

6 GOVERNANCE AND MANAGEMENT

6.1 Governance

Governance structure

As an inter-governmental organization of 17 African states (four additional States from Central and East Africa have applied for membership), the Africa Rice Center (WARDA) has a unique governance structure. Like the other CGIAR Centers, WARDA has a Board of Trustees (BOT). But in addition, it also has a Council of Ministers of Agriculture, Scientific Research and Higher Education (COM) of Member countries in West and Central Africa. The Member States contribute funds to WARDA, and also make in-kind contributions of staff time and other resources that help strengthen WARDA's research and partnership activities. Currently, the Board meets once every year, and the Council meets once every two years.

A National Experts Committee (NEC), comprised of Directors/Heads of the countries' national agricultural research systems (NARS), which supports the work of the Council, and meets annually (in alternate years this meeting is preparatory to the Council meeting), supports the Council. The operational cost of the Board and its Committees is borne by WARDA. However, the cost of Council and NEC meetings is shared between member States, the country/Center hosting the meeting, and WARDA (which pays for honorariums of NEC members (but not COM members); and does not cover travel expenses for attending the meetings. The Panel considers the total cost to WARDA of the BOT and COM reasonable.

The Director General of WARDA serves as the ex-officio Secretary of WARDA's Council of Ministers, and is an ex-officio member of the Center's Board of Trustees. The Board Chair of WARDA is a special invitee/observer at Council meetings. Both the Council and the Board have their own well defined Constitutions and Rules of Procedure. WARDA's Board and Management thus have to take cognizance not only of the legal agreements and of policies that govern WARDA as an "international Center" funded by the CGIAR and other donors, but also of the policies and deliberations of an "African Center" guided by WARDA's Council of Ministers.

In view of this unusual governance structure -- and the time and effort associated with organizing Board, Council and NEC meetings, each of which is attended by many members -- the WARDA Board of Trustees meets once year. To compensate for the gap between Board meetings, WARDA's Executive and Finance Committee (EFC), comprised of the Chairs of all its committees, meets twice a year, and also conducts business electronically between Board meetings. All other Board Committees -- the Audit Committee, Nominating Committee, and Program Committee (on which all Board members serve) -- meet just prior to the meeting of the full Board, though they too conduct some of their business by phone or email, as needed.

The governance structure of WARDA's Board of Trustees is unusual in a few additional respects as well. According to its Constitution, one-half of its 8-14 members must be nationals of Member states, as must the Director General of WARDA. The Board Chair and the remaining Board members can come from countries that are not represented on the WARDA Council of Ministers; i.e., they can come from non-Member states outside West and Central Africa. In accordance with its Constitution, therefore, since 1987 when WARDA joined the CGIAR, the Board Chair has always been from a donor country or a "non-Member" State in Africa. In addition, the Board has two "CGIAR nominees" appointed by the Board, usually from important donor countries in North America and Europe.

Since March 2007, the WARDA Board has also had two “common Members” with the IITA Board of Trustees. It is intended that two additional common members will be added to both Boards by the end of 2007, to conform to the agreement “in principle” on aligning the governance structures of these two CGIAR Centers located in West and Central Africa. For facilitating the appointment of common members who meet the requirements of both Boards, the Boards of WARDA and IITA have established a “joint” Nominations Committee, comprised of the Chairs of the Nominating and Program Committees of the two Centers. This joint Committee met for the first time in March 2007 in Cotonou. The respective Executive (and Finance) Committees of the two Centers have also conducted “joint” meetings, as well as video- and phone conferences over the past two years.

WARDA’s Council of Ministers has provided much-needed political backing to the Center during its recent traumatic years, and has helped the Center rapidly and successively (first in Bamako, Mali, and then in Cotonou, Benin) find a new home after its painful relocation from Bouaké. The Council and its Member governments take justifiable pride in being the “highest” oversight body of the West Africa Rice Development Association (WARDA), the sub-Regional “autonomous inter-governmental research association” it had created in 1971, sixteen years before WARDA became a “CGIAR” Center in 1987.

Throughout the subsequent twenty years, the Center has successfully maintained this “dual” (regional/African, as well as international) identity. In recognition of its role in rice research and development in Sub-Saharan Africa, in January 2003 -- following a recommendation of the NEC, endorsed by the WARDA Board of Trustees -- the Center was renamed “Africa Rice Center”. This new name was welcomed by FARA, ASARECA, and CORAF/WECARD; and at the Board meeting in February 2003 in Mali, the CGIAR (through its Director) hailed WARDA’s primary research product, NERICA (New Rice for Africa), as a “flagship of the CGIAR”.

The Panel Chair and one member observed the Board and Committee meetings in March 2007, including their closed sessions, and interviewed all Board members individually; and the Panel Chair also met the Chair of the Council of Ministers, currently the Minister of Agriculture and Water Resources for Nigeria. We have also reviewed some of the extensive documentation available to the Board and the NEC during the past few years, as well as minutes of their meetings. Based on these, the Panel’s overall conclusion is that WARDA’s governance structure, though more elaborate than in other CGIAR Centers, is not unduly burdensome.

We believe the Council of Ministers does not unjustifiably influence the functioning of the Board of Trustees of WARDA, which retains the authority to determine the internal policies and strategy of the Center, and to oversee their effective implementation. The NEC has taken its advisory responsibilities seriously, and has helped disseminate WARDA’s research results and outputs to the NARES of West and Central Africa. The Council and NEC have been invaluable for seeing WARDA through the very difficult years of the “Ivorian crisis”, which, importantly, is not yet over -- since the decision on when and how to return to Bouaké is still pending, and is not expected until 2010 or so. This decision will not be easy, and will need to be endorsed by both the Board and the Council.

In December 2004, the Board of Trustees decided that in order to provide much-needed stability to the research program and staff of the Center, WARDA headquarters would, from January 2005, be temporarily located in Cotonou, Benin, while Cote d’Ivoire would remain the host country of WARDA’s permanent headquarters. A move back to Bouaké would be considered only after security, living, and working conditions permit. In April 2005, the Board further decided that WARDA would continue to operate from facilities in Cotonou, Benin, “until such

time that hostilities among the different factions in Cote d'Ivoire have ceased, the whole country is under duly internationally-recognized Government, and when conditions have been adjudged to be conducive for WARDA's operations". The assessment at that time (in April 2005) was that "the return to Bouaké/M'bé may take between 3-5 years if not longer". The Panel considers this pragmatic approach of the Board, endorsed by the Council of Ministers, appropriate.

Hence, our overall conclusion is that various components of WARDA's unique governance structure have performed their complementary functions diligently and reasonably well. The size and composition of the Board itself, and the structure of WARDA's Board Committees, are satisfactory — and conform in general with the Center's Charter and Constitution, and with the CGIAR guidelines for Boards. We note also that WARDA's Board operations have improved considerably in recent years, and are well managed; and the support provided by the Board Secretary, in terms of documentation and follow-up of Board discussions and decisions, has been effective. The Panel therefore recommends no major changes in WARDA's governance, or Board structure, size and composition. Some improvements in the way its Committees function could nevertheless be useful, including additional support for the Program Committee, as suggested below.

Governance alignment with IITA

As noted above, WARDA has faithfully implemented the concepts of "common" Board membership and "joint" Committee meetings with IITA, both of which have been strongly recommended by the CGIAR. The experience of the WARDA and IITA Boards during the past two years shows, however, that the transaction costs of even modest steps in "governance alignment" of autonomous CGIAR Centers are not trivial. Not only do busy Board and Committee Chairs and DGs have to set aside time for extensive consultations and joint planning, but the practicalities of date, place, and logistics have to be suitable for both Centers as well.

For example, despite members of both Executive Committees being available in person at their respective headquarters in Cotonou and Ibadan for the "joint" (video/phone) meeting planned for March 2007, even a phone conference could not take place due to an unexpected glitch in technology. After the aborted attempt, both Executive Committees expressed a strong desire to reschedule this meeting for Fall 2007. However, despite their good intentions, it was clear that arranging a face-to-face meeting of the "Joint Executive Committee" was not going to be easy, primarily due to unavoidable conflicts in the dates and locations of the next scheduled meetings of the WARDA and IITA Boards. (The next meeting of WARDA's Executive and Finance Committee is planned for September 2007 in Cotonou, immediately preceding the meeting of its Council of Ministers, hosted this year by Nigeria; and the next IITA Board and Executive Committee meetings are planned for September 2007 in Dar es Salaam).

Despite these hiccups, the various actions on governance alignment already taken or planned by the two Centers provide evidence of the willingness of both Boards to seek common ground on a variety of issues. The Panel believes that efforts at alignment of governance structures are being taken seriously by both Centers; and that WARDA and IITA are pursuing these measures so that they could more-effectively guide the alignment of programs and corporate services, both of which are currently underway at the Headquarters and field sites of both Centers, as covered elsewhere in this report. Given the practical difficulties of arranging in-person as well as virtual meetings of common Board members and joint Committees, it seems to the Panel that incremental progress is inevitable -- and perhaps even desirable and necessary -- on such important and sensitive matters as alignment of governance structures of otherwise independent entities.

In this context, the Panel also notes that in November 2006, in response to the possibility of a structural “merger” between WARDA and IITA, the Council of Ministers strongly supported WARDA as an autonomous and independent Center with a unique identity that should not be diluted. Since both IITA and WARDA seek to serve the nationals of countries represented on WARDA’s Council of Ministers, it would be in *both* Centers’ interests to retain the considerable goodwill now present among West and Central African countries towards the two Centers and the CGIAR.

Hence, overall, the Panel is convinced that the current steps towards governance alignment provide sufficient momentum to the more meaningful and potentially beneficial moves toward programmatic and corporate services alignment between IITA and WARDA. More ambitious externally driven plans for organizing “Joint Board” meetings thus need to be made with caution, and need to be justified by convincing arguments that their anticipated benefits to both Centers would outweigh their considerable transaction costs of time and effort. This is even more relevant in the case of WARDA now, in light of the considerable change already weathered by the WARDA Board and Management in recent years, as mentioned earlier.

Board and Center leadership

As noted above, the Panel Chair and one member interviewed most WARDA Board members at the March 2007 Board meeting in Cotonou. Based on these interviews, a perusal of relevant Board documents, and interviews with available senior staff of WARDA, the Panel concludes that during the most troubled period of WARDA’s recent history (from 2002-2005), the Center was generally well served by its leaders. At times, especially during the violence in Cote d’Ivoire in 2002 and 2004, the Center needed decisive leadership in response to an environment of considerable uncertainty and unpredictability; and this was provided by the Director General, with support from key members of the Board, particularly the Chairs of the EFC and Audit Committees.

The move to Bouaké was implemented in September-November 2004, in three phases after security guarantees were provided by the Ivorian government and UN Forces. The two parties to the conflict in Cote d’Ivoire had recently signed a peace agreement, which was expected to hold; and no one could have predicted the outcome of this Agreement, nor of the Board-endorsed decision to return to M’bé. Hence, though it is tempting to second-guess some extremely difficult decisions taken by WARDA Management during the “Ivorian crisis”, the Panel believes that, overall, most WARDA staff and their CGIAR colleagues rightly acknowledge the able leadership provided by the DG, Board, and Council, without which the Center would not have survived in its present form.

The former Board Chair of WARDA led the Center from 2003-2005, and the former Director General was at the helm of the Center’s affairs for ten years, 1996-2006. Both individuals had exceptional experience and understanding of the needs of NARS, and of conditions in the West African sub-region. They were fully committed to the cause of WARDA, and deserve credit for seeing the Center through extremely rough times in 2002-2005. They, along with their many colleagues -- on the Board of Trustees, among Center management and staff, and in partner organizations, particularly in the Governments of Mali and Benin -- made sure that most of WARDA’s research program activities continued uninterrupted even when the headquarters facilities and staff were being relocated from place to place at short notice.

The Director General and Board Chair were fortunate also to have received the support and dedicated services of their ADG for Research & Development and other Directors, and of WARDA staff (both internationally- and locally- recruited) and their families, without which

their leadership would surely have failed. They were also very ably supported by WARDA's many friends and well wishers among the Governments of Cote d'Ivoire, Mali, and Benin; the Chair and Members of the Council of Ministers; key donors of the CGIAR, particularly officials of the French, American, and other governments and agricultural research organizations; the UNDP, UNOPS and other officials who helped evacuate staff from Bouaké; the CGIAR Chair, Director, and Secretariat staff; and many staff of NARES partners and other CGIAR Centers, all of whom provided substantial financial assistance and/or material and moral support as needed.

This is not to say that the entire period 2000-2007 has been one of uninterrupted smooth functioning and effective leadership by all concerned. It appears that during the 2000-05 period, Board leadership in some instances was not as strong as was warranted by the circumstances confronting the Board and WARDA. Given the fact that the Board met only once a year, and the situation in Cote d'Ivoire was fast-moving and fluid, it would have been understandable for the Board Chair to allow a relatively free hand to the Director General to manage the unforeseeable realities on the ground as best as possible. Nevertheless, it appears that during this period the (then) Chair may not have been effective at all times in counter-balancing the strong influence and personality of an energetic and forceful DG, fully immersed in the day-to-day running of the Center.

During the same period, the Board and Director General were surprised by allegations of financial fraud relating to the provision of benefits to the latter, which, after due diligence by an influential donor and the Board's Audit Committee, were resolved in favor of the DG. The costs incurred, in terms of inevitable tension between the donors, Board, and DG, was unfortunately heavy. But relations between the (previous) Board and (previous) DG seem to have returned to normal.

The situation appears to have further improved with the appointment in 2005 of the current Board Chair, who leads with a light touch but with a firm grasp of the Board's business. His collegial attitude encourages open discussion and participation by Board members, and is appreciated by most Board members and staff of WARDA. The strategic orientation of the Board could, however, be improved. However, this requires concerted action not only by the Board Chair, but also by the Chairs and members of the EFC and Program Committee, as well as more relevant "strategic-options" papers presented to the Board by WARDA management and staff.

The current Director General was formerly on the WARDA Board for 4 years, and on the NEC for many more years, before being selected as DG in March 2006 (he assumed office in October 2006), following a transparent competitive search process overseen not only by the full Board, but also by the Council of Ministers and the NEC. He has indicated his preference for open dialogue with members of the Board, Council, and NEC, and intends to delegate authority to WARDA Directors, program leaders, and senior staff. This is a welcome development. The Center is fortunate to have the services of experienced senior managers, many of whom bring an in-depth understanding of the CGIAR and of the current capacities and future needs of WARDA. However, some of these managers are new in their jobs, and need to be given time and space to establish themselves in their current positions.

In terms of Board and Center leadership, the current Chair has indicated that the Nominating Committee should start looking for his successor. However, even if this transition were to take place in the next year or two, the immediate future looks reasonably promising for WARDA. The Panel hopes that the new DG, his Board colleagues, and his team of senior staff will soon settle into a rhythm of effective management that will suit the governance responsibilities and managerial style of every one concerned. This will prepare the ground for further progress on

such important aspects as implementing the “new vision” for the Center (see below) outlined to staff by the DG in October 2006, and endorsed by the Board at its March 2007 meeting; implementing the WARDA MTP for 2007-09; and further aligning the Center’s governance, programs, and corporate services with IITA and other CGIAR Centers over the next few years, as planned.

Board size and composition

During the past six years, WARDA’s Board has had between 12 and 15 members. In recent years, the Board has sought to follow CGIAR guidelines for Board composition, as well as relevant recommendations of CGIAR’s 2006 Stripe Review of Center Governance; and has reduced its size from a peak of 14 members in 2001 to 11 members currently (including the DG, an ex-officio Board member). Table 6.1 shows the nationality, gender, disciplinary background, experience (e.g., in research management, governance, finance etc), and period of service of WARDA Board members during the period under review.

As in all CGIAR Centers, the WARDA Board has sought a “balanced” size and composition--in terms of disciplinary strength, gender, experience, and geographic representation--while at the same time seeking to ensure that it retains sufficient capacity to undertake its primary oversight, fiduciary, and other functions. In so doing, and in accordance with its Constitution, it has also sought Board nominees from Francophone- and Anglophone- member countries of West and Central Africa, as well as other Board members with strong linkages with important donor countries (e.g. Japan), and rice-networks around the globe.

The Panel commends the Board for having taken steps to reduce the size of the Board from 15 to 12 (including the Director General), without compromising on the need for maintaining quality and balance. However, some Board members are busy senior executives of comparable or larger research organizations, and do not seem to have sufficient time to devote to Center business. This constraint is being addressed by the Nominating Committee, for example by the appointment of two Vice Chairs of the Program Committee. Nevertheless, these and other mitigating measures to address the problem will need careful monitoring in coming years. In addition, as the WARDA Board seeks in the near future to strengthen the scientific depth of the Center’s research activities, it would need to draw upon additional scientific expertise, so that it could more effectively discharge its program oversight function. This is further discussed below.

Table 6.1 Africa Rice Center (WARDA), Board Composition 2001-2007¹¹³

Name	Nationality	Specialization	Gender	Nominated by	Year 20..							Committee Membership	Start	End	
					01	02	03	04	05	06	07				
Mamadou Diomande	Cote d'Ivoire	Phytopathology/Govt Official	M	Member State	x								C-PC, M-EFC	Nov-96	Nov-01
Dunstan C. S. Spencer	Sierra Leone	Ag Economics	M	Member State	x								C-AC, M-EFC, M-PC	Apr-99	Apr-01
Diana McLean	Canada	Ag Development	F	CGIAR	x								M-PC, NC	Apr-95	Apr-01
Ryuichi Ishii	Japan	Crop Physiology	M	CGIAR	x								V-PC	Oct-95	Apr-01
Akilagpa Sawyerr	Ghana	Law	M	Member State	x								M-PC, M-AC	Jun-98	Jun-01
Jacob Ayuk-Takem	Cameroon	Agronomy/ Research Management	M	Member State	x	x	x						M-PC, AC, NC	Nov-97	Jun-03
N. Lindsay Innes	United Kingdom	Crop Science	M	CGIAR	x	x	x						C-BOT, C-NC, M-AC, PC, EFC	Jun-98	Nov-03
Richard Musangi	Kenya	Animal Science/ Research Management	M	Board	x	x	x	x	x				C-BOT, VC, C-NC, M-AC, EFC	Jun-98	Jun-05
Kanayo Felix Nwanze	Nigeria	Entomology Civil Engineering/ Manager	M	Ex-Officio	x	x	x	x	x	x			M-EFC, PC	Dec-96	Nov-06
Remi Pochat	France	Manager	M	Board	x	x	x	x	x	x	x		C-AC, M-EFC, PC	Apr-01	Apr-08
Clementine L. Dabire	Burkina Faso	Entomology Breeder/ Research Management	F	Member State	x	x	x	x	x	x	x		V-BOT, C-NC, M-EFC, PC	Apr-01	Apr-08
Takeshi Horie	Japan	Management	M	Board	x	x	x	x	x	x	x*		C-PC, M-EFC, NC	Sep-01	Sep-07
Mary Uzo Mokwunye	Nigeria	Horticulture	F	Member State	x	x	x	x	x	x	x*		VC-BOT, C-NC, M-PC	Apr-01	Apr-07
Edwin C. Price	USA	Agric Economics	M	Board	x	x	x	x	x	x			VC-BOT, C-NC, M-EFC, PC	Jun-00	Jun-06

¹¹³ Notes: *Members for only part of 2007, hence not counted in total. Their replacements have already joined the Board, and are counted in the total of 11 members in 2007.

C = Chair
M = Member

BOT = Board of Trustees
AC = Audit Committee

VC = Vice Chair

EFC = Executive and Finance Committee

PC = Programme Committee

NC = Nominating Committee

Name	Nationality	Specialization	Gender	Nominated by	Year 20..							Committee Membership	Start	End
					01	02	03	04	05	06	07			
Bamba Gue Papa	Cote d'Ivoire	Socioeconomics	M	Member State	x	x	x	x	x	x		M-PC, M-AC, V-NC	Sep-02	Sep-08
Abdoulaye Seck	Senegal	Agric Economics	M	State/Ex-officio			x	x	x	x	x	VC-PC, M-EFC, PC	Apr-04	11-Oct
Owusu- Bennoah	Ghana	Soil Science/ Research Management	M	Member State				x	x	x	x	C-PC, M-EFC, NC	Apr-04	Jun-10
Gaston Grenier	Canada	Agronomy/ Management	M	Board				x	x	x	x	C-BOT, C-EFC, M-AC, PC, NC	Apr-04	Jun-10
Inga Bjork- Klevby	Sweden	Business Admin/ Diplomacy	F	Board					x			M-PC, NC	Mar-05	Mar-06
Tsedeke Abate	Ethiopia	Entomology/ Research Management	M	Board							x	VC-PC, M-NC	Mar-07	Mar-10
Barbara Becker	Switzerland	Management	F	CGIAR							x	M-AC, M-PC	Mar-07	Mar-10
Getachew Engida	United Kingdom	Accounting/CG Management	M	CGIAR							x	VC-AC, M-PC	Mar-07	Mar-10
Adama Traore	Mali	Vet. Science/NARS Mgt	M	Member State							x	M-NC, M-PC	Mar-07	Mar-10
Kiyooki Maruyama	Japan	Genetics/Research Management	M	Board							x	VC-PC	Mar-07	Mar-10
					14	10	11	11	12	10	11			

Board committees

Program committee

At WARDA, the whole Board serves as the Program Committee (PC). Since the Board meets only once a year--and meetings of all Board Committees must take place during the same (packed) 3-day period prior to meetings of the full Board--the work of the Program Committee is usually compressed into just a day (or sometimes a day and a half) of intensive presentations by staff, discussions by the committee of the whole, and formulation of recommendations of the PC to the full Board. Based on the Panel's findings and conclusions on research quality (as discussed in other sections of this report), this does not seem to be enough.

The Panel's concerns regarding the limited attention given by the Board's Program Committee to in-depth discussions of the *science* of rice research and science strategy were heightened by our observations of the March 2007 meeting of the PC. At this meeting, most of the time was devoted to discussion of Mid-Term Plans, proposed projects, and research management, rather than scientific issues. The same general pattern seems to have been followed in previous PC meetings as well, as is evident from the minutes of other Board meetings. Our separate discussions with individual Board members at the March 2007 Board meeting reinforced this impression.

The size of the PC could perhaps be reduced in an effort to make its discussions more science-focused, but there would still be only a few "rice-scientists" on the Committee. The recent reduction in Board size has made it harder to satisfy geographic-, CGIAR-, gender-, and disciplinary requirements that still need to be met; and there are fewer vacancies every year that could be used to strengthen the scientific expertise on the Board. Moreover, we believe the pattern of focusing on research management rather than research quality is less a function of the size of the PC *per se* than of its disciplinary mix. In view of these constraints, instead of focusing on the size and composition of the Board and PC, we seek below to strengthen the resources available to the PC for addressing science-related program matters.

The Panel's findings and conclusions on WARDA's research program, particularly the need for greater scientific depth, are discussed elsewhere in this report. However, here we wish to highlight the important role of the Program Committee in determining the Center's research policy and strategy, and in providing effective scientific oversight of program design and implementation. The problem of insufficient time being devoted to scientific issues could be partially addressed by rearranging the agenda of the full Board meeting, and by devoting an additional day or so to discussion of underlying scientific issues and unanswered research questions. If the agenda of the EFC meetings in March, when the full Board is also in session, is suitably adjusted (as suggested below), this time could be made available to the Program Committee.

An alternative would be to have more than one meeting of the Board (and therefore of the PC) every year, as is recommended by CGIAR guidelines and is the practice in most other CGIAR Centers. While this alternative would naturally increase costs, it could be cost-effective, and therefore the preferred option. However, the Panel recognizes that WARDA already has annual meetings of its Board, and six-monthly meetings of the EFC; and in addition, it arranges meetings of its Council of Ministers every two years, and of the National Experts Committee every year. (The latter devotes considerable time to program and partnership-related issues.)

We believe also that adequate strengthening of the program oversight function at WARDA would require more than just additional time being devoted to it. The Panel believes this function

could be strengthened by appointing internationally eminent scientists with a good knowledge of rice and/or other cereals to the WARDA Board, thereby increasing the scientific capacity of the Program Committee. However, implementation of this suggestion would take time; would be possible only as vacancies on the Board become available, when the terms of current members come to an end; and would, in any case, be difficult to operationalize, given the special requirements of the size and composition of WARDA's Board, as discussed earlier. Other alternative measures thus need to be found, to immediately strengthen the resources available to the Program Committee for undertaking strategic oversight of scientific research at WARDA on a continuing basis.

Accordingly--and particularly since the Panel hesitates to recommend two meetings of the Board and PC (the Committee of the whole) every year, and until such time that the PC has strengthened its own capacity for effective scientific oversight--*the Panel recommends that the Program Committee augment its resources by relying on an external Board-appointed Scientific Advisory Committee (SAC) comprised of 3-4 outstanding scientists with knowledge of rice and/or other cereals from around the globe, who would provide in-depth guidance on the technical quality and strategic direction of the science undertaken by WARDA.*

These scientists should be selected for their technical rigor and scientific achievements, and would serve as a "standing Panel of peer reviewers on science quality and science strategy". They would provide independent advice to the Program Committee on all science-related issues, thereby enabling the PC (and the Board) to deepen its own discussion of WARDA's research activities, without affecting the size and composition of the Board or the PC. In addition, it is suggested that the documents presented to the PC/Board by Management cover specifically and analytically various options for addressing strategic and scientific questions facing the Center, rather than focusing largely on the details of MTPs and projects, as seems to have been the case in recent years, partially in response to the new (and changing) MTP guidelines introduced for all Centers by the CGIAR Science Council during the past three years.

Audit committee

The Audit Committee (AC), comprised of four members, has been one of the more active Committees of the Board (along with the EFC). It has diligently undertaken the functions assigned to it in the Center's Board manual, and in CGIAR guidelines. The task of the AC has been rather onerous during the period under review, primarily due to the severe dislocation of work and assets suffered by WARDA during the "Ivorian crisis" in 2002-2005, as well as due to the special due-diligence issues brought to the AC's attention by the External and Internal Auditors.

We reviewed minutes of the meetings of the Board Audit committee from 2001 to 2006. The minutes are detailed, and it is clear that pertinent issues are raised and discussed in the meetings. It is evident too that the external auditor freely interacts with the Audit committee and that the committee values their input. The Internal Auditor's proposed work plan and the report on work conducted during the previous year are also tabled by the Internal Audit Head. Concern has been raised in successive audit committee meetings that the internal auditor is unable to complete all the proposed audits included in the audit plan.

The audited financial statements are routinely proposed for adoption by the full Board. It would however appear from a review of AC minutes that the Audit Committee members consistently receive both the management report and the audited financial statement late and just before the

meeting (primarily because the Board meeting is in March, just after the accounts have been finalized). It is also noted from the minutes that the Audit Committee does not always get some of the information it requests for from management expeditiously, for example the MTP based reports of expenditure on a monthly basis.

A review of the minutes of Audit committee meetings and management reports for periods between 1999 and 2006 indicates to us that the Center suffered a number of fraudulent losses. For example: a) in 2001 the work of internal audit revealed fraud by a WARDA employee who diverted fuel worth approximately CFA 40 million (the matter is still in court); b) following a request by the Head of Finance, internal audit investigations revealed fraud by a cashier involving about CFA¹¹⁴ 16.3 million; c) CFA 3.6 million was embezzled from the staff provident fund over a long period of time; d) CFA 10 million imprest was embezzled by a member of staff managing the Guest House in Bouaké during the “Ivorian crisis”; and e) fraud was discovered in 2006, when the administrator of one of the stations was paying himself allowances in excess of his contractual agreement for a period of over 12 months. The matters listed above indicate the necessity for constant vigilance in ensuring the control environment. As a result, IA would be able to quickly detect errors and fraud.

Fortunately for WARDA, members of the Audit Committee have taken their responsibilities seriously, and by all accounts appear to have discharged them effectively. During 2000-2007, key members of the AC have had extensive relevant experience of managing large scientific organizations, and have devoted the time and attention needed to faithfully undertake their fiduciary functions on behalf of the Board. In March 2007, the Audit Committee has been further strengthened by the addition of a professionally qualified CPA with in-depth experience of the CGIAR, and this should help ensure that the AC will continue to function effectively in coming years.

Nominating committee

For appointing members to the WARDA Board, the Nominating Committee (NC) has facilitated the gradual reduction of Board size, the selection of qualified members, and the balancing of competing requirements, as discussed in the section on Board size and composition. By instituting an annual self-assessment program for members, the NC has also helped improve the quality of contributions made by Board members. The Chair and members of the NC have thus served WARDA quite well.

On occasion, however, the planning for orderly succession of Board members has not been smooth or easy. In 2005, the Board faced the possibility of four of its members completing their second terms at the same time (in 2006), with another four members doing so the following year. This situation severely tested the ability of the Nominating Committee to propose strong candidates for Board membership; while at the same time meeting the requirements for common Board membership with IITA, appointment of CGIAR nominees, and gender-, representational-, and disciplinary balance. As a short-term measure, it appropriately tackled this issue by staggering the expected dates of departure of several members; i.e., by recommending extensions for the affected Board members for periods ranging from 1-3 years.

The NC has also initiated the practice of inviting new members to participate as observers at a Board meeting, prior to becoming full members with Committee responsibilities. This has helped

¹¹⁴ 1 Euro = 655.9 CFA since 1994

ensure that new Board members have the opportunity to acquire knowledge about the Center and their Board responsibilities before they are called upon to guide Center activities. In addition, the NC has sought to strengthen Board capabilities by nominating members with at least one-year experience on the WARDA Board to the CGIAR-sponsored Board orientation program; and it has led a systematic questionnaire-based process of (self-) assessment of Board members, Board Chair, and Director General. All these steps have succeeded in strengthening Board capacity, and are commended.

In recent years, the NC has also had to respond to some additional requirements as well—such as the appointment of “common” Board members with IITA—and it has done so admirably. The NC has consistently encouraged closer collaboration between WARDA and other CGIAR Centers, and has made special efforts to nominate individuals with extensive experience of the CGIAR system. In the context of the CGIAR-initiated governance alignment with IITA, this has required a balancing of Board composition along several competing dimensions. Based on the Panel’s observations of the NC meeting in March 2007, and discussions with various Board members, the NC seems to have successfully undertaken this delicate balancing act.

The discussions of the NC at the March 2007 meeting were remarkably open and forthright, even during discussion of sensitive issues, such as assessing the performance of the Board Chair and DG, both of which were discussed in the presence of the person being reviewed. At the end of these assessments, the NC sought feedback from the Board Chair and DG on how helpful the assessment process had been for them, and was told that greater confidentiality of discussions could in fact lead to more open sharing of mutual concerns. *The Panel agrees with this conclusion; and strongly encourages the NC to discuss the performance of individuals in a closed session in their absence.* Once the NC has reached a consensus assessment, it should ask the NC- or Board Chair (as appropriate) to provide feedback in a confidential closed session only to the individual concerned.

Executive and finance committee

This Committee is comprised of the Board Chair, Chairs of the three other Board Committees, plus one other Board member (selected at large, with the intention of including one of the common Board members with IITA). The EFC meets in person twice a year, and because the full Board meets only once a year, the EFC has a rather large responsibility throughout the year for overseeing WARDA’s financial, program, human resources, partnership, and other activities.

In general, the EFC has discharged these responsibilities with due diligence and care. The Panel has already noted the substantial contributions of the EFC to the continued well-being of WARDA during the “Ivorian crisis” and its immediate aftermath. Here, it wishes to commend as well the continuing intensive involvement of key EFC members in WARDA business, at Board and Council levels, beyond the normal call of duty for typical CGIAR-Center Board members.

It notes, however, that the March meeting of the EFC overlaps completely with the meeting of the full Board and its other Committees. Besides duplicating many agenda items expected to be also covered by other Committees around the same time, this gives the impression of a two-tier Board, and also takes valuable time away from a possibly-longer meeting of the Program Committee, as discussed earlier.

At the March 2007 meeting, the Board considered a suggestion from one of its members to suitably curtail the agenda of the EFC to only essential items that it alone could cover in depth

(e.g., issues relating to Center finance, human resources, and administration), thereby giving more time to other Committees (such as the PC) to discuss other issues in depth, before bringing their consensus views and recommendations to the full Board for discussion. *The Panel endorses this suggestion to limit the EFC's agenda to essential items that it alone can cover, and expects that this will help further streamline the work of the EFC, as well as of the full Board.*

6.2 Management

Management response to the "Ivorian crisis"

In 2002-04, WARDA was able to weather the "Ivorian crisis" in part due to effective management of the Center by the Director General and his senior management team, with the support of very dedicated staff at all levels, all of whom contributed significantly to keep the Center running under very adverse circumstances. The impact of the crisis, however, in terms of staff capacity for undertaking research and providing corporate services, was far-reaching and long lasting.

The first priority during the civil strife and violence in Cote d'Ivoire was to save lives. On 26 September 2002, as the fighting intensified in and around Bouaké, the DG himself led to safety a convoy of 23 buses and vans with over 250 staff and families. International and regional staff and their families were evacuated to Abidjan; and some scientists were relocated to Bamako (Mali), where ICRISAT had a research station, and to Ibadan (Nigeria), where IITA headquarters is located and WARDA had some ongoing research activities. Some staff, at great personal risk, made extraordinary efforts to recover germplasm, electronic data, financial information, and computer hardware from the M'bé campus. A temporary headquarters, with essential management and administrative staff, was established in Abidjan, and research activities were continued in locations outside Cote d'Ivoire, primarily in Senegal and Mali.

By early 2003, the Center had signed a host agreement with the Government of Mali, with the expectation that Bamako would provide a temporary home base for WARDA until the situation improved sufficiently in Cote d'Ivoire. In late 2004, the Management decided to move back to Bouaké; but information regarding this decision was not given to the Mali government in a timely manner. The aborted return to Bouaké in November 2004 meant that the Center was forced to relocate once more. Based on a study of options available to the Center, the Board decided to temporarily re-locate the Center to Benin. In January 2005, the IITA research station in Cotonou became WARDA's temporary headquarters, following a new hosting agreement with the Government of Benin, and a tenancy agreement with IITA.

Understandably, the impact on the management of the Center was considerable. Essential staff members were relocated to rented offices in Abidjan at great cost; some staff were laid off; staff lost property and belongings at M'bé and Bouaké; and more than 80 vehicles were stolen by the rebel forces. There was high staff turnover, both among the IRS and the regionally- and locally-recruited GSS (general services staff). In addition, because of uncertainties of returning to WARDA headquarters, recruitment of quality staff became more difficult. The families of many staff were unwilling to return from their home countries, primarily due to the trauma suffered during the evacuations from Bouaké, concerns regarding workplace- and job security, and the difficulty of finding good schools in remote locations.

Despite this, WARDA's activities were never closed down, even at the height of the 2002 and 2004 crisis. In the midst of the evacuation, relocation, and resettling, WARDA developed a new Strategic Plan 2003-2012, restructured its overall organization into two major divisions, Research

& Development and Corporate Services, and prepared a new Medium Term Plan with two R&D Programs and eight consolidated MTP projects. It also moved into East and Central Africa and established a new “station” in Tanzania, and continued to develop and disseminate new NERICA varieties. Full credit must go to WARDA Management, staff and families for their tenacity, dedication, and hard work throughout this very stressful period.

In terms of the impact on WARDA’s finances, Management estimates the total cost of evacuation and relocation of staff from Bamako to Cotonou (i.e., excluding the cost of relocation in 2002-03 from Bouaké to Abidjan and Bamako, during the height of the “Ivorian crisis”, for which an estimate is not available) at about US\$3.9M. This includes: evacuation of staff in November 2004 from Cote d’Ivoire to Bamako or to their respective countries; relocation of staff from Bamako to Cotonou in January-February 2005; shipment of personal effects, scientific equipment, and office furniture from Cote d’Ivoire and Mali to Cotonou; conversion of two IITA greenhouses to offices; and the cost of laying off approximately 65 GSS, paying their terminal benefits, closing the Bamako station, and retaining a skeletal staff specifically to maintain WARDA facilities in Cote d’Ivoire. To help defray these expenses, in 2002-2003 WARDA received US\$2.4M special support from donors (including the World Bank, Japan, DFID), leaving a net cost exceeding US\$1.5M.

Rebuilding management capacity

Recognizing the severe toll the “Ivorian crisis” and the trauma experienced in Bouaké had taken on staff, a number of “Team Building” surveys, interviews, and workshops were conducted by consultants in March-July 2004 when WARDA was temporarily working from Bamako. These addressed such topics as organization and structure, communication and management of information, exercise of power and leadership, and client and supplier relationships. The consultants uncovered a variety of issues related to the organization and structuring of human resources, management style and authority, staff accountability, motivation, communication, trust, research monitoring, etc. They recommended corrective actions across the board, in all these areas.

In response, Management indicated a willingness to undertake many of the actions suggested, including the introduction of improved administrative and human resource systems, procedures, and processes; strengthening the role of the HR Officer; and restructuring the Corporate Services division. Follow-up action was taken in some areas, but was soon overtaken by other events, primarily relating to the planning and preparation for a return of WARDA to Bouaké. This return was attempted in October-November 2004, but had to be tragically aborted, as noted earlier. This naturally was a huge set back to Management and staff, in terms of their capacity to manage and undertake productive research and to provide the administrative services needed to keep the Center running efficiently.

Upon relocating to Cotonou in January 2005, attempts were again made to overcome the damage caused by the turmoil of the previous two years. In April 2005, WARDA Management provided all staff the opportunity for individual and group counseling, and this apparently helped substantially to heal the psychological wounds, though some scars inevitably remained. New managers and staff were hired to replace those who left the Center for various personal or professional reasons, or to fill new positions required for implementing the new MTP. Almost half of the IRS, and most of the GSS, now working for WARDA in Cotonou were hired after the Center established its temporary headquarters at the IITA (Benin) station. Some of these new recruits took time to learn how to work effectively with “veterans” of the “Ivorian crisis”, led by

the Director General and his inner circle of confidants, who had forged strong bonds amongst themselves.

Some staff apparently also needed extra time and mentoring to meet the high standards expected of professional staff and managerial systems at international Centers. This was not always easy to do, as was noted, for example, by the CGIAR Internal Audit Unit's (IAU) review in September 2005 of the Finance department. This review, undertaken by a consultant, examined in depth the Finance department's organization and processes, and noted deficiencies in several areas. It highlighted the need for streamlining processes to improve efficiency, help meet month-end deadlines, and relieve staff workload; reviewing allocation of duties to staff, and assessing senior accountants and their capabilities; improving management reporting, by providing more timely and better information on costs of personnel and overhead, and ensuring that reports are accurate; ensuring better leadership within the department, and a more assertive role outside it; and improving internal controls through appropriate separation of duties among staff.

This review's recommendations are currently being implemented. However, additional measures are still needed, as discussed below in the section on Financial Management. The Center has also followed-up on the Team Building exercise undertaken in 2004. At a 2-day off-campus retreat in February 2006, the entire Senior Management Team plus project leaders undertook a fresh assessment of selected aspects WARDA's program and administration, explored ways of improving staff performance, discussed steps needed to implement decisions taken by the CGIAR at AGM05, and proposed a way forward. The report of this self-assessment by senior WARDA staff was presented to the Board at its March 2006 meeting in a commendably transparent and forthright manner.

Included in the report were issues and solutions identified by staff (before discussion with Management). These related to:

- *Human resource management*: a) staff morale not optimal, lack of orientation of new staff, no clear policy on staff development; b) workload, lack of support staff, crisis relating to space, lack of staffing plan; and c) inadequate communication and team building, lack of horizontal communication, unclear lines of communication;
- *Publishing*: lack of team approach to publications, poor research and documentation/data recording and management, no obvious sanctions;
- *Resource mobilization*: lack of institute-wide strategy, weak project proposals, inexperience in resource mobilization, poor knowledge of donor requirements, no incentive for resource mobilization, lack of personal responsibility, low institutional budget for publications;
- *Finance and budget*: low or delayed annual budgetary allocations for research, deficiencies in reporting expenditures incurred in research, cash flow problems due to delays in receiving donor contributions, and insufficient client-orientation among staff of the finance department;
- *Support services*: delays, time taken in vehicle repairs, restrictions in hiring staff or obtaining computer resources;
- *Institutional image*: low participation at international meetings, poor international media strategy, WARDA still perceived as a West African Center, external perception that there were extended vacancies, massive staff turnover, and instability;
- *Programmatic challenges*: poor documentation of post-impact of NERICA, poor availability of seeds, what next after NERICA? and

- *From AGM decisions to action*: no solution in Cote d'Ivoire in the foreseeable future (3-5 years), temporary base at the IITA campus makes WARDA vulnerable for merger, problems of the lengthy dislocation from its permanent headquarters.

The Management Retreat had obviously brought to the surface a number of problems that were perceived by staff as having accumulated over the years. To their credit, senior managers of WARDA acknowledged some of these pending concerns, and proposed corrective actions for each set of issues. They resolved to: maintain focus on their vision of WARDA, and to share it with all staff; broaden and strengthen the ownership base among staff; keep everyone on board and improve staff morale; enforce rules, norms, and procedures related to staff performance; design and implement rewards and sanctions; and respond proactively to the changing policy environment within the CGIAR, and at the level of the African Union/NEPAD. Immediate action was initiated by the Director General and his Senior Management Team (SMT) on a number of issues; and was ongoing when the DG completed his second term in November 2006.

A new beginning

In October 2006, the new Director General of WARDA—who had been on the Center's Board since 2004--presented to staff his "new vision" for the Center. In a presentation titled *Reorganizing WARDA to Enhance its Competitiveness*, he asked staff to "start doing business in a new and better way by changing attitudes and behavior in order to transform WARDA". His list of what needed to be done built on the assessment undertaken and proposals initiated by the outgoing DG and the SMT that the incoming DG inherited. Understandably, it also included additional aspects, and formulated a novel approach to initiate a new way forward.

The list included the following items: ensure that the vision is shared with all staff; in research, avoid bureaucracy, encourage team spirit and solidarity, improve management of resources; improve credibility, quality, and impact of research; improve research documentation and proposals; be open to partnerships; and serve NARS, in order to have significant impact. The overall goal was to urgently make WARDA more competitive, diversified, sustainable, and a powerful tool for the development of Africa's rice sector. For this, the DG sought to develop a "new" breed of scientists who could bring in funds, do high quality research, communicate effectively, and provide knowledge and technologies to their partners. For the staff, in general, he wished to provide better working conditions, adequate equipment, research assistants, administrative support staff, fair evaluation of performance, and proper incentives. The DG also proposed specific actions for implementing his new vision, and presented these to the Board in March 2007 for information and comments.

These actions are consistent with the diagnosis and results of the very useful WARDA Risk Management Workshop facilitated by the IAU in October 2006. The recommendation was to reconstitute a risk management team to meet quarterly. The SMT identified the following as the 5 top risks facing the Center: loss of, and lack of access to, research data; centralized governance/management style of the DG and senior managers, slow decision making because of too many committees without authority, and lack of transparency in decisions made; changing donor priorities, and difficulty of attracting restricted funding; weak internal controls during implementation, hence policies not translated into practice; and commitment of WARDA member States, in relation to rice policy, merger with IITA, contributions to WARDA, and credibility with other donors.

Workshop participants translated these five risks into four key messages for WARDA, as follows: Improve internal housekeeping/management practices, and put emphasis on resource mobilization and people management; strengthen communication, both internal and external; strengthen research management, particularly in relation to research data; and enhance the public awareness drive, particularly in relation to key stakeholders such as member States. They then listed a number of actions that could be taken to mitigate each risk and to address its symptoms and underlying causes. These proposed actions were presented to the Management and Board, and were endorsed.

Further work needs to be done for the assessment and identification of risks to trickle down to the level of Units. There also appears to be uncertainty over whose responsibility it will be to ensure that the Center manages its risk adequately. The February 2007 report suggests that the Center reconstitute the risk management committee with appropriate technical people from research and corporate service. *The Panel endorses the proposed reconstitution of the Risk Management Committee; and urges the Board and Management to take steps to ensure that the risk management process within WARDA is internalized and appropriately monitored and managed.*

The Panel believes the approach taken by the new DG and his senior managers thus far is sound, and needs to be encouraged. The actions proposed in the Risk Management workshop report of 19 February 2007 will help WARDA manage many of the key risks it presently faces. In addition, recognizing that the Director General plans to address a number of other pending issues, and to lead WARDA towards a worthwhile though ambitious goal, in general, the Panel supports the DG's new vision and proposed actions (see Box 6.2.1 below). While we do not consider it necessary or appropriate to comment in detail on every aspect of this list of planned actions, we offer below (and in other sections of this report) comments on a few selected aspects of organization and management that could have longer-term strategic importance for WARDA.

Box 6.2.1 Specific Actions Proposed by the Director General in October 2006 for Implementing his New Vision for WARDA

For the Research & Development Division:

- Ensure a strong research Directorate capable of taking right decisions at the right time
- Review the design of projects to have critical mass and establish thematic groups
- Recruit a biometrician (part time)
- Simplify scientific structure: put projects under two Programs, under a ADG-R; plus have Thematic groups (breeders, agronomists, economists etc); current Asst Directors will become new Program Leaders for one year; then the next Program leaders will be selected by the scientists of respective Programs, based on specific criteria
- Scientists, including Program Leaders, will spend about 80% of time on research, 20% on administration
- Scientists will produce 2 peer-reviewed publications per year
- Scientists will submit 2-3 bankable projects per year
- A communication and marketing unit will be established to provide donor information to scientists, provide necessary support to scientists to develop and finalize concept notes and project proposals, be part of a committee to evaluate concept notes, support the DG in all communication work, and raise public awareness of WARDA's research
- Research Director to propose the way forward for work on post-harvest technologies

- Research Director to propose a strong capacity building strategy for NARS
- Research Director to plan and organize scientific seminar series (invite researchers from within and outside WARDA), document recommendations from discussion, and share the information on Research Days.

For the Corporate Services Division:

- Interact more closely with scientists and provide regular assistance, always remembering that WARDA is a research Center
- Strictly follow the Manual of Procedures, which should be posted on the intranet and should be applicable to all staff, including the DG
- Develop quarterly plans for WARDA cash flow (note that budget is not cash flow)
- Provide monthly budget reports (with analysis of the gap between approved budget and its implementation)
- From 1 Jan 2007, the current system for travel advance will be changed to per diem
- Decentralized management: One GSS representative will attend EMC as observer, designated by GSS; one GSS will attend AGM by rotation; one will attend SMT
- Develop a training plan for all staff members (to improve their competitiveness)
- Staff members should provide copy of their last degree/diploma to HRO for staff files
- Computerization of routine office procedures and forms
- Rationalize consultancies (hire consultant only when competencies not available in house or staff are too busy)
- Regularize and monitor personal accounts
- Set up a suggestion box for staff to give ideas for improving Center's efficiency (not to be misused for personal attacks)
- Strengthen internal auditing (all staff will be equally treated, including the DG).

Financial management

Funding and performance indicators

The trend in the quantum and composition of grant income for WARDA, and the key performance indicators related to its annual operations and financial position, are highlighted in the Table 6.2 below. The Panel notes that the financial situation is stable, and the performance indicators for short- and long-term solvency are within or better than the range recommended in the CGIAR Financial Guidelines. The indirect/direct cost ratio is somewhat higher than the recommended 20%, but has improved during the past few years, as discussed further below.

Resource mobilization

Total grant income has not increased significantly on an annual basis since 2000 (see Table 6.3 below and Annex 13). The contributions to WARDA in 2006 are below. There has been a noticeable change in the composition of funding, with a gradual increase in the restricted portion of grant income over the years: restricted grants constituted 46% of funding in 2006, compared to only 28.2% in 1999. The decline in the proportion of unrestricted grants has limited Management's freedom to utilize WARDA's income for some priority areas and for covering overheads, but is the result of increasing competition for such funds and the preference of some donors to earmark/restrict funds for specific projects or budget lines. Since this trend is common to all CGIAR Centers, and seems difficult to reverse, it implies the need for strengthening the Center's capacity to produce project proposals that attract funding.

Table 6.2 WARDA's Funding and Performance Indicators – 1999-2006

	2006	2005	2004	2003	2002	2001	2000	1999
GRANT INCOME								
Unrestricted*	5.924	5.831	5.804	4.756	4.427	4.272	4.679	6.512
Temporarily restricted	5.035	5.191	4.221	4.411	5.158	4.798	3.407	2.558
Total	10.959	11.022	10.025	9.167	9.585	9.070	8.086	9.070
PERFORMANCE INDICATORS								
Operating surplus (Amounts in US\$'000)	281.8	779.1	823.9	854.4	449.7	149.3		
Working capital (Amounts in US\$'000)	2,864	2,356	1,520	584	(85)	(798)		
Short term solvency** (liquidity)- Days	102	87	59	22	(10)	(30)		
Long term financial Stability** (Adequacy of reserves)- Days	102	87	59	22	(10)	(30)		
Indirect/direct cost ratio**	27.9	43.7	48.6	-	-	-	27	-

**CGIAR recommended levels for Financial ratios:

Short term solvency: 90 to 120 days

Long term financial stability: 75 – 90 days

Indirect/direct cost ratio: 20%

*Note: The World Bank gave WARDA a special grant of US\$180,087 in 2002, US\$1,221,243 in 2003, and US\$430,000 in 2004 for extraordinary expenses incurred because of the crisis in Cote d'Ivoire. These amounts are not included in the annual grant income analyzed here for the period 1999 to 2006.

WARDA has made progress in this direction, and has been able to recoup more of its direct costs from restricted projects. This effort is expected to be intensified in coming years, in line with the new DG's vision for WARDA that includes a concerted drive on fundraising and recovery of full direct costs of project. It is intended to create a special Communications and Marketing Unit for this purpose. The DG has been able to obtain tangible evidence of a "re-commitment" to WARDA by Member States during his courtesy visits to these countries following his appointment in December 2006. As a result, the arrears on member contributions have been reduced considerably in several cases (see Table 6.4. below).

The annual contribution rates of member states have remained the same over many years; and receipts from January 2000 to December 2006 have totaled approximately US\$ 804,823. Over a period of 16 years, from 1990 to 2006, WARDA collected a total sum of US\$ 4.2M or an annual average of US\$ 263,000. In 2007 alone WARDA expects to collect a total of US\$ 2.48M, which is equivalent to the average contributions for 9.5 years. Nigeria's arrears of US\$1.2M, which were the largest, have now been cleared. In 2007, four countries have contributed for the very first time: Guinea Bissau, Liberia, Niger, and Guinea. These new funds, collected in 2007, will be recognized in 2008. Based on this progress and assurances from other Member States, there is some reason to be optimistic regarding these Member countries' continued financial support for WARDA.

Table 6.3 WARDA's Grant Income for 2006 (US Dollars)

Contributors	Unrestricted	Restricted	Total
Japan	737,965	942,673	1,680,638
World Bank	1,086,000	286,702	1,372,702
The Netherlands	867,000	469,190	1,336,190
Canada	505,214	771,542	1,276,756
United States of America	200,000	739,520	939,520
United Kingdom	914,800		914,800
AfDB		707,362	707,362
Norway	654,688		654,688
Sweden	426,279		426,279
Rockefeller Foundation		376,477	376,477
Germany	192,132	93,641	285,773
United Nations Programs		272,610	272,610
Belgium	245,271		245,271
IFAD		224,211	224,211
France	95,645		95,645
European Union		86,510	86,510
Other Small Donors		50,515	50,515
Taiwan		13,630	13,630
Total Restricted Grants	5,924,993	5,034,582	10,959,575
Other Revenues:			
Member State Contributions			113,597
Center Earned Income			363,300
Total Grant and Other Revenues			11,436,472

Table 6.4 Member States Contributions (and Arrears) to WARDA

	Annual Contribution	Arrears at 31 Dec 2006	Arrears at 11 July 2007
Benin	27,764	52,961	0
Burkina Faso	18,283	248,453	266,736
Cameroon	27,742	324,485	352,227
Côte d'Ivoire	42,324	186,010	0
Guinea	18,283	408,406	426,689
Guinea Bissau	18,283	408,406	376,688
Ghana	37,202	567,443	604,645
Liberia	18,283	378,405	378,557
Mauritania	18,283	408,406	426,689
Mali	18,283	54,849	73,132
Nigeria	160,175	1,056,648	0
Niger	18,283	426,689	426,689
Senegal	18,283	18,283	17,030
Sierra Leone	18,283	363,791	382,074
Chad	18,283	408,406	426,689
Togo	18,283	367,604	385,887
Gambia	18,283	381,153	399,436
	500,000	6,042,113	4,943,168

WARDA recognizes member states' contributions as revenue in the year following that in which they are received. The accounting treatment on receipt of contributions is to debit cash as an asset and to credit a payable account as funds received in advance. The balance sheet does not therefore reflect the correct position as the funds received are not "paid in advance" by member states but are payments for arrears. If the member states were making pledges for the arrears, one would understand the reservation against accruing the pledged amounts. In the light of the significant increase in collection of arrears from member states in the first three months of 2007, the Panel was informed that WARDA management has made a special request to the Board to allow the Center to recognize contributions received in 2007 as income for 2007, and to revert to the earlier policy for future years. However, during its visit in July, the Panel was informed that this was no longer needed. The current accounting policy on recognition of member states' contributions makes comparability of annual accounts from year to year somewhat difficult. To avoid this problem, *the Panel suggests that the accounting policy for Member States contributions be permanently changed so that these contributions are recognized in the year in which they are received.*

Indirect cost ratio

The indirect cost ratio is a measure of how much research activity a Center is able to support on its institutional cost base. WARDA's indirect cost ratio for 1999 was 27. This ratio was computed during the pilot studies undertaken for all CGIAR Centers, and was based on WARDA's financial data for that year. WARDA did not thereafter compute its indirect cost ratio for 2000, 2001, 2002 and 2003 and the Panel was informed that disclosure of the rate was not mandatory for CGIAR Centers until 2004. In the Panel's discussions with the Center's external auditors, they indicated that they do not express an opinion on the rate computed.

WARDA's indirect cost ratio has significantly decreased between 2005 and 2006 (see Table 6.2 above). Management has indicated that the high indirect cost ratio in 2004 and 2005 was due to the extraordinary support activities during the crisis, and a different allocation of some "common sustenance services" to operations. A correct method of computation is now in place.

In the Panel's view, the earlier higher ratio may also have arisen from lack of clarity in coding of expenses, and the reclassification and reallocation of expenditure traditionally undertaken by the Finance department towards the year-ends, a concern raised by WARDA's auditors during the same period. The Center therefore needs to tighten its control environment to ensure integrity of the accounting system and procedures, and needs to reduce the possibility of arbitrary reallocation and reclassification of expenditure between account codes at year-end. In addition, a further decline in the indirect cost ratio can be achieved by a stronger effort to ensure that all service/cost Centers systematically charge full costs to the projects that receive such services.

Control environment

As noted above, the accounting and internal controls had deteriorated during the "Ivorian crisis". Two Senior Accountants and three Accounting Assistants left in 2005, and individuals with less experience and qualifications replaced the assistants. This put considerable pressure on the only Senior Accountant who remained, and on the Head of Finance. As a result, the audit of the financial statements for 2005 was strenuous, and was delayed. Two Senior Accountants were recruited in 2006 to complete the staff complement in the department, but they require continuous training and exposure to non-routine tasks.

The unexpected reduction in staff of the Finance department led to an inadequate segregation of duties, and precluded an acceptable level of oversight over financial transactions. At the March 2006 Board meeting, WARDA's external auditors expressed their concerns, indicating that the deterioration in the control environment was a combination of: a) weakening of internal control following successive relocations; b) non-satisfactory application of procedures (bank reconciliations); c) insufficiency of the means of implementation (understaffing leading to assumption of incompatible tasks); and d) limitation of the mandate of the internal audit service.

The Panel's review indicates that, as noted by the external auditors, the control environment needs to be continuously monitored. Random spot checks of accounts, as well as in-depth internal audits of financial procedures and how well they are followed in practice, are needed. Such monitoring could cover a variety of financial management areas, including the management of employee accounts and personal loans, local imprest accounts, ledger accounts, internal audit files etc; and also seek to reduce delays in reporting to budget holders. In addition, *the Panel recommends that the Financial Procedures Manual (which was last issued in 2001) be updated and suitably revised, as needed; and that compliance with these procedures be ensured by the Board and Management so that the financial control environment operates as intended.*

WARDA Management is in the process of addressing these concerns. However, knowledge of preparation of financial statements and reports in WARDA rests in the Head of Finance, who has been at the helm of WARDA finances since 1989. It would be extremely difficult for any of the staff currently in the finance department to prepare management accounts and financial statements in his absence. Since the beginning of 2006, the Head of Finance has been on short-term employment contracts of 2-3 months at a time, and then six months to December 2006. He is currently on a one-year contract to the end of 2007, but this is being reviewed.

None of the staff in the finance department are well versed in the SUN Accounting system software, with the exception of the Information Systems Administrator-Finance, whose responsibility it is to prepare programs and also to run the management and financial reports. A report on the review of the Finance Department organization and processes conducted in 2005 by the CGIAR Internal Audit Unit (IAU) in conjunction with WARDA Internal Audit Section recommended that one or more staff members within WARDA's Finance and IT groups be trained to undertake these tasks to ensure sufficient back-up capacity.

The lack of sufficiently trained and experienced staff poses significant business-continuity risks to WARDA's financial operations. It is an unnecessary risk to employ a head of finance for short periods at a time. To reduce these risks, Management must ensure the employment of appropriately experienced and competent managers and accountants in the Finance Department, and provide them stability of tenure. *The Panel urges Management to review the performance and tenure of the Head of Finance and take suitable action regarding his contract terms; and that appropriate delegation of responsibility from the Head of Finance to suitably qualified and trained Senior Accountants be ensured.*

Budgetary control

Following the "Ivorian crisis", the Head of Finance performed the role of Budget and Planning manager. During the period covered by this review, the external auditors have expressed reservations about budgetary control within WARDA. Their concerns relate to: a) reallocation of expenditure to budget codes without the agreement of budget holders at year end; b) non-validation by the budget holder of management reports transmitted to donors; c) pre-financing of

projects before obtaining grants from donors; and d) no efficient mechanism to anticipate budgetary over-expenditure on projects, thereby increasing the risk of non-recovery of such expenditure related to restricted projects. In addition, budget holders have complained that they did not receive timely reports on project expenditures, except in 2006 when more information has been provided periodically.

Efforts have been made by Corporate Services to address these shortfalls. Budgetary control has improved following the appointment of a full-time Planning and Budget Manager in 2006. Monthly reports of expenditures are now sent to each budget holder. Previously, there was no requirement for the latter to certify the correctness of the report, and considerable follow-up was needed by Management and the Planning and Budget Manager to obtain this confirmation. This deficiency has been rectified. However, scientists are presently unable to view on-line the accounting entries on their projects; and there is delay in uploading budgetary figures onto the accounting system.

There is thus further scope for enhancing budgetary control, fostering accountability of budget holders, and ensuring that financial management meets expected standards. For this, there is a need to clearly delineate the tasks and responsibilities of the Budget and Planning Manager, so as to avoid overlap and inconsistency in budget-related responsibilities that are still being undertaken by the Finance Manager (such as reporting to donors on financial aspects of projects, and clearing payment requests by project-budget holders against their approved budgets). Accordingly, *the Panel suggests a review of the responsibilities of the Finance Manager in relation to budgetary control, to remove any overlap with tasks that should be performed by the Planning and Budget Manager; and that the latter be appointed to relevant Center Committees dealing with planning and budgeting matters.*

Internal audit

From 2001 to 2005, solely the Internal Audit Head staffed the Internal Audit department; and an assistant was recruited in September 2005. Internal Audit prepares annual plans, which are approved by the Board's Audit Committee (AC) annually. However, the internal auditor has not been able to undertake all the audits planned for each year. This is attributed to the shortage of staff in the department; and to the addition of other ad hoc audits and investigations that have to be done each year.

The AC approved the charter of the internal audit unit in 2005. While the mandate is wide and all embracing, and is in line with international best practice, the Panel notes that the work undertaken by the Internal Auditor has not covered procedural review of key internal controls over areas susceptible to high risk. Processing controls and the integrity of the financial management system for WARDA have rarely been prioritized for audit. The work undertaken tends to emphasize investigations of possible malpractice or error, or areas that the DG and Management request to be investigated.

The internal auditor's work should encompass review of the Center's internal control environment, including systems and processes. The audit plan should also be discussed with the external auditor to ensure that they can rely on the work of the internal audit. This could lead to a reduction in time spent by the external auditor on the annual audit, and possibly a reduction of fees. The involvement of the WARDA Internal Auditor in audits of other Centers undertaken by the CGIAR Internal Audit Unit is a welcome development, for it will increase the exposure and capacity of the Internal Auditor.

The Audit Committee has noted delays in completing audit assignments (particularly the audit report on project costing, which was commenced in 2004). There is no formal requirement that the units audited formally respond to the report of the internal auditor, and in some instances, it has taken the intervention of the DG to obtain responses from auditees. This deficiency needs to be corrected by Management assuring the independence of the internal auditor, and ensuring that staff recognize the importance of the internal audit function.

External audit

The external auditor appointed by WARDA since 2002 has issued unqualified audit opinions annually. The latest financial statements issued by the auditors are for the year ended 31 December 2006. The external auditors perceive that the control environment within WARDA is currently moving towards an acceptable level, after having deteriorated significantly during the “Ivorian crisis”. The loss of staff, resulting in the remaining staff undertaking incompatible tasks during the crisis period, led to a degradation of accounting and internal controls. Inadequate day-to-day monitoring of activities of junior accounts staff was cited as one of the key weaknesses in financial management at WARDA, but this area is now receiving attention.

The external auditors have issued a management report in each of the years covered by this review. Some issues that have been raised consistently include: a) weak control environment, particularly during crisis years 2002–2005; b) inadequate budgetary system, resulting in cumbersome budget monitoring, inappropriate expenditure coding, and budget overruns of various expenditure lines; c) reclassification of expenditure from one budget code to another without the budget holder’s agreement; d) inadequate management of exposure to foreign exchange risk; and e) inadequate analysis of employee advances accounts.

They also reiterate the need to have budget holders confirm the accuracy of financial reports issued by the Finance Department, as opposed to the current situation where they are merely required to indicate receipt of the reports. They, however, believe that the financial management information system run on SUN is adequate for WARDA’s needs.

A Board resolution has called for bids for external audit services for the year ending 31 December 2007, and IITA and WARDA are considering the engagement of the same firm of auditors, in line with the Agreement to align corporate services. The selection of a suitable firm should now be expedited, so that the auditors could undertake an interim audit prior to year-end, if needed.

Financial problems of the Inland Valley Consortium

In response to the SC issue on the Inland Valley Consortium (IVC), the Panel’s comments on financial management of the IVC are given below. A CCER on the IVC (Phase II) was conducted in 2004, and a report issued in October that year. It notes that information on the expenses of IVC were not available from the WARDA Finance Department during the CCER Panel’s visit. The National Coordinating Units (NCUs) have complained of delays in receiving funds allocated for their national activities from the RCU. From about 2003, France and the Netherlands, IVC’s two traditional donors (providing over 60% of IVC funding from 2000 to 2005) ceased to specify their financial contribution directly to IVC activities. They preferred to support the core budget of WARDA and left it to WARDA to reallocate the funds within its program and projects.

Management has indicated that problems during the “Ivorian crisis” prevented the Finance Department from releasing budgets and funds to NCUs on time and that the NCUs were not

satisfied with the level of transparency in the allocation of resources to IVC and in turn to the NCUs. However, according to WARDA Management, it has now taken appropriate action for timely information to be passed to the IVC Regional Coordination Unit (RCU) about the money spent and the available budget. At their meeting in November 2006, the CSC received a transparent overview of the current year, the previous year, and a forecast of the following year's budget. The presentation made by the ADG-CS and Budget officer was apparently appreciated by the CSC, which reportedly confirmed that the situation had improved.

Discussions with Management also reveal that from 2007, the DGIS (The Netherlands) has stopped funding single-commodity Centers such as WARDA, and France has scaled down its funding to WARDA from \$190,000 in 2002 to \$75,000 in 2006. Currently other sources of funding for IVC include special projects with specified end-dates. Clearly, the loss of DGIS funding and scaling down of France's contribution puts the sustainability of the IVC program at risk. At the same time, a larger proportion of core funds may have to be used to shore up the IVC activities/projects, thereby increasing the likelihood that relevant core expenditures would need to be scaled down. However, WARDA's external auditors and the Internal Audit unit did not have much knowledge of IVC, which could mean that IVC is not considered a large and prominent project requiring special attention, but is instead treated as a series of projects within WARDA accounts.

To help overcome these problems, *the Panel urges WARDA to better involve NCU's in the preparation and adoption of the IVC budget.* For improving transparency, there is need for an agreed rationale for allocating resources to partners in member states. Aggregate financial information needs to be collected for IVC, and then reported by country and (sub) project; and this information could be regularly provided to Management and NCUs. In addition, accountability of funds disbursed to NCUs could be enhanced by requiring the retirement of funds advanced by the Center on a periodic (perhaps quarterly) basis. Such an approach, emphasizing financial transparency and accountability, has general applicability for other WARDA partnerships as well.

6.3 Corporate services

The decentralized management of the Center and of the Corporate Services Division, as well as closer interactions between administrative staff and scientists, and consistent and transparent use of management systems, procedure manuals, and decision process are necessary; as has repeatedly been noted by WARDA managers and staff themselves during the past few years. The Panel therefore supports the various actions planned to be taken by the DG, ADG (CS), and managers of various service units to further improve the "service orientation" and administrative efficiency of corporate services at WARDA.

We note that many of the current needs for improvement--as pointed out in various staff Retreats and Workshops, and briefly summarized above--relate to a various aspects of general administration, finance, budgeting, and human resource management. For addressing some of these, it may not be enough to simply follow current procedures or to tighten the enforcement of existing rules and regulations. Instead, a more thorough review of systems, policies, and processes would probably be needed, so that the "bar could be raised" for the delivery of corporate services, just as it is being raised for the research program at WARDA.

The need for improving the level of services provided has been highlighted by the staff perceptions survey conducted by the Panel for this review (see Annex 14). A total of 69 staff

responded to this survey, including 31 (70%) of the 44 IRS and 38 (23%) of the 164 GSS who received the survey instrument electronically. Over 90% of these respondents said that WARDA's "new vision" is shared by staff. Nevertheless, many respondents expressed dissatisfaction with the level of purchasing/administrative services provided to them. In the human resources management area, staff expressed dissatisfaction with regard to WARDA as an attractive place of work, performance management, professional advancement, training, and compensation; with GSS more dissatisfied than IRS, in general. Staff are also concerned about the proposed alignment of corporate services with IITA, and would like their views to be taken into consideration by Management.

The recent recruitment of an experienced ADG (CS) and an Human Resources Manager augers well for strengthening these functions; as do the efforts already underway in other corporate services units to implement the actions agreed upon during the various workshops, retreats, and reviews undertaken at WARDA in 2004-07, some with the assistance of external consultants or staff of the Internal Audit Unit of the CGIAR. The Panel's comments on some of these aspects are given below.

6.4 Changes in Staff Profile

The "Ivorian crisis" had a major impact on the human resources available to WARDA. The number of IRS fell from 59 in 2001 to 42 in 2002; and both departures and recruitment were affected. A total of 35 IRS have left WARDA since 2002, and 63 have been recruited. As a result, more than 60% of current IRS staff has been at the Center for less than 3 years. The turnover in scientific staff--such as breeders, agronomists, physiologists, economists, and technology developers--has been significant.

Some of the departures were, however, reportedly the result of differences of opinion and management style between the DG and some of his senior managers. In July 2002, for example, the Deputy Director for Research left after serving WARDA with distinction for over a decade; and in March 2003, the Director of Research left after serving WARDA for only eighteen months. The ADG (Research) who replaced him, left after two years. It thus appears to the Panel that this instability in staffing scientist positions could not have helped WARDA maintain its cutting-edge science, as noted elsewhere in this report.

The changes in leadership and capacity in the Corporate Services division have been no less frequent and significant. For example, the Director of Administration and Finance left in January 2004, after a stay of only two-and-a-half years, when WARDA was still being administered from its temporary location in Bamako. He was followed by an interim Director, appointed for 6 months, before an ADG (CS) took over in July 2004; and this incumbent too left within two years, in March 2006, when the current ADG (CS) was appointed. Since 2001, the average tenure for the Head of Corporate Services has been less than 18 months.

In addition, the Assistant Director for board and donor relations, and the Head of Human Resources left WARDA in 2005. A senior GSS staff member, on an interim basis, replaced the latter for almost two years, until the current HR Manager was appointed in March 2007. The Planning and Budget manager was appointed in 2006 (though he has considerable prior experience in IITA); and the current head of Finance is serving in a Consultant capacity since 2005 (though he has been at WARDA since 1998, and was the Finance Manager for 7 years, until

2005). These frequent changes in key administrative positions have inevitably meant that the Corporate Services division of WARDA will need to be further strengthened in coming years.

In terms of geographic diversity, however, WARDA has done very well. In 2005, it was the most diverse CGIAR Center in terms of nationality of its IRS. Over the 10-year period 1995-2005, more than 27 different nationalities have been employed at WARDA at the IRS level. These include three countries in N. America, 15 countries in Sub-Saharan Africa, 7 countries in Europe, and 2 countries in Asia. There has also been a remarkable shift from North to South: the ratio of IRS scientists from the South increased from 44% in 1995 to 73% in 2005, and was 80% in 2007. There has been progress in terms of gender balance as well--there was only one female IRS in 1996, but in 2005, there were eight female IRS, and presently there are six female IRS. In addition, a spouse employment scheme has been implemented since 1996; and in 2005, there were four "IRS spouses" working at WARDA. All these are commendable achievements.

6.5 Alignment of corporate services with IITA

The alignment of corporate services of WARDA and IITA is expected to be completed by December 2007. All aspects of corporate services are expected to be covered during this alignment process--which will thereby affect both Centers' management of financial, physical (PPS, materials), human, and information resources.

Since each Center currently has different systems and policies—with different strengths and drawbacks—these efforts to harmonize and integrate the corporate services of the two Centers could change (to a larger or smaller extent) the systems currently used in both Centers. For example, WARDA currently uses the Sun system for financial and materials management, while IITA uses the Oracle system; and both Centers may need to make adjustments so that relevant financial and budgetary information can be transferred seamlessly from one Center to the other after the alignment.

The two Centers' procurement systems too are different; and an external consultant has recently comprehensively reviewed IITA's materials management system. The improvements introduced in IITA could provide an impetus to improve WARDA's procurement processes as well, when the two systems are harmonized. A similar exchange of ideas and good practices would be useful in the areas of human resources management, information and communications, and physical plant services, so that the systems that finally get adopted for use at the Cotonou station—where the provision of corporate services to both Centers will be the responsibility of WARDA—is better than the system currently in use at either Center.

Put differently, and as stated in the Memorandum of Agreement (MoA) between IITA and WARDA signed in April 2007, the Corporate Services staff of both Centers are now expected to collaborate closely with each other to jointly plan, design, and implement the new administrative systems that will be used by WARDA after the alignment of corporate services. This will require staff of both Centers to make extra efforts to work across Center-boundaries, and to think and work differently than seems to have been the case thus far.

The two Centers' recent experience in dealing with human resource issues related to the alignment illustrates this. The Heads of Corporate Services and HR Managers of both Centers have an opportunity to jointly address the complex HR issues involved in "transferring" NRS/GSS staff from IITA to WARDA. These potential problems, if not managed well, will affect

both Centers, since they share common physical facilities at Cotonou and will soon be sharing many GSS staff as well. Both Centers have recently appointed professionally qualified HR Managers, and IITA has recently recruited a new DDG (Support) who will join in August 2007. Hopefully these new appointees would, in their mutual interest, work on these HR issues as one team, as will the joint “Transition Task Forces” that have recently been appointed for HR, finance, computers, purchasing, PPS, and general administration. The two Centers have also appointed a Transition Steering Committee, and have jointly hired three external consultants from Benin for advising the Centers on matters relating to government liaison, legal requirements, and HR options and processes. These are commendable steps.

It is expected that this team approach would prove very useful for discussion and harmonization of *all* corporate services that will be used by both Centers located at Cotonou—even though administratively the provision of such services will be the responsibility of WARDA. As per the MoA, a Local Implementation Committee is expected to be set up, to “oversee the site specific aspects of the agreement”. Its role “is to prepare annual budgets and work plans for approval by the AMC [Agreement Management Committee], and to ensure their implementation”. The AMC is expected to “approve annual budgets, provide guidance to the Local Implementation Committees and to arbitrate on issues when necessary.”

The realignment process is complex, will require flexibility both in the design and implementation phases, and could take longer than the six months provided for the entire process to be completed. The newly appointed Task Forces and Steering Committee seem to be on the right track, are moving forward slowly but steadily, and are fully aware of the difficult task ahead. The Panel therefore believes that instead of trying to meet the arbitrary deadlines specified in the MoA, the alignment proceed with due care and diligence, even if the process takes a little longer than originally expected.

As the two Centers move ahead with alignment of their corporate services, it would be useful to benefit from the experience of other CGIAR Centers that have recently aligned their corporate services. For example, the model being followed by IWMI and WorldFish—who have agreed that a newly-formed organization titled International Research Support Services (IRSS) would deliver outsourced corporate services to them, covering Finance, HR, and IT—is quite different from the approach adopted by WARDA and IITA. While it may be too early to know if this model will work as intended, the IRS seems to have started on a promising note. The experience of ILRI and ICRAF, the two Centers headquartered in Nairobi that have agreed to align selected corporate services could be instructive as well. Both these examples could provide lessons that might apply to WARDA and IITA.

In view of the complexity, long-term importance, and strategic implications of the alignment of corporate services for WARDA and IITA, and the potential for severe adverse consequences of possible communication gaps between the two Centers during the still-evolving harmonization process, *the Panel recommends that the staff and heads of Corporate Services of WARDA and IITA: a) continue a very collaborative approach to ensuring that the transfer/alignment of corporate services proceeds smoothly; b) closely monitor on a regular basis the progress made by the various Transition Task Forces, Steering Committee, and the Local Implementation Committees at Cotonou and other sites covered by the Memorandum of Agreement; and c) seek to benefit from the experience of other Centers that are aligning corporate services. Nevertheless, it cautions WARDA that in seeking efficiency gains from the alignment of corporate services, it*

ensures that research quality and relevance are not compromised, and that scientists continue to have access to adequate technical support during and after the alignment process.

6.6 WARDA's planned return to Côte d'Ivoire

WARDA's headquarters remains in Côte d'Ivoire where the M'bé location represents a 40 million USD investment (at the original investment value) in infrastructure from its Member countries. After the move to Cotonou in January 2005, the Board of Trustees defined a planning horizon of five years, in order to ensure stability to staff and programs. Thus, the earliest return will be in 2010 in the best of circumstances regarding political stability in Côte d'Ivoire.

It is to be noted that the Board of Trustees and the Council of Ministers of WARDA played a major role in taking timely decisions on relocation and in ensuring a measure of continuity and stability. Some donors also compensated partly the financial loss incurred by staff exodus, loss of all vehicles, laboratory equipment and relocation expenses. Moreover, the senior management team led by the Director General showed remarkable resilience throughout the turmoil and never put the future of WARDA as an institution and as an Association at risk. The fact that WARDA is an Association of Member States, besides a CGIAR Center, proved to be an important asset during its darkest days. That WARDA is in its present vibrant state today as a performing CGIAR Center, temporarily located in Cotonou, is testimony to the resilience and robustness of the Association, and its importance in Africa.

The Panel Chair accompanied by the Director General visited M'bé on April 6, 2007. The station is in excellent condition, with no damage whatsoever to the physical infrastructure, all utilities are fully functional, and the buildings and grounds are being maintained. The genetic resources collection is in good condition and is being maintained. A former IRS scientist, as consultant, supervises the local staff at Bouaké, ensures the management and maintenance of M'bé, and oversees foundation seed production (100 t for the Government of Nigeria). A security detail (from the New Forces) is in place, and is being paid by WARDA at a small cost. Political conditions allowing, nothing would prevent a return to M'bé in terms of working conditions. However, the city of Bouaké is not yet hospitable to international staff, with all commercial banks still closed, no international schools nor adequate medical facilities nor a decent hotel, nor functioning gas stations. In many aspects, it was still a ghost city, ravaged by war, at least at the time of the visit.

Hence, WARDA could prepare for a return to Bouaké, political, security and living conditions permitting, at the earliest in 2010, and possibly later. *A second failed return cannot be permitted.* This does not mean that certain WARDA operations such as station testing of new varieties, breeder seed production and even certain laboratory tests could not take place in M'bé during the intervening years.

On the SC issue whether WARDA has an appropriate plan of action regarding infrastructure and installations left behind in Côte d'Ivoire and what further steps should WARDA take regarding its planned return to Côte d'Ivoire, the answer is that WARDA infrastructure at Bouaké in Côte d'Ivoire is well maintained, and a plan to continue this maintenance is in place and is being implemented. Operations there are limited to seed production and germplasm management/regeneration. WARDA has nominated a representative in Côte d'Ivoire based in Bouaké and who oversees both technical and administrative matters. It is hoped that a return to the headquarters will take place when the security conditions are in order and based on United

Nations norms. A strategic plan on this issue has been developed and shared with the WARDA Board of Trustees. No further steps are warranted at this moment regarding the planned return to Côte d'Ivoire in the future.

6.7 Concluding comments on Governance and Management

Clearly, during the period under review, WARDA has had to face extraordinary circumstances beyond its control, as outlined in Chapter I. The 4th EPMP recommendations on governance and management have largely been implemented, as noted in Chapter 1, or were overtaken by events. The difficulty of guiding and managing a Center repeatedly uprooted from its home country and headquarters location due to violent civil unrest should not be minimized; nor should the time and effort needed to firmly re-establish it on a firm footing in subsequent years. WARDA has only now emerged from this five-year period of uncertainty and flux. In recent years, it has performed reasonably well in terms of the CGIAR Performance Measurement System that includes a comparative assessment of governance, as well as on the financial and other management-related performance measures included in the CGIAR report for 2006. The Board and Management are taking this performance monitoring and reporting seriously, and follow-up actions and improvement are likely in coming years, where needed.

In the Panel's view, governance at WARDA is reasonably good, though program oversight could be improved. Management of research and corporate services has improved, though there is room for further strengthening in several areas, as suggested above. Moreover, the Center is still undergoing a further period of transition—with a new Director General, who assumed office in October 2006; a new "vision" and research organization introduced by him soon thereafter; and several new staff in important positions. In addition, it is expected that the planned alignment of corporate services between WARDA and IITA (Benin) will be completed by end-2007; a new ADG for Research and Development will be appointed upon the retirement of the current incumbent sometime during 2008; and programmatic alignment between WARDA and other CGIAR Centers will accelerate.

It seems to the Panel, therefore, that during the next 3-5 years, WARDA would benefit from a period of Board-guided and Management-orchestrated stability and consolidation, which would nevertheless introduce necessary changes in governance and management in a systematic and prudent manner. Once these changes are made, however, we believe WARDA would have the capacity to deliver a much more ambitious research program in the coming years.

7 WARDA TOMORROW

7.1 The Context

In many countries of SSA, rice production is keeping up with the population increase (2-3% per year) and even surpassing it. But with rice consumption in WCA increasing at 6% per year on average, the battle is still being lost in terms of reducing imports. Many factors explain this. However, with increasing world market prices (since 2003), rice farmers in SSA are getting higher prices, and local competitiveness is increasing. In addition, with improved technology and expanding areas under rice - uplands, lowlands, irrigated - a catch up on growing imports is possible. Several studies have shown the great potential for increasing local rice production and for reducing rural poverty and enhancing economic growth in the humid, sub-humid and Sahelian (irrigated) environments. This is because the economic multiplier effects in the rice value chain, from input supply, to production, to post-harvest processing and marketing are large, creating a lot of employment for both women and men.

7.2 WARDA's comparative advantage

WARDA's comparative advantage is obviously in strategic and applied research on rice, and in facilitating policy work on rice production and marketing in SSA, as well as on nutrition and livelihood issues linked to rice. As a relatively small, commodity-based Center, clear priorities need to be set for its research program and outreach/technology transfer activities. Over the years, and in order to foster impact, WARDA has moved towards the development end of the research-development continuum, mainly through its partnerships and networks, e.g. in CBSS and foundation seed production through ARI. Just breeding more NERICA varieties and putting them through PVS will simply not produce the quantum productivity effects that WARDA is aiming for. The agro-ecological and socio-economic environment needs to be better stratified; and research, including breeding and other research activities at WARDA, need to consider this. This will produce new insights and knowledge for producing IPGs that allow more focused interventions in the diversified rice environments in which rice is grown in SSA.

7.3 Rice Technology Generation and Dissemination - the Scientific Challenge

WARDA is at the center stage of rice technology generation and dissemination for the region. Until now, a lot of emphasis has been put on genetics and breeding, including the generation of interspecific (NERICA) varieties. About 6.7 % of all rice grown in the uplands of WCA is under NERICAs, after about 5-10 years of effort. This is already a remarkable achievement, taking into account that the uplands are a complex rice environment, and the many constraints to adoption.

Part of the problem is that NERICAs are still a generic recommendation, not tailored to specific local agro-ecological and socio-economic conditions. Africa is very heterogeneous. Moreover, NERICAs, even if there are now 18 upland, 60 lowland and 3 irrigated NERICA varieties, are still not bred for specific conditions. Moreover, the genetic base of NERICAs is fairly narrow. In addition, the underlying factors behind NERICAs' performance under stress conditions such as drought, low soil fertility, heat, water stress, pests, and weeds are still not known. In the coming years, research needs to address the production of varieties better targeted to the different agro-ecological niches of the three major ecosystems. Among new varieties, a large place will certainly be taken by a second generation of NERICAs with a broader genetic basis, and possessing better

weed competitiveness. It is likely as well that some of the newly produced varieties will carry favorable alleles of resistance to RYMV and/or tolerance to submergence, and/or tolerance to salinity, introduced by marker-aided selection into elite locally adapted varieties. Progress is also expected in understanding the genetic and physiological factors controlling traits of agronomical importance, such as drought resistance or iron toxicity, either through classical genetic mapping approaches, or through whole genome association mapping, both in *O. sativa* and in *O. glaberrima*.

7.4 NRM

Thus far, WARDA has put major emphasis on genetic improvement, and on adapting rice varieties to marginal environments. Managing the environment to bring out the genetic potential of different varieties needs much more attention (soil and water management, agronomy), as do post-harvest issues. In addition, the area under rice has been expanding into marginal upland and poor lowland areas, resulting in lower yields. Even in good soils with inappropriate crop and natural resource management, yields may decrease after a couple of years due to nutrient mining and other forms of land degradation. Future research should focus on the development of NRM practices to sustain long-term rice production in Africa.

In tailoring NERICA and other WARDA varieties to more context-specific conditions, the agronomy of rice, NRM issues, and the social sciences will need to come to the fore, and receive more attention. It has become clear that the agro-ecological environment in a broad sense, including farm management practices, also needs to be changed in order to realize the genetic potential. Under poor management conditions, the best NERICA varieties remain low yielding and yields are not sustainable. What are the recommended agronomic practices (optimum sowing date, spacing, density, fertilization, weed control, water management and control) for each variety in each environment?

7.5 Seed Production

Seed production will remain a major constraint on adoption and diffusion of NERICA and other WARDA varieties. Because the private seed sector in SSA is underdeveloped, the public sector needs to step in. The small emerging private seed entrepreneurs and CBSS need public support, or at least need to be protected against dumping at low seed prices by the public sector, as happens in certain countries. This is a difficult issue. Ideally, WARDA should only engage in breeder seed production (and temporarily, in producing some foundation seed) and training and capacity building on seed issues. But this has proven insufficient to meet demand for seed. As private foundations are now moving to address the seed challenge, the pressure WARDA to get more involved with seed production, including from its COM and NEC, should be less. It remains unclear why farmer-to-farmer seed exchange and adoption often remains minimal. WARDA's socio-economists need to monitor the adoption of new varieties (and disadoption), the seed issue and impact of new varieties. In addition, the reasons for adoption or non-adoption need to feed back into WARDA's breeding and NRM programs. Ideally, mixed, interdisciplinary teams should do the adoption and impact studies.

7.6 The Policy Environment

Regarding the policy environment and policy research and advocacy, the main advantage in SSA is that the rice market is there, and is growing fast. No major efforts are needed to create a market

or make it grow. Furthermore, most countries protect domestic rice production to some extent, by imposing import duties. There is an issue of discounts on local rice due to poor quality compared to imports needs to be addressed throughout the local rice value chain, including post-harvest (milling, purity, uniformity) and marketing (packaging, branding). This problem needs to be tackled through the creation of appropriate institutions for local value chain enhancement and development, and public support may be crucial for appropriate institutional innovations to occur. Additional public resources are needed to support rice research, in line with countries' declared aims of attaining more self-reliance in rice and better food security.

WARDA needs to constantly monitor the rice policy environment in SSA, and undertake the policy research needed for policy advocacy, activities for which WARDA is well placed. The Center needs to take full advantage of its Association status, its Council of Ministers, National Experts Committee and APRAG, to create a more conducive environment for local rice production and marketing and rice research and development.

7.7 Training and Capacity Building

Training and capacity building remain a continuing challenge for WARDA, as NARS get stronger and undertake on more of the applied and adaptive research. The demand for keeping up with new technologies and methodologies is huge, particularly in topics like molecular biology, crop modeling, post-harvest, NRM, spatial analysis, and socio-economics. Because capacity building for rice research in the mandate region is not only a moral obligation but also an excellent investment, WARDA has an obligation to train as many scientists and research technicians as its budget allows. In addition, such capacity building has to be at all levels, from research technicians to Ph.D.s. Under budget constraints, the temptation is always to cut back on training, wrongly assuming this does not affect the main research program; while in fact it does, as training is part and parcel of WARDA's core activities.

7.8 Future scenarios

Before the next EPMR, WARDA may have returned to M'bé in Côte d'Ivoire, political and security conditions permitting. By then, WARDA will hopefully have become a US\$ 15 to 20 million Center with increased scientific capacity and stronger scientific standing. The infrastructure facilities at M'bé are spacious and first class, allowing excellence in research. By then also, the IRRI-CIAT and IITA collaboration will hopefully be commonplace, resulting in synergies, more critical mass, new insights, more efficient (molecular) breeding, and a better understanding of genotype x environment interactions.

Future events in Nigeria, as a mega-country for rice in SSA, and a special focus of WARDA, will have particularly important implications for WARDA's success in SSA. With the Presidential Initiative on Rice, a strategy declared at the highest level to develop rice production, and good technology, Nigeria could turn the corner on rice imports, and set an example for the rest of Africa. If 70 to 80% of the poor in Nigeria are rural, as elsewhere in SSA, and are mainly engaged in agriculture, how else can they escape from poverty, but through increased agricultural productivity?

In the future, WARDA should remain an agile Center, with a strong headquarters that coordinates work in Cotonou and in several outstations, including in Nigeria, St.-Louis, Bouaké and Tanzania. Ideally, all outstations should have critical mass to meet the subregional

challenges in the different rice agro-ecologies and socio-economic environments. WARDA needs to build on its successful partnership model further, in order to seek more effective collaboration on problem identification, cutting-edge science, applied research, and dissemination of results. At the same time, transaction costs in networking and partnerships need to be controlled, and shared more evenly with partners.

WARDA tomorrow—as the Africa Rice Center--will be a reputed CGIAR Center, known for its excellence in rice research in SSA and in the world, and will also have successful networks and partnerships with the NARS, advanced research institutes and CSOs. This is the scenario that the Panel has in mind.

The verdict on a rice-led green revolution in West Africa is still out, while the challenge for more rice production in Central, East and southern Africa is growing fast. The yield gap remains a daunting challenge, and not just for rice in SSA. With adequate resources from Member countries (the number of Member States in the Association is increasing) and donors, and with a focused and impact-oriented research program, WARDA (with its partners) can deliver on the promise of putting more rice on the tables of poor and hungry people, of putting more money into their pockets, and of contributing in this way to the daunting challenge of the MDGs.