, rice breeder, NARO Namulonge, Uganda

T. Tsuboi, JICA expert on rice, Namulonge, Uganda

Dr. Taïb Diouf, Directeur scientifique, ISRA, Senegal

Prof. B.Y. Abubakar, Executive Secretary, Agricultural research Council of Nigeria, Abuja

Dr. S.A. Ingawa, Director Projects Coordinating Unit, Abuja

Dr. A.A. Ochigbo, Executive Director, National Cereals Research Institute, Badeggi, Nigeria (NEC chair)

## **Private Sector**

Babatundé R. Ollofindji, Société Tunde, Cotonou, Bénin

Abdouahmane Malick Ndiaye, directeur Agritec, St. Louis, Senegal

Joel Kibamba, Administrative Assistant, ENI Congo, Democratic Republic of Congo

I.K. Mulindwa, MP Limited, Kampala, uganda

Ambassador Philip Idro, Upland Rice Millers, Jinja, Uganda

Mrs. Susan Mary Muyinga, Procurement, Nsanga Agrochemicals, Ltd. Uganda

Joseph Kavuma, Manager, Tonnet Enterpris, Uganda

Amin Farishta, Production Manager, Sunrue Commodities, Ltd, Uganda

Nicolai Rodeyns, Manager, Naseco (1966) Ltd, Uganda

Cliff-Richard, Masagazi, Marketing Manager, Naseco (1966) Ltd, Uganda

Christian Baine, Director, Corunet Consult, Ltd, Uganda

Frederick Muduuli, Managing Director, Keith Associates Agroinput Dealers, Uganda

B.S. Gowda, General & Allied, Kampala, uganda

Abdallah Byabasaija, Business Development Manager, SOMED, Uganda

Peter Bran, Administration Manager, Upland Rice Millers Co. Ltd., Uganda

Charles Sembatya, Agronomist, Enterprise Dev. Specialist, Sasakawa Global 2000, Uganda

Mubangizi Emmanuel, production manager, Farm Inputs Care Center (FICA), Kampala, Uganda

Justus Imanywoha, breeder, FICA, Kampala, Uganda

Lincoln Lunagga, Makinawa Rice Farm, Uganda

Nelson Ojwiya, General Manager, China Huangpai Foods, Ltd, Uganda

Geoffrey Sebabindiru, Sales Manager, Global Agro-Inputs, Ltd, Uganda

B.N.S. Gowda, Director, General Allied Ltd., Uganda

# **Sub-Regional Organizations**

Dr Seyfu Ketema, Executive Secretary, ASARECA, Uganda

Fina Opio, program coordinator staple crops, ASARECA

Dr. Marcel Nwalozie, Scientific Coordinator, CORAF/WECARD, Senegal

IVC President, INRAB, Bénin

# Universities

Prof. Dayun Tao, Deputy Dir. General, Crops Res. Inst., Yunnan Academy of Agricultural Sciences, China

Prof. Dr. Matthias von Oppen, Agricultural Economist, Hohenheim University, Germany

Prof. Ryuichi Ishii, University of Nihon, Japan

Prof. Tatsuhiko Shiraiwa, Crop Science Lab. Graduate School of Agric., Kyoto Univ., University of Kyoto, Japan

Pieter Windmeijer, Executive Secretary, North - South Center, Wageningen University and Research Center (WUR), Netherlands

#### **CGIAR**

Laura German, A&H

Ruth Meinzen-Dick, CAPRI

Victoria Henson-Apollonio, CGIAR CAS-IP System Unit of the CGIAR

Joachim Voss, Director General, CIAT

Douglas Pachico, DDG-Research, CIAT

Jean-Marcel Ribaut, Director, Generation Challenge Programme

Dr. Howarth Bouis, Director, Harvest Plus Challenge Programme

Enrica Porcari, ICT-KM System Unit of the CGIAR

Joachim von Braun, Director General, IFPRI

Mark Rosegrant, DDG Research, IFPRI

Peter Hartman, Director General, IITA

Paula Bramel, DDG Research, IITA

Carlos Sere, Director General, ILRI

John McDermott, DDG-Research, ILRI

Robert Zeigler, Director General, IRRI

Ren Wang, DDG-R (at the time he was contacted), IRRI

Paul Kiepe, IVC (convened by WARDA)

Frank Rijsberman, ex- Director General, IWMI

David Molden, DDG-Research, IWMI

Salvador Fernandez-Rivera, Livestock Program (SLP) SWP

Barun Gurung, PRGA SWP

Olaf Erenstein, RWC Rice-Wheat Consortium for the Indo-Gangetic Plains

Braima James, SP-IPM Systemwide Program on Integrated Pest Management (SP-IPM)

Freddie Kwesiga, Programme Coordinator (at the time he was contacted), Sub-Saharan Africa Challenge Programme

Ann Marie Kormawa, SWIHA (convened by WARDA)

Toby Hodgkin, System-wide Genetic Resources Programme

Cliff Mutero, Systemwide Initiative on Malaria and Agriculture (SIMA)

Jonathan Woolley, Water and Food Challenge Programme

Pamela George, Program Manager, Water and Food Challenge Programme

Stephen Hall, World Fish Center

Patrick Dugan, DDG-Research, World Fish Center

# Ministers/Political authorities and their representatives

Mallam Adamu Bello, Hon. Minister of Agriculture and Water resources (COM President), Abuja

Dovonou Roger, Hon. Minister of Agriculture, Livestock and Fisheries, Cotonou, Bénin

Hibault Alexio, directeur de cabinet, Ministre de l'Enseignement Supérieur et de la Recherche, Abidjan, Côte d'Ivoire

Okaasai S. Opolot, Commissioner, Crop Production and Marketing, Ministry of Agriculture, animal Industries and Fisheries, entebbe, Uganda

Vincent K. Musubire, Deputy Principal Secretary, Office of the Vice-President, Uganda

#### Annex 6

# List of documents reviewed by the Panel

Terms of Reference and Guidelines for External Program and Management Reviews of CGIAR Centers

Most recent EPMR report of the Center

Summary of actions taken in response to the last EPMR

CGIAR research Priorities 2005-2015

The latest Board-approved Strategic Plan of the Center

Medium-Term Plans of the Center for the period of review

SSA Regional MTP 2007-2009

WCA Regional MTP 2007-2009

MTP 2007-2009

MTP 2006-2008

MTP 2005-2007

MTP 2004-2006

MTP 2003-2005

MTP 2001-2002

WCA MTP: Consultative and Coordination Meeting 6-8 Nov 06, Summary Report and Meeting Report

SC commentaries of the Center's Medium-Term Plans

2006 SC MTP 2007-2009 Commentaries and Center Response

2005 SC MTP 2006-2008 Commentaries and Center Response plus SC overview

2004 SC MTP 2005-2007 Commentaries and Center Response

2003 SC MTP 2004-2006 Commentaries and Center Response

2002 SC MTP 2003-2005 Commentaries and Center Response

2000 SC Financing Plan 2001

Center-Commissioned External Review Reports

Integrated Genetic and Natural Resources (IGNRM) plus Actions Update from Feb07

Partnerships (A B Obilana, H. Feyt, M. N Kapiriri) plus Actions Update from Feb07

Inland Valley Consortium (IVC) (E. Smaling, J. Payen, F. Lompo)

Organization and Management: Post crisis team building (D. Koudou, R. Kuyo)

Social Science Research Agenda (Prof. M. von Oppen, (Chair), Prof. Shabd S. Acharya, and Prof. E. M. Koffi-Tessio) plus Actions Update from Feb07

Donor commissioned external review reports

European Union - "Policy environment & rice market development" (EU Proj 3.2) plus Centre Response

UNDP - Africa-Asia Joint Research: Interspecific Hybridization between African and Asian rice species

Gatsby and Rockefeller Foundation – "Evaluation of adoption of NERICA and other improved upland rice varieties following varietal promotion activities in Nigeria"

USAID - Evaluation of the USAID-Funded Collaborative Agricultural Research Networks in West and Central Africa

EU Review\_ Creating Low Mngnt Plant Types for Resource Poor Farmers in Rainfed Ecosystems (Proj 1.4)

EU Review\_SSA Challenge Programme. Review of the inception phase.

BMZ\_Proj Review on farmer participatory improvement and adaptation of production technologies for rainfed rice-based systems in W Africa with emphasis on Nigeria and Benin

List of achievements/outputs by Program or other research unit: publications (peer-review and other), research breakthroughs as recognized by peers, germplasm, genetic stocks, new technologies etc.

A paper prepared by Center management and Board on: a) main issues of current concern, b) vision of clients needs in intermediate (5 years) and long (10 years) term; c) vision on CGIAR and donor status

in intermediate and long term; d) state of the relevant science in intermediate and long term; e) plan of action reflecting these vision statements

The current organization chart, with a brief description of the Center's internal management structure, including the composition and terms of reference of each major committee

Toward a New Vision and Strategy for the CGIAR

New Monitoring and Evaluation System for the CGIAR Centers

New Monitoring and Evaluation System for the CGIAR Centers

Comments from Science Council on Performance Monitoring Indicators - Pilot Year 2005

SC Suggestions to Implement the CGIAR Performance Measurement System

SC feedback on PM Results – Africa Rice Center (WARDA)

**EPMR** reports of CGIAR Centers

Most recent CGIAR stripe studies involving the Center

Stripe Review of Corporate Governance of CGIAR Centers

Criteria for Assessing Proposals for new Systemwide Programs

Status of Monitoring and Evaluation of CGIAR Systemwide and Ecoregional Programmes

Report of the First External Review of the Systemwide Programme on Integrated Pest Management (SP-IPM)

Lessons Learned in the Implementation of Systemwide Programmes - iSC Perspectives - 2002

Systemwide Review of Plant Breeding Methodologies in the CGIAR

Systemwide Review of Plant Breeding Methodologies in the CGIAR WARDA's sub-Panel report

The CGIAR Charter

Most recent Annual Report of the Center, and comparable research reports of the programs

Forward in Partnership: Annual Report 2004-2005

Africa Rice Centre: Program Report 2002-2003

The latest Annual Funding Request

List of professional staff with short CVs including standard set of information as instructed by the SC Secretariat (publications, key memberships, invited lectures, prices/awards, students supervised)

List of reports of major planning conferences, internal reviews, expert meetings, etc., which have had a major influence on the direction of specific Center programs

List of the agreements for cooperative activities with other Centers and institutions

List of ongoing and recently completed contracted projects

Most recent CGIAR financial guidelines and manuals

Reference Guides for CGIAR International Agricultural Research Centers and their Boards of Trustees Center Charter and other basic documents establishing the Center, along with subsequent amendments

Table showing composition of the Board over the last five years, along with an indication of the term of office of current members and their roles on the Board

Board handbook or rules of procedure

Table showing allowances, benefits, and salary ranges for each category of staff

Table showing personal data on professional staff by program, including each job title, incumbent's location, IRS/NRS/LRS status, period of tenure, gender, nationality, age, salary over the last three years, funding source (excluding names)

Table summarizing turnover of staff over the last five years by staff category

List of international staff vacancies and how long positions have been vacant

Set of minutes covering Board and Board committee meetings since the last External Review (and reports of board committees to the full Board if not included in the minutes)

Staff manual or a description of current personnel procedures for international and locally-recruited staff

Local compensation surveys used by the Center

Reports of external auditors, including management letters, and financial officer's reports to the Board since the last External Review

Most recent internal audit reports

Executive Council of the CGIAR Meeting Documents

ExCo10 (Tenth Meeting of the Executive Council); Summary Record of Proceedings, CGIAR Alignments in SSA and Beyond: AGM05 Decisions on SSA Task Forces Follow-up, Response to main decisions/conclusions on WCA arrangements: SSA Task Forces follow-up (Joint IITA/WARDA Report to ExCo 10); IITA - WARDA Alignment - Agreed deliverables

ExCo9 (Ninth Meeting of the Executive Council); Summary Record of Proceedings, SSA TF Follow ups: IITA WARDA Discussions, Progress on dev of sub-regional MTPs Update, Progress on dev of regional MTPs, CGIAR global Centers in Africa 2005

ExCo8 Eighth Meeting of the Executive Council); Summary Record of Proceedings, SSA TF on Prog and Structural/Org Alignment: Rpt of the CGIAR SSA TF, ExCo Members' Corrections/Comments on the draft SSA TF rpt, Rpt of the CGIAR SSA TF presentation

CGIAR ICW 2000 Proceedings Decisions

**Impact Case Studies** 

Dalton, T & Guei R.\_Productivity Gains from Rice Genetic Enhancements in W Africa: Countries and Ecologies (World Development 33(2):359-374)

Diagne\_The Diffusion and Adoption of NERICA rice varieties in Côte d'Ivoire (Developing Economies 44:(2))

Patrice Y. Adegbola, 1, Aminou Arouna, Aliou Diagne et Souléïmane A. Adekambi. Determinants Socio-Economiques et Taux d'adoption et d'intensite d'adoption des nouvelles varietes de riz Nerica au centre du Benin (Adoption NERICA\_Benin\_7\_sup)

Aliou Diagne. Taking a New Look at Empirical Models of Adoption: Average Treatment Effect Estimation of Adoption Rates and their Determinants\* (Diagne Paper IAAE 2006 October 2006\_with tables)

Barry M.B, Diagne A, Sogbossi M.J, Pham J.L, Diawara S, Ahmadi N.Recent changes in varietal diversity of rice in Guinea. (Guinee Biodiv Article VERSIONNovembre\_aliou edit)

Souléïmane A. Adekambi, Aliou diagne et Gauthier Biaou. Impact de l'adoption DEs varietes Nericas sur la scolarisation des ENFANTS AU Benin : cas du departement des collines (Impact Nerica scolarite enfants Benin\_v1)

Patrice Y. Adegbolaa, 1, Aminou arouna, Aliou diagne et Souléïmane A. Adekambia. Evaluation de l'impact economique des nouvelles VARIETES de riz nerica au Benin : Une evidence avec les modeles bases sur l'approche « Contre factuel » (Impact Nerica\_Benin\_6)

Aliou Diagne ; Marie-Josée Sogbossi ; Sékou Diawara ; Abdoulaye Sadio Diallo et Alpha Bacar Barry. Evaluation de la diffusion et de l'adoption des variétés de riz NERICA en Guinée (Nerica adoption et diffusion Guinee sep06\_aliou edit)

Aliou Diagne. Diffusion and adoption of Nerica rice varieties in Côte D'ivoire (The Developing Economies, XLIV-2 (June 2006): 208–31)

A. Diagne; M. J. Sogbossi; I. Touré et A. Camara. How Successful has been the Dissemination of the NERICAs rice varieties in Guinea? Country- level areas estimation from household survey and census data (Nerica Dessimination Guinee Fevrier 06)

Dunstan Spencer, Andrew Dorward, George Abalu, Dayo Philip and Diji Ogungbile. Evaluation of adoption of Nerica and other improved upland rice varieties following varietal promotion activities in Nigeria (Nerica\_Report\_RevAndrew-DS-April 7-2006)

Aliou Diagne. Assessing the Impact of Agricultural Research Using the Counterfactual Outcomes Framework: The WARDA experience (WARDA Impact of Ag Research IAAE 2006)

Aliou Diagne. Bred for Women Rice Farmers? Impact of Nerica Adoption on Rice Yield in Côte d'Ivoire. (Yield Impact Nerica\_Exp Ag\_ v1-December 2006)

NERICA Adoption and Impact: Papers and Abstracts

**IRRI** Relevant Documents

IRRI Strategic Plan 2007-2015

Bringing Hope, Improving Lives: Why Rice Research is Important for Poor People (presentation by R. Ziegler, June 2005)

Sub-Saharan Africa Challenge Programme

SSA CP Full Proposal: Building Sustainable Livelihoods Through Integrated Agricultural Research for Development - Main text & Annexes

SC Commentary on the SSA Challenge Programme Proposal

EU Review\_SSA CP Inception Phase

SSA CP external review

SWEP - Consortium for the Sustainable Use of Inland Valley Agro-Ecosystems in Sub-Saharan Africa, commonly referred to as the Inland Valley Consortium (IVC)

SWEP\_IVC extract from MTP 2007-2009 submission

SWEP\_IVC extract from SC Commentary MTP 2007-2009

SWEP - Systemwide Initiative on HIV/AIDS and Agriculture (SWIHA)

SWIHA\_Review Progress report

SWIHA\_Project planning workshop report\_Building resilience to HIV/AIDS among smallholder farmers in Benue state, Nigeria

SWIHA extract from MTP 2007-2009 submission

SWIHA extract from SC Commentary of MTP 2007-2009

SWIHA\_Synthesis report of regional workshop

WARDA's recent strategic presentations

WARDA DG at SC05 ppt: Towards Africa's Rainbow Revolution An Innovative Partnership-Owned R4D System, Kanayo F. Nwanze

WARDA DG at SC05 MSWord: Towards Africa's Rainbow Revolution An Innovative Partnership-Owned R4D System, Kanayo F. Nwanze

Africa Rice Congress Abstracts\_Beyond the First Generation NERICAs in Africa: Paradigms and Partnerships for the Next Decade

Awards

2006 -- Le prix du président du Burkina Faso à Dr Moussa Sié et ses partenaires

2006 -- WARDA Wins UN Award

Africa Rice Center (WARDA) Wins 2006 South-South Partnership Award

2006 -- Africa Rice Center won the 2nd prize and the "honorable mention" in the First CGIAR International Photo Competition of research and research-related themes

2006 -- The CGIAR Science Award for Outstanding Partnership to the CGIAR Genebank Community

2006 -- WARDA Scientist Wins International Rice Prize from Japan

2004 -- WARDA Hails Dr Monty Jones, Co-winner of the 2004 World Food Prize

2003 -- Senegal's Presidential Award in 2003

Financial Information from CGIAR Secretariat

Financial Notes on WARDA

Financial Notes on CGIAR

List of WARDA publications since the last review

Handing-Over Report, Kanayo F. Nwanze, WARDA DG, Dec1996-Nov2006

List of IRS staff for review in 2007 and 2006

#### Other documents:

Adoption of NERICA and other Improved Upland Rice Varieties following Varietal Promotion Activities in Nigeria", A study for the Gatsby and Rockefeller Foundations, Final Report, January 2006.

Ahmadi N, Albar L, Pressoir G, Pinel A, Fargette D, Ghesquière A., Genetic basis and mapping of the resistance to Rice Yellow Mottle Virus.III. Analysis of QTL efficiency in introgressed progenies

confirmed the hypothesis of complementary epistasis between two resistance QTLs, 2001, Theor Appl Genet 103:1084–1092.

Albar L, Bangratz M, Ndjiondjop M-N, Jones MP, Ghesquière A., Mutations in the eIF(iso)4G translation initiation factor confer high resistance of rice to rice yellow mottle virus, 2006, The Plant Journal, 47(3): 417.

Albar L, Lorieux M, Ahmadi N, Rimbault I, Pinel A, Sy A, Fargette D, Ghesquière A., Genetic basis and mapping of the resistance to Rice Yellow Mottle Virus. I. QTL identification and relationship between resistance and plant morphology, 1998, Theor Appl Genet 97:1145–1154

Amin M. and Mabe M., Impact factors: use and abuse. Perspectives in Publishing, 2000, 1:1-6.

Atlin G, Paris T, Courtois B., Sources of variation in rainfed rice PVS trials: implications for the design of "Mother-Baby" trial networks. In: Proc. Workshop on Quantitative analysis of data from participatory methods in plant breeding, 23-25 August 2001, Justus Liebig University, Germany.

Atlin G., Improving drought tolerance by selecting for yield. In: Manual: Breeding rice for drought tolerance, 2003,. eds Fisher K, Lafitte R, Fukai S, Atlin G, Hardy B, IRRI, p. 14-22.

Audebert, A., L.T. Narteh, P. Kiepe, D. Millar and B. Beks. 2006 (eds). Iron Toxicity in Rice-based Systems in West Africa, Africa Rice Center (WARDA). Cotonou, Benin. 175 p.

Balasubramanian, V., M. Sie, R.J. Hijmans and K. Otsuka, Increasing Rice Production in Sub-Saharan Africa: Challenges and Opportunities, Advances in Agronomy, 2007, Vol. 94, pp. 55-133.

Barry M.B, Diagne A, Sogbossi M.J, Pham J.L, Diawara S, Ahmadi N.Recent changes in varietal diversity of rice in Guinea. (Guinee Biodiv Article VERSIONNovembre\_aliou edit)

Barry MB, Pham J-L, Noyer J-L, Billot C, Courtois B, Ahmadi A, Genetic diversity of the two cultivated rice species (O. sativa and O. glaberrima) in Maritime Guinea. Evidence of interspecific recombination, 2007, Euphytica 154 (1-2): 127-137.

Barry MB, Pham J-L, Noyer J-L, Courtois B, Billot C, Ahmadi N., Implications for in situ genetic resource conservation from the ecogeographical distribution of rice genetic diversity in Maritime Guinea. Plant Genetic Resources: Characterization and Utilisation, 2007, 5(1): 45-54.

Bradbury LMT, Fitzgerald TL, Henry RJ, Jin Q, Wtaers DLE, The gene for fagrance in rice, 2006, Plant Biotechology Journal 3:363-370.

Calpe, C., International trade in rice: recent developments and prospects, International Rice Commission Newsletter, 2005, FAO, Rome, Vol. 54, pp. 11-23.

CGIAR-projects co-funded by the European Commission in 2004, November 2005.

Coulter, Jonathan and Bohumil Havrland, Monitoring of project 3.2 (project 5): Policy Environment and Rice Market Development at WARDA, ECART-NATURA.

Coulter, Jonathan and Bohumil Havrland, "Policy Environment and Rice Market Development" project 3.2. (Project 5) for the European Commission, November 2005.

Dalton, Timothy J. and Robert G. Guei, 2003. "Productivity Gains from Rice Genetic Enhancements in West Africa: Countries and Ecologies". World Development 30, No 2, pp. 359-374.

Defoer, T., M.C.S. Wopereis, M.P. Jones, F. Lançon, O. Erenstein and R.G. Guei, Rice-based production systems for food security and poverty alleviation in SSA, International Rice Commission Newsletter, Proceedings of the FAO Rice Conference 2004, Special edition, Vol. 53, pp. 85-96.

Diagne Aliou, "Taking a New Look at Empirical Models of Adoption: Average Treatment Effect Estimation of Adoption Rates and their Determinants", 26th Conference of the International Association of Agricultural Economists, August 12-18, 2006, Gold Coast, Australia and European Meeting of the Econometric Society, August 24-28, 2006, Vienna.

Diagne, A. Assessing the Impact of Agricultural Research Using the Counterfactual Outcomes Framework: The WARDA experience (WARDA Impact of Ag Research IAAE 2006)

Diagne, A. Diffusion and adoption of Nerica rice varieties in Côte D'ivoire (The Developing Economies, XLIV-2 (June 2006): 208–31)

Diagne, A.; M. J. Sogbossi; I. Touré et A. Camara. How Successful has been the Dissemination of the NERICAs rice varieties in Guinea? Country-level areas estimation from household survey and census data (Nerica Dessimination Guinee Fevrier 06)

Diagne, A.; Marie-Josée Sogbossi ; Sékou Diawara ; Abdoulaye Sadio Diallo et Alpha Bacar Barry. Evaluation de la diffusion et de l'adoption des variétés de riz NERICA en Guinée (Nerica adoption et diffusion Guinee sep06\_aliou edit)

Diagne, Aliou. Bred for Women Rice Farmers? Impact of Nerica Adoption on Rice Yield in Côte d'Ivoire. (Yield Impact Nerica\_Exp Ag\_ v1-December 2006)

Diagne, A. The Diffusion and Adoption of NERICA rice varieties in Côte d'Ivoire (Developing Economies 44:(2))

Doumbia, Sekou, "Enquête bilan de l'état de l'adoption des variétés améliorées de riz pluvial dans le département de Daloa Zaguiguia 2006, CNRA Abidjan, Novembre 2006.

Doumbia, Sekou, I.J. Keli et M.E. Depieu, "Perception paysanne de l'innovation à travers l'évaluation participative en riziculture: intérêt et limite pour la recherche", Agronomie Africaine, No spécial (5), 2004.

Dunstan Spencer, Andrew Dorward, George Abalu, Dayo Philip and Diji Ogungbile. Evaluation of adoption of Nerica and other improved upland rice varieties following varietal promotion activities in Nigeria (Nerica\_Report\_RevAndrew-DS-April 7-2006)

FAO Rice Market Monitor of December 2006 (Vol. IX - Issue No 4)

Fargette D, Pinel A, Abubakar Z, Traoré O, Brugidou C, Fatogoma S, Hebrard E, Choisy M, Séré Y, Fauquet C, Konaté G., Inferring the evolutionary history of Rice Yellow Mottle Virus from genomic, phylogenetic, and phylogeographic studies, 2004, Journal of Virology 78: 3252-3261

Hervé P., Allele engineering and drought: a simple solution for a complex trait? In: Drought resistant rice for increased rainfed production and poverty alleviation, 2007, eds. Seraj R and Hardy B, IRRI, Los Baños, Philippines (in press).

HIVA-WFP, Profil des marches à Madagascar - Strengthening Emergency Needs Assessments Capacity (SENAC) in WFP, Eliane Ralison and Frans Goossens, K.U.Leuven, janvier 2006 and Bockel, Louis, Politiques publiques et pauvreté à Madagascar - La filière riz moteur de croissance ou facteur de crise, L'Harmattan, Paris, 2005.

IFPRI in collaboration with IITA, CORAF/WECARD and ECOWAS, Regional Strategic Alternatives for Agriculture-led Growth and Poverty Reduction in West Africa, final draft report, Washington D.C., December 31, 2006.

IRRI, Rice Almanac, Third edition, Los Banos, 2002, p. 79.

Jones MP, Dingkuhn M, Aluko GK, Semon M. 1997 Interspecific O. sativa x O. glaberrima progenies in upland rice improvement. Euphytica 93:237-246

Kijimo, Yoko, Dick Sserunkuuma and Keijiro Otsuka, "How Revolutionary is the "NERICA Revolution?" Evidence from Uganda, The Developing Economies, XLIV-2, June 2006, 252-67.

Okry and van Mele, 2006, Documenting, validating and scale up technologies..

Paris TR, Singh A, Luis J, Singh HN, Singh ON, Singh, S, Singh RK, Sarkarung S., Listening to farmers' perception through participatory rice varietal selection: a case study in villages in eastern Uttar Pradesh, India. In Proc. Intern. Symp. on Participatory plant breeding and participatory plant genetic resources enhancement, Pokhara, Nepal, 1-5 May 2000, p179-191.

Patrice Y. Adegbola, 1, Aminou Arouna, Aliou Diagne et Souléïmane A. Adekambi. Determinants Socio-Economiques et Taux d'adoption et d'intensite d'adoption des nouvelles varietes de riz Nerica au centre du Benin (Adoption NERICA\_Benin\_7\_sup)

Patrice Y. Adegbolaa, 1, Aminou arouna, Aliou diagne et Souléïmane A. Adekambia. Evaluation de l'impact economique des nouvelles VARIETES de riz nerica au Benin : Une evidence avec les modeles bases sur l'approche « Contre factuel » (Impact Nerica\_Benin\_6)

Peng S, Bouman B, Visperas RM, Castaneda A, Nie L, Park HK, 2006. Comparison between aerobic and flooded rice in the tropics: agronomic performance in an eight season experiment. Field Crop Research 96: 252-259.

Pham J., Evaluation des ressources génétiques des riz cultivés en Afrique par hybridation intra- et interspécifique, 1992, PhD thesis, Université de Paris XI, Orsay, Paris

Portères R., Taxonomie agrobotanique des riz cultives O. sativa L. et O. glaberrima Steudel, 1956, Journal d'Agriculture Tropical et de Botanique Appliquées 4 and Second G., Relations évolutives chez le genre Oryza et processus de domestication, 1984, PhD thesis, Université de Paris XI, Orsay.

Pressoir G, Albar L, Ahmadi N, Rimbault I, Lorieux M, Fargette D, Ghesquière A., Genetic basis and mapping of the resistance to Rice Yellow Mottle Virus. II. Evidence of a complementary epistasis between two QTLs, 1998, Theor Appl Genet 97: 1155–1161

Rice Trends in Sub-Sahara africa, WARDA, 2005.

Rodenburg J, Diagne A, Oikeh S, Fukatuchi K, Kormawa PM, Selon M, Akintayo I, Cissé B, Sié M, Narteh L, Nwilene F, Diatta S, Sere Y, Ndjondjop MN, Youm O, Keya SO, Achievements and impact of NERICA on sustainable rice production in sub-Saharan Africa, 2006, International Rice Commission Newsletter, 55:45-58.

Savary S, Willocquet L, Elazegui FA, Castilla N, Teng PS, Rice pest constraints in tropical Asia: Quantification of yield losses due to rice pests in a range of production situations, Plant Disease, 2000, 84:357-369.

Second G., Relations évolutives chez le genre Oryza et processus de domestication, 1984, PhD thesis, Université de Paris XI, Orsay.

Semon M, Nielsen R, Jone MP, McCouch S. 2005. The population structure of African cultivated rice Oryza glaberrima. Evidence of elevated levels of linkage disequilibrium caused by admixture with O. sativa and ecological adaptation. Genetics 169:1639-1647.

Semon, M., Jones, M.P., Nilsen, R. and McCouch, S.R.. Populations structure of O. glaberrima and its implications for breeding drought tolerance in cultivated rice. Pp 130-131. In. Poland, D., Sawkins, M., Ribaut J.M. and Hoisington D. (eds). Proceedings of a workshop on Resilient Crops for Water Limited Environment. Cuernavaca. Mexico. 24-28 May 2004.

Sere, Y., Sy, A.A., Akator, S.K., Onasanya, Z.. and Zai, K.. 2004. Screening strategy for durable resistance to rice blast at WARDA. pp. 38-42. in Sere, Sreenivasaprasad and Nutsugah (eds.). Rice blast in West Africa: Characterisation of pathogen diversity, key screening sites and host resistance. Proceedings of a stakeholder workshop, Project R7552,UK Department for International Development - Crop Protection Programme. Africa Rice Center WARDA Bouaké, Côte d'Ivoire, vi + 152 p.

Solh, M., Rice is life in 2004 and beyond, International Rice Commission Newsletter, 2005, FAO, Rome, Vol. 54, pp. 1-10.

Souléïmane A. Adekambi, Aliou diagne et Gauthier Biaou. Impact de l'adoption DEs varietes Nericas sur la scolarisation des ENFANTS AU Benin : cas du departement des collines (Impact Nerica scolarite enfants Benin\_v1)

Traore O, Sorho F, Pinel A, Abubakar Z, Banwo O, Maley J, Hebrard E, Winter S, Séré Y, Konate G, Fargette D., Processes of diversification and dispersion of Rice Yellow Mottle Virus inferred from large-scale and high-resolution phylogeographical studies, 2005, Molecular Ecology 14: 2097–2110.

Von Braun, Joachim, Public policy and international collaboration for sustaining and expanding the rice revolution, Keynote at the 2nd International Rice Congress on "Science, technology and trade for peace and security", New Delhi, October 9-13, 2006.

WARDA, Rice Trends in Sub-Saharan Africa, Third Edition, Cotonou, 2005, p. 31.

WARDA, Strategic plan 2003-2012, 2004 and Achievements since the Fourth External Program and Management Review, 2007, 32 p.

Witcombe JR, Decentralization versus farmer participation in plant breeding: some methodological issues. In: New frontiers in participatory research and gender analysis, CIAT, 1997, Cali, Colombia, p.135-154.

#### Annex 7

# 4th WARDA EPMR Recommendations: WARDA's Response and Panel Comments

In general, WARDA has responded well to the recommendations of the  $4^{th}$  EPMR and most recommendations have been fully implemented.

**Recommendation 1:.** The Panel recommends that WARDA strengthen its capacity to monitor and assess the impact of its activities

WARDA's 2000 Response: WARDA agrees that impact assessment is a priority at a time when promising technologies developed and tested during the last decade are reaching farmers' fields. Fully aware of the strategic importance of impact assessment in the forthcoming years, in 1997 WARDA set up two projects in the Policy Support Program which focus on impact assessment of new technologies. A series of impact assessment activities has been planned and funds will be secured for their implementation. WARDA will allocate a full-time position to impact assessment activities as soon as possible.

WARDA's 2007 Updated Response: Aware of the strategic importance of impact assessment, in 1997, WARDA set up two projects in the Policy Support Program which focused on impact assessment of new technologies. A series of impact assessment activities were then planned and funds were secured for their implementation. Following the fourth EPMR, WARDA recruited an international staff at the Principal Staff (PS) level in the area of impact assessment. This led to the creation of an impact assessment unit with the following achievements:

#### Panel's Comments:

A certain number of impact assessment studies were conducted and papers published in refereed journals. Training and NARS capacity building in IA were done in nine countries of WA. WARDA is strongly involved in SPIA. There is also the need to monitor the impact of adoption of NRM management practices, and to monitor the impact of use of other WARDA's products (databases, etc.).

**Recommendation 2:** The Panel recommends that research on crop and resource management for rainfed rice receives a higher priority than at present.

WARDA's 2000 Response: WARDA appreciates this recommendation, as it strengthens its views expressed in the current MTP (p.18), where it is stated "that upland rice research will continue to be oriented more towards conservation and enhancement of the resource base while additional resources have been allocated towards the development of technologies to intensify cultivation in the lowland rice ecosystems. Both ecosystems need to benefit from stronger integrated natural resources management research which will receive greater emphasis during the 2000-2002 MTP period." Crop and natural resources management currently comprises one third of the approved staff plan for 2000-2002, i.e. a similar resources allocation level as for varietal improvement, and is being addressed in a balanced approach. It is essential that a critical mass for both crop/resource management and varietal improvement be maintained if the potential gains are to be realized. The balance between research on crop and resource management and on varietal improvement will be annually reviewed in WARDA's planning.

WARDA's 2007 Updated Response: WARDA expressed its appreciation for this recommendation which was in line with the 2000-2002 MTP. Crop and natural resources management currently comprises about one third of the approved staff plan for 2007-2009, i.e. a similar resources allocation level as for varietal improvement, and is being addressed in a balanced approach. It is essential that a critical mass for both crop/resource management and varietal improvement be maintained if the

potential gains are to be realized. Since year 2000, the balance between research on crop management and on varietal improvement has been annually reviewed during the planning week. A CCER on Integrated Genetic and Natural Resource Management (IGNRM) was conducted in 2005-2006, which confirmed WARDA's position.

## Panel's Comments:

Recommendation fully implemented.

**Recommendation 3:** The Panel recommends that research on rainfed rice be consolidated along crop improvement and crop and resource management lines.

WARDA's 2000 Response: WARDA appreciates the thinking underlying this recommendation. In the past, research areas were organized along disciplinary lines. However, these were reorganized in 1997 into integrated projects targeted at defined sets of constraints and ecosystems, resulting in strong interdisciplinary research teams. We believe that consolidating research on rainfed rice, strictly along crop improvement and crop/resource management lines, will be counterproductive. The research strategies, particularly in the integrated projects, are aimed at both genetic enhancement and technologies for sustainable production and improved natural resources management. While WARDA will continue with integrated approaches to technology development, we will ensure that crop improvement and resource and crop management activities become more visible than at present.

WARDA's 2007 Updated Response: In the past, research areas were organized along disciplinary lines. However, these were reorganized in 1997 into integrated projects targeted at defined sets of constraints and ecosystems, resulting in strong interdisciplinary research teams. WARDA believes that consolidating research on rainfed rice, strictly along crop improvement and crop/resource management lines will be counter-productive. The 2003-2012 Strategic Plan is the current document which provides the basis for the new program structure along two core areas and research challenges: integrated productions systems, and rice policy and development. It should be noted that WARDA continues to ensure that crop improvement and resource and crop management activities are visible within the two-program structure.

#### Panel's Comments:

Recommendation implemented in part. Work is concentrated on breeding. There should be a better balance with agronomy and NRM. For example, since 2001, WARDA does not have a senior water management scientist.

**Recommendation 4:** The Panel recommends an expansion of the Irrigated Rice Programme so as to address effectively irrigated systems beyond the Sahel with emphasis on breeding for the humid and sub-humid zone, and crop and natural resource management.

**WARDA's 2000 Response:** WARDA welcomes the Panel's support for an expansion of the Irrigated Rice Programme. In 1997, the Sahel Irrigated Rice Programme was expanded to become the Irrigated Rice Programme, in order to address irrigated systems in all agro-ecological zones in the region. Provision has been made for a modest expansion in this programme.

WARDA's 2007 Updated Response: WARDA welcomed the Panel's support for an expansion of the Irrigated Rice Program. Irrigated rice systems constitute an important of WARDA agenda beyond the Sahel. Interactions of the Sahel Station have been strengthened with IVC and lowland project. The Strategic Plan 2003-2012 takes into account the expansion of activities related to irrigated rice systems, which is further amplified by the expansion of the geographical mandate into East Africa, including

strong partnerships with ASARECA and NARO. Policy research and support for example is not limited to the Sahel, but include a wide range of activities related to irrigated systems and lowlands.

#### Panel's Comments:

Although WARDA has put emphasis on breeding and NRM for the lowlands with partial or full water control, there is an issue of critical mass at the St. Louis station in Senegal for the irrigated Sahel, particularly in NRM and G X E interaction. This is further explored in the section on rice agronomy and NRM.

**Recommendation** 5: The Panel recommends involvement of a full-time senior economist in the Irrigated Rice Program. In addition to giving direction on cost of sustainable production and resource use efficiency, the program should guide the rice production perspective to the household and community level.

**WARDA's 2000 Response:** WARDA fully agrees that it is now timely to involve a full-time senior economist in the Irrigated Rice Programme. From 1992 until now, two successive post-docs and a visiting scientist have filled the position of economist in the Irrigated Rice Programme for a total period of 5.5 person years. WARDA's MTP for 2000-2002 includes the provision for a postdoc production economist in this Programme. Subject to availability of funding, WARDA management will explore ways of providing the staff continuity that the Programme now deserves, so as to allow the Programme to address the issues highlighted in the recommendation in a consistent and productive manner.

**WARDA's 2007 Updated Response:** During the period of 1992-2003, two successive post-docs, a visiting scientist, then another post-doc, filled the position of production economist in the Irrigated Rice Program for a total period of 8.5 person years. The position has since been converted into a full senior staff position. A CCER in social science conducted in 2006 recommended an increased number of economists. USAID recently approved a project aimed at documenting costs of production of rice in Africa.

## Panel's Comments:

Recommendation has been fully implemented.

**Recommendation 6:** The Panel recommends that the Policy Support Program develops a strategic and more coherent agenda so as to address issues of food security, post-harvest opportunities, sectorial policy and seed marketing. WARDA should pursue more pro-active research collaboration on these issues with regional, other Southern and Northern University partners, particularly through the Task Force mechanism.

WARDA's 2000 Response: WARDA welcomes this recommendation, as it confirms the relevance of the research initiated and planned in the Policy Support Programme as stated in the 2000-2002 MTP. WARDA agrees that the development of a consistent network of partners within and outside the region is required to fully implement and complete the Policy Support Programme agenda. Initial contacts have been made with regional and international research institutions to identify areas of collaboration in the policy domain, and to strengthen the collaboration, including the development of formal collaboration agreements with Universities in the region.

**WARDA's 2007 Updated Response:** WARDA welcomed this recommendation at the time of the fourth EPMR and agreed that the development of a consistent network of partners within and outside the region was required to fully implement and complete the Policy Support Program agenda. Initial contacts were made with regional and international research institutions to identify areas of

collaboration in the policy domain, and to strengthen the collaboration, including the development of formal collaboration agreements with Universities in the region. In 2001, a workshop was organized which brought together WARDA and universities in Africa together. Follow up actions were defined and are being pursued. A research plan paying particular attention to the points raised in the EPMR was developed in 2004. This document formed the basis for developing Project 5 of the 2005-2007 MTP. A number of actions have been taken to strength policy support agenda and strategy:

- A study on Nigeria rice economy funded by USAID has been completed; follow up actions are been undertaken
- A workshop on policy bringing together stakeholders and practitioners was held
- An Agricultural Policy Research and Advocacy Group (APRAG) was created and is functioning
- Post-harvest has been clearly highlighted in the 2007-2009 MTP; this is also highlighted in the USAID review of WARP

#### Panel's Comments:

The Policy Support Program still needs considerable improvement and a sharper focus. The Program is now even more important than in 2000 and has suffered from staff vacancies not being filled for a long period of time. A monitoring of the Program by an EC mission in 2004 resulted in a very critical report <sup>117</sup>. And the problems mentioned in that report have not been fully resolved.

**Recommendation** 7: The Panel recommends that WARDA develops a new strategic agenda on social and institutional constraints to technology adoption and gains a better understanding of existing knowledge systems in the region.

**WARDA's 2000** Response: WARDA endorses this recommendation and recognizes the need to strengthen Program 4. Prior to the creation of Program 4, WARDA began work in this area through the RADORT (Research on Accelerated Diffusion of Rice Technologies) project from 1996-1999, in collaboration with Winrock International. Since Program 4 became operational in 1998, further steps have been taken to strengthen the themes highlighted in the recommendation.

WARDA's 2007 Updated Response: During the period of 1996-1999, WARDA initiated work in the area of technology transfer through the RADORT (Research on Accelerated Diffusion of Rice Technologies) project funded by IFAD, in collaboration with Winrock International. Within the context of the then Program 4, WARDA strengthened its capacity in technology transfer with the recruitment of a technology transfer specialist and a redefined RADORT now designated PADS (Participatory Adaptive Research and Dissemination of Rice Technologies in West Africa) also funded by IFAD and which is the middle of its second phase. The technology transfer unit is led by a senior scientist. The recent recruitment of a Sociologist has strengthened the unit. PVS is fully implemented in the 17 member countries and is now widely used for dissemination of all new or improved varieties. PLAR was introduced as a participatory approach.

#### Panel's Comments:

WARDA has made efforts to implement this recommendation but the constraints to technology adoption remain very large and are not always well understood. Knowledge gaps remains and also the situation is shifting due to a number of developments. Constraints are also local context specific, depending on agro-ecological and socio-economic conditions.

<sup>&</sup>lt;sup>117</sup> Coulter, Jonathan and Bohumil Havrland, Monitoring of project 3.2 (project 5): Policy Environment and Rice Market Development at WARDA, ECART-NATURA, Monitoring of CGIAR-projects co-funded by the European Commission in 2004, November 2005.

**Recommendation 8:** The Panel recommends that, due to the extension of new "NERICA" upland rice varieties which will lead to loss of indigenous genetic resources, WARDA should intensify the collection and conservation of indigenous upland rice varieties.

WARDA's 2000 Response: WARDA agrees with this recommendation. In recognition of possible genetic losses, the centre continues to conserve rice genetic variability of all indigenous rice germplasm in sub-Saharan Africa. Almost all countries in the region have been explored for germplasm collection and conservation, except for some isolated remote areas. WARDA will continue to undertake germplasm collection and conservation, including germplasm repatriation to NARS on request, in collaboration with other organizations and programs within and outside the CGIAR, such as IPGRI, SGRP, FAO, NARS and the sub-regional genetic resources networks. The centre recently consolidated its genetic conservation efforts into a Genetics Resources Unit and is in the process of extending the genebank facilities for medium and long-term conservation.

WARDA's 2007 Updated Response: In recognition of possible genetic losses, the center continues to conserve rice genetic variability of all indigenous rice germplasm in sub-Saharan Africa. Almost all countries in the region have been explored for germplasm collection and conservation, except for some isolated remote areas. WARDA will continue to undertake germplasm collection and conservation, including germplasm repatriation to NARS on request, in collaboration with other organizations and programs within and outside the CGIAR, such as IPGRI, SGRP, FAO, NARS and the sub-regional genetic resources networks. In 1999, the center consolidated its genetic conservation efforts into a Genetics Resources Unit. It has, through an inter-center collaborative project funded by the World Bank and additional funding from Japan, extended its genebank facilities for medium and long-term conservation.

## Panel's Comments:

Recommendation implemented but more work needs to be done on the collection of local indigenous genetic resources (*O. sativa, O. glaberrima and wild rices*).and their characterization.

**Recommendation 9**: The Panel recommends that WARDA develops a strategy for managing and periodically reviewing its partnerships for greater effectiveness and efficiency.

**WARDA's 2000 Response:** Each of WARDA's diverse partnerships has periodic reviews built into its normal evaluation and monitoring process. WARDA agrees that there is a need to clearly document the Centre's formal process for the management and review of its partnerships.

**WARDA's 2007 Updated Response:** As indicated during the 4th EPMR, each of WARDA's diverse partnerships has periodic reviews built into its normal evaluation and monitoring process. WARDA agreed that there was a need to clearly document the Center's formal process for the management and review of its partnerships. A CCER on partnerships conducted in 2005 provided the baseline for streamlining the partnership process.

## Panel's Comments:

Recommendation fully implemented.

Recommendation 10: The Panel recommends that the Board of Trustees:

- assists the COM in the search process for positions on the WARDA Board;
- institutes a formal annual evaluation process for each Trustee, including the Board Chair;
- ensures that the Program Committee plays a more active role in providing guidance and oversight to the Centre in program strategies and priority setting;

pursues avenues to allow Trustees to be better prepared for meetings. Each Trustee should receive the essential meeting documents at least 7 days before the scheduled meetings.

**WARDA's 2000 Response:** The Board agrees. The Secretary to the Board makes an annual canvas to the COM. In addition, the Director General, as Secretary to the COM, will explore, on behalf of the Board, more efficient methods of identifying nationals of member states without impinging upon Article VII.2(a) of the WARDA Constitution.

The Board agrees to review this recommendation and has already discussed suitable means of such assessment. At its meeting in June 2000, the Board will formalize this process through the Nominating Committee. Prior to that meeting, the Chairperson of the NC will continue to consult available material, including that from the CGIAR on evaluation process.

The Board agrees and will explore with Management how the effectiveness of the PC can be improved so as to enhance Board involvement in setting priorities and Programme strategies.

The Board agrees and has been assured by Management that documents will be delivered to Board members well in advance of meetings. Additionally, the Board will consider the merit of a "Reading Day" at Bouaké, prior to Board meetings.

**WARDA's 2007 Updated Response:** A new process was introduced for the search of Board members from the Association, whereby half of the Trustees are identified by the Board and approved by the COM.

The Board agreed to review this recommendation and in 2005, it designed a new process of individually reviewing Board members, including the Board Chair.

The meetings of the Program Committee have been structured to include items of oversight ranging from simple review to orientation of the research agenda and outputs.

Most of the materials are sent to the Board by electronic means at least two weeks before the meetings. In addition, Trustees are provided hard copies on arrival, including materials not sent earlier by email. A reading-day was instituted to assist in better preparing for meetings.

#### Panel's Comments:

The Panel agrees with WARDA's update of 2007; and commends the Board for implementing all but one (item iii above) of the 4<sup>th</sup> EPMR's recommendations on BOT. Regarding item iii, the Panel agrees that the Program Committee now plays a more active role; but it believes that additional efforts are needed to ensure that the PC provides adequate scientific guidance and oversight to the Centre's research program. A recommendation has been made in our report to this effect.

**Recommendation 11**: The Panel recommends that Management takes such actions as necessary to capitalize on the strengths and address the weaknesses identified in the Staff Survey, and that the Board replicate the Survey every 18 months to monitor progress and to provide feedback to the Staff, and Management.

WARDA's 2000 Response: WARDA agrees and the Board and Management have taken particular note of this recommendation. As was recorded in the report, WARDA had already taken steps to address staff issues by retaining a Human Resources Specialist of the Organizational Change Program (OCP) to assist Management. A Senior Management Team (SMT) retreat held in September 1999 identified three sets of issues – more consultation for increased transparency and participation, attracting and retaining high caliber staff, and building and sustaining morale – as challenges to be

addressed by the SMT over the next 12 months. The SMT comprises members of the Executive Management Committee (EMC), the Programs Management Committee (PMC) and the Administration and Finance Committee (AFC). One of the outcomes of the retreat was the commissioning of a comprehensive, diagnostic staff survey to be conducted by the OCP in mid-2000, the timing of which will now be reviewed by the Board and Management in the light of the Staff Survey carried out by the Panel.

WARDA's 2007 Updated Response: WARDA took note of this recommendation. Staff quality and retention is one of the strategic points being addressed by Management. Increased consultation and transparency in decision-making were key to successfully leading WARDA through the crisis. While no formal staff surveys were undertaken, the annual evaluation process was deemed to provide the necessary information as requested by such surveys. Following the major crises in Cote d'Ivoire in 2002 and 2004, WARDA management treated staff psychology and concerns with the utmost attention. These efforts are documented in a number of sensitive documents. The efforts continue until today. To mention but the most important actions:

In June 2004, after the first crisis in September 2002, with relocations to Bamako and Abidjan, management called on a senior consultant to assess staff morale and concerns in a major team building exercise.

In May and August 2005, after the second crisis of November 2004, and the temporary relocation to Cotonou, management again called on the services of a psychiatrist (MD) to assess the consequences of these traumatic events, at individual, group and institutional levels.

In February 2006, a 2-day retreat was held in Cotonou, involving representatives of all categories of staff. The retreat was very useful and resulted in an action plan which is regularly reviewed by WARDA's Senior Management Team (SMT).

## Panel's Comments:

The Panel agrees with WARDA's update of 2007 that Management has taken several steps during the past few years to address issues of staff quality and retention, as well as other staff concerns highlighted in the 2004 team building exercise and the 2006 management retreat. It also recognizes that the Ivorian crisis of 2002-2004 had a major impact on staff morale and management of the Center, and that its after-effects are still being felt, though to a lesser degree than in previous years. The staff satisfaction survey conducted by the Panel for the 2007 EPMR has identified continuing concerns, some of which can be traced to the high staff turnover during the past few years, the continuing uncertainty regarding the planned return to Côte d'Ivoire in a few years, and the realignment of corporate services with IITA that is currently underway. Management is aware of these matters, is taking concerted action to respond to some of these concerns, and is expected to take further steps as needed. The Panel's report discusses these issues, and makes a few suggestions and recommendations which we hope will help address the key staff- and management related issues during the next few years.

**Recommendation 12**: The Panel recommends that WARDA fills vacant positions within the shortest time possible in order to ensure efficiency of program implementation.

**WARDA's 2000 Response:** WARDA agrees and will continue to endeavor to fill vacant positions within the shortest time possible without compromising quality of the appointment.

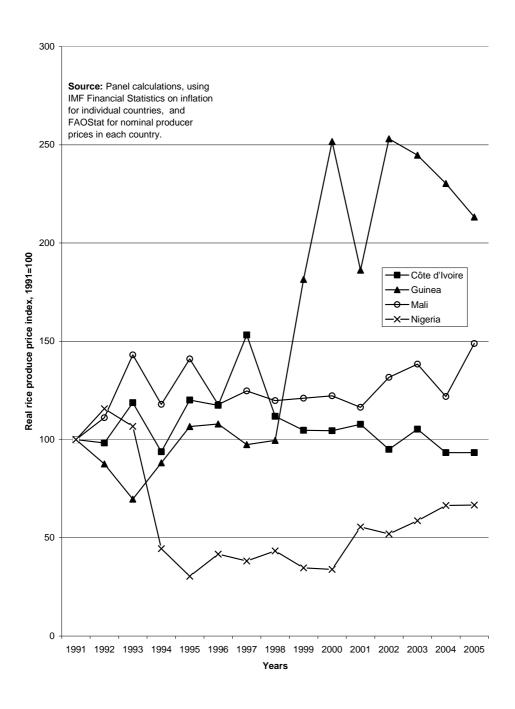
**WARDA's 2007 Updated Response:** While it is agreed that it is important for WARDA to continue filling vacancies within the shortest time possible, without compromising quality of the appointment, it is equally important for WARDA to manage these vacancies as efficiently as possible. The crisis in Côte d'Ivoire has taught WARDA that it is better to recruit quality and committed staff that will stand

by the institution than those who may be tempted to abandon the ship at the smallest wind. During the period in review, a total of XX positions have been filled with an average length of XX months of vacancy.

# Panel's Comments:

The Panel agrees with WARDA's updated response of 2007 that vacancies need to be filled expeditiously without compromising quality. It expects Management will continue to seek the best qualified persons for filling current and future vacancies, and will follow established recruitment policies and procedures in a fair and transparent manner.

Annex 8 Evolution of real rice prices to producers in Africa's main rice producing countries 1991-2005



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# Annex 9 The Ivorian crisis

The "Ivorian crisis" developed suddenly in late September 2002 and spread rapidly in 2003-04. WARDA Management responded with a series of short-term as well as long-term mitigating strategies. A brief account of the main events that unfolded during the first year of the crisis is given below, to provide an appreciation of the difficult situation faced by the Center at the beginning of the review period covered in this report (since the last EPMR in 2000).

The crisis started on 19 September 2002, following a coup attempt by rebel forces in Côte d'Ivoire. The area in and around Bouaké, where the Center's headquarters and most of its staff were located, soon became the epicenter of armed conflict. WARDA staff were unable to leave their homes for over a week; but after strenuous efforts by Management to ensure safe passage out of Bouaké, on 26 September 2002 WARDA was able to relocate about 250 staff members to Abidjan. This group included all internationally recruited staff (IRS), and most general services staff (GSS) who, as per the host country agreement, had been recruited not only from Cote d'Ivoire but also from other West African countries.

The majority of IRS remained in Abidjan, where a temporary administrative base was established by WARDA Management; and most IRS families were evacuated from Côte d'Ivoire. These decisions were endorsed by the Chairs of the Board of Trustees and the Council of Ministers. On 1 November 2002, ICRISAT (CGIAR Center headquartered near Hyderabad in India) agreed in principle to allocate offices to WARDA at its field station in Bamako, Mali. Management therefore moved speedily to relocate and reestablish itself, on a temporary basis, in Mali. In November, after several dangerous forays into M'bé, WARDA staff succeeded in recovering all its data-servers, 25 personal computers, important documents, and some personal effects from the headquarters site; and by 13-16 December, over 6000 accessions, including new collections and breeding lines (80% of the total germplasm collection at M'bé), had been retrieved.

The 2002 field trials and seed multiplication plots were maintained at M'bé; and the end-of-season research work at various other field sites was continued. On 10 January 2003, negotiations with the Government of Mali and ICRISAT were concluded; and by end-February, 16 scientists (60% of the 30 international staff on board in September 2002), and many technical support staff, had been temporarily relocated to Bamako. The WARDA Board meeting decided on 24-28 February 2003 that the Center should plan to stay in Mali for at least two years--thus activating a long term strategy of crisis management that allowed scientists the necessary timeframe for research planning and implementation, as well as planning their personal life.

By end-February 2003, a shipment of recovered germplasm accessions had been sent to IITA (at Ibadan, Nigeria), with a duplicate batch retained in Abidjan. The Management team, and the Administration and Finance department operated from the Abidjan Liaison Office; and organized frequent meetings of the Executive Management Team (EMC) and meetings with scientists and other staff. WARDA's research and development activities at field stations in St Louis (Senegal) and in Ibadan were not affected, largely due to WARDA's partnership mode of operations. On 4 March 2003, a host country agreement was signed with the Government of Mali.

During the same period, WARDA staff recovered all germplasm material from M'be, totaling 7,500 accessions. One set of samples was preserved in Abidjan and another was sent to IITA, where WARDA's long-term storage of its germplasm is traditionally maintained. WARDA also reached agreement with Fort Collins, Colorado, on safety duplication of the germplasm. In addition, to ensure business continuity, WARDA's Information and Communication Technology (ICT) unit was

particularly proactive throughout the crisis. Vital facilities, such as servers and data were retrieved from Bouaké; and new servers for email, finance, and data were installed in Abidjan. A new coordinator of the African Rice Initiative (ARI) was recruited in March 2003.

Despite these achievements, the impact on WARDA was severe. The Director General reported to the Board in February 2003 that "the crisis has dealt a heavy blow to WARDA's research activities. Some of WARDA's output can be retrieved but a lot of scientific effort has been lost. The long-term trials have especially suffered." Several scientists had left the country when the unrest began; and were put on technical leave. The scientists who stayed back in Abidjan had been working without laboratories and fields. Technical and financial reports to donors had been delayed, largely because of the crisis. However, the DG also noted that "our modus operandi of partnership has kept our R&D activities outside of Cote d'Ivoire undisturbed".

On 2 May 2003, the opposing forces in Cote d'Ivoire signed a Peace Agreement, which included a cease-fire and end of all hostilities. This Agreement was expected to go into immediate effect. By the time the Council of Ministers met on 18-19 Sept 2003 in Cotonou, Benin, there seemed to be grounds for cautious optimism. The Council lauded decisions taken by Management to ensure security of staff, campus, genebank, scientific/financial/administrative data; continuity of operations, communications, and research activities; availability of funds for the extraordinary expenses related to the crisis; continued goodwill and confidence of WARDA's stakeholders; and maintenance of staff morale and efficiency.

However, it also recognized the continuing negative effects of the crisis: tremendous strain on the Management and staff; disruption of research activities; disruption of family life, which affected staff morale (and led to several resignations); delay in the recruitment for several key staff positions; delay in payment to GSS; severe downsizing of staff, with over 50% of GSS on technical leave; and excessive and extraordinary expenses related to the involuntary dislocation caused by the crisis. Accordingly, the Council concluded that the "decision on the official full-fledged return to Bouaké will be determined only after the disarmament of forces and the establishment of law and order in Bouaké."

A partial return to M'bé near Bouaké was attempted in September 2004, when again hostilities broke out, particularly in Bouaké on November 2004. This meant the second retreat from M'bé. It is to be noted that when WARDA returned to its headquarters in September 2004, the Board of Trustees in its April 2004 meeting had approved the Plan of Return and all the necessary approvals and assurances were given from the government of Côte d'Ivoire, the United Nations and the international community. When on November 4, 2004 hostilities resumed unexpectedly, most staff from Bamako and Abidjan had already made it back to Bouaké. The death of one of their colleagues which occurred on November 6, 2004 and the violence in Bouaké forced once more an evacuation from Bouaké, then Abidjan and Côte d'Ivoire. This caused a serious disruption in programs and in morale and staff resignations at all levels. The quality of the outputs from the Center need to be maintained by ensuring that staff can work almost worry-free and as a consolidated team in one location. In January 2005, WARDA temporarily located at the IITA-station in Cotonou, Bénin, where it is still now, awaiting a return of stable peace in Côte d'Ivoire.