

4 STAKEHOLDER RELATIONSHIPS: ASSESSMENT OF PARTNERSHIPS, PROGRAMS AND CENTER IMPACTS

4.1 IITA's Attitude to Partnership

IITA's engagement protocol is to link with a wide array of partners including advanced overseas research institutes (ARIs), regional and Africa-based international organizations; national agricultural research services (NARS), universities, and non-governmental organizations to aid in technology generation, deployment and diffusion towards its goal of alleviating hunger and reducing poverty. The primary partners for IITA's R4D mission have been the NARS of collaborating nations. IITA is increasingly looking towards ARIs and African universities for the more upstream research for greater complementarity and synergy and to increase likelihood of generating science-based impact. The Center has also aggressively sought out partnerships with the small and medium enterprises (SMEs) and other for-profit entities as partners in advancing its objective of creating a demand pull. It links increasingly to the different expressions of the private sector in its agri-business approaches and as part of its agricultural research for development paradigm. The Center is also cognizant of the value of a sustained relationship with sister CGIAR Centers, creating complementary programs and sharing resources more efficiently. IITA appears to pay due attention to maintaining closer alliance with national governments and governmental organizations as well as with sub-regional, regional, and Africa-wide organizations in search of policy advocacy for itself and collaborating partners. Relations have also been created with non-governmental and civil society organizations. The way in which the various partners contribute to project research is well described in IITA's MTP for 2007-2009. The observations of the EPMR on the state of these partnerships are described in later sections of this chapter.

Currently (in 2006), IITA has established formal partnerships with over 160 organizations in more than 50 countries.²⁸ The list reflects IITA's engagement with funding agencies, research organizations, universities, private organizations, and NGOs reflecting the wide spectrum of alliances that a Center such as IITA partners with, to generate resource support and to mobilize and disburse research results for impact. It is a long list, but both the number and range of partners are perhaps on par with those of other Centers. Since 2003, IITA has adopted a new policy on inter-institutional agreements that requires that all fund transfers above US\$2000 require agreements. In 2006, IITA had 361 active agreements which include 146 agreements, 101 sub-agreements, and 114 MOUs. In 2006, approximately 24% of IITA funds were transferred to partners.

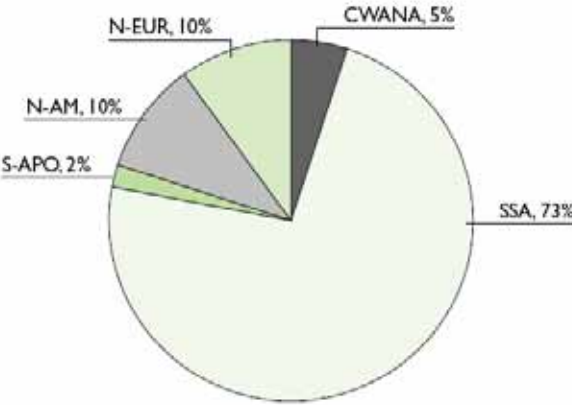
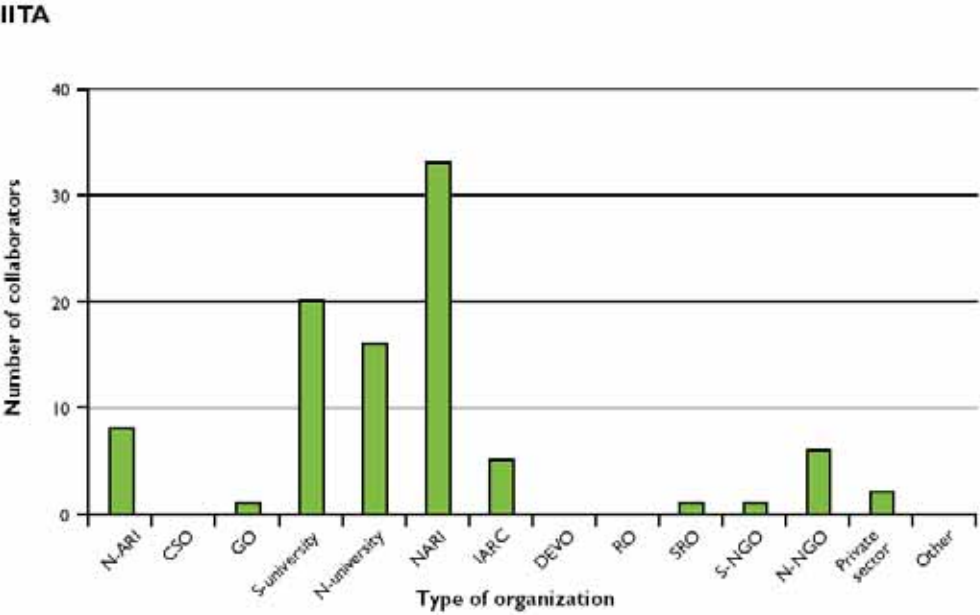
Working with partners is a necessary part of the R4D strategy. IITA documentation places particular emphasis on listing partnerships but perhaps in an insufficiently rigorous fashion. A partner organization should be one that shares risks and investments in an endeavor, rather than simply being an ad-hoc participant briefly consulted or contracted for a short-term project. IITA should critically review and assess partner organizations for their contribution to long-term development goals. The measure of R4D's effectiveness in developing relationship to non-research organizations should be in the accrued sustainability of skills and partnerships.

IITA suggests that with the increasing scientific capacities of some NARS and Southern Universities, IITA will be able to focus more on regional and pan-African bodies in the future.

²⁸ See Annex 11: In some cases the partnerships are limited to persons in institutions

The intent is to move to a position where NARS/Southern Universities and IITA will then complement each other in upstream research and the joint implementation of R4D programs. Collaboration with NGOs and the Private Sector will also be further expanded and intensified especially in the area of adoption and commercialization of agricultural products, although it is not clear if IITA acknowledges the important role of NARS in downstream adaptive research and links with the private sector. Informal partnerships will remain important and IITA is designing systems to better capture and capitalize on these partnerships. Figure 1, shows the distribution of IITA partners and organizations in different geographical regions of the world.

Figure 4.1 Distribution of IITA partners and organizations by geographical regions



In the highly competitive world of international agricultural R&D, many institutions have difficulty in keeping a proper balance in their relationships with institutions and programs that they partner with and/or serve. Collaborating institutions often fail to recognize their comparative advantages and the particular place and niche that they need to fill to avoid duplication and overlap with the functions and responsibilities of their respective partners. In some cases, the problem arises from harmless temptations to jump at opportunities for generating results with impact, attracting grant funds, and drawing attention to one's program and self. In others, it may be the result of ill-conceived and improperly rationalized adjustments to the mandates of one's institution. In yet other situations, it almost appears to arise from disregard for the aspirations and strength of partner institutions.

Inter-institutional engagements deserve serious attention and need to be approached with care and touch for the purpose of attaining success and impact. If not handled with care, great opportunities for synergy and complementarities are missed, and likelihoods for achieving significant results and impact towards the greater common goal are unduly compromised. Although in the past, IITA has done a good job of seeking out appropriate partners and leading and sustaining that partnership towards advancing the cause of science in development, concerns are emerging from its current relationships with NARS. The nature and extent of these issues and the Panel's observations about these relationships are described below.

4.2 Inter-Center Relations

IITA enters into a number of partnership arrangements with other CGIAR Centers through contributions to Challenge Programs (identified in Chapter 3) and the planning for these and other regional planning in Africa (see section 2.5). The following focuses therefore largely on the key bilateral relationships between IITA and other Centers.

4.2.1 CIAT

The basis of collaboration between CIAT and IITA is a detailed MOU signed by the respective DGs in June 1984. The framework of the MOU recognizes the comparative advantages of each Center. CIAT, being located in the region where cassava originated, was recognized as having an advantage in developing and maintaining a global germplasm bank; understanding the epidemiological profiles of cassava diseases; and, where applicable, the source of natural bio-control agents. Additionally CIAT was recognized as being strong in the area of cassava processing for various industrial applications, and was expected to take a lead role in this aspect. IITA on the other hand was recognized as a Center responsible for breeding and dissemination of cassava in the African continent, as well as logically being the gateway for cassava germplasm destined for Africa.

This MOU seems to have steered the collaborative work between the two institutions quite smoothly until about five years ago when the relationships became strained, primarily on the issue of introducing germplasm to Africa in a manner that does not seem to safeguard against the inadvertent introduction of cassava diseases from South America. The Panel sought and obtained a communication paper detailing the IITA position on the challenges and expectations in handling the introduction of materials into Africa. The following is an excerpt from this document:

"International and regional exchange of cassava germplasm, as for other crops, is an essential component of crop improvement. The movement of germplasm across borders of countries and

regions involves risks of inadvertent introduction of foreign pests and pathogens of quarantine importance to new areas. Pathogens have even been intercepted from tissue culture materials. Phytosanitary regulations/measures have been established to reduce the risk of such introductions. These are in recognition of the fact that some pests and pathogens may have mild impact in their areas of origin but can become highly virulent or destructive once introduced to a new environment. For instance the Inter-African Plant Quarantine and Phytosanitary Guidelines and Regulations Vol. 11 of December 1999 page 58, crop no.39 stipulates: "Vegetative material importation is strictly PROHIBITED into the Continent". Unfortunately, the established phytosanitary measures are being compromised. "In as far as cassava is concerned, there have been introductions of pests from South America to Africa in the past, which could not be eradicated. These include the cassava green spider mite (*Mononychellus tanajoa*), and the cassava mealy bug, (*Phenacoccus manihoti*). *P. herreni* is currently confined to Brazil, Bolivia, Colombia and Venezuela but remains a potential threat."

IITA's submission also gave details of several cassava diseases that were not yet known to occur in Africa, but which would be devastating if introduced. To guard against this possibility, and to protect African farmers from more disasters, CIAT and IITA signed an MOU whereby introductions from South America to Africa would be processed by IITA, (cleaned and certified) before release to the NARS which lack adequate physical, human and financial capacity to do so. The Panel commends this approach, and believes the MOU provides a useful basis on which to proceed, particularly since some NARS in Africa are still in the early stages of development.

The Panel understands that CIAT in some cases apparently wishes to move its material directly to NARS in Africa. To the extent that they are dealing with strong NARS (e.g. South Africa), this would be in accordance with the MOU; but the Panel is concerned that often it is not the technical capability, but the rigor needed to receive, contain, test, grow and observe the materials that is weak in some NARS. To address this issue in a productive way, IITA, IAPSC and CIAT have called a meeting on the movement of vegetative material; and others dealing with this material (e.g. CIP, ASARECA, FARA, CORAF, etc.) have also been invited. This meeting was scheduled for 2007 but coincided with the EPMRs of both Centers, and has now been postponed to 2008.

Since both Centers have expressed their willingness to move beyond this apparent stand off, the Panel urges that the matter be discussed urgently between the two Centers and concerned parties, and be resolved with assistance from the Chair of the Alliance Board if needed.

4.2.2 *Bioversity International (formerly IPGRI)*

IITA and Bioversity have a long history of collaboration in the area of banana and plantain (BP) research. The Panel is pleased to learn that the earlier tension between the two Centers has now been resolved; and IITA and Bioversity have identified a number of specific areas for collaboration. These include: preparation and implementation of joint proposals to a donor for program support in Burundi, Rwanda and D.R. Congo, and for a German post-doc to conduct impact assessment on bananas and plantains (BP) in East Africa; joint work through the consortium of IITA-TSBF-Bioversity in relation to BP research; preparation of a joint proposal for work on introducing BP endophytes in Uganda; integration of the BP breeding and testing program; and refinement of the Material Transfer Agreement protocols.

4.2.3 CIMMYT

The linkage with CIMMYT is solely related to the two Centers' work on maize. Here the two Centers have followed a time-honored division of labor-- CIMMYT handles maize needs in the mid- to high altitudes, and IITA focuses on lowlands (1000m or less). This has worked well; and the relationship between the Centers has markedly improved in recent years. Collaboration on the drought tolerant maize project is good. IITA has made good progress with its open pollinated maize in lowland areas in West Africa and south East Africa (Mozambique). Maize inbred lines developed by IITA have been contributed to hybrid maize programs in Zambia, Zimbabwe and South Africa. IITA maize varieties have also been requested and sent to Asia (India, China, and Korea). However, in the context of possible CGIAR reforms, if IITA moves closer to being primarily an (integrative) "eco-regional" rather than a commodity-focused Center, CIMMYT would look to contribute genetic and agronomic inputs to the eco-regional effort.

4.2.4 WARDA

IITA and WARDA have a long-standing collaboration on rice research, in the sense that in Ibadan, IITA hosts a number of research activities undertaken by WARDA staff, including rice research being conducted in partnership with IRRI and JIRCA scientists. This work has progressed productively and smoothly leading to the now Africa famous NERICA, and it is expected to continue with improvements and promotion. In addition, IITA scientists continue their own research at Cotonou (where WARDA's temporary headquarters is now located); but the Panel understands that IITA is currently not envisaging research by IITA scientists on rice. Thus, closer programmatic alignment between the two Centers is not anticipated at present, though the two Centers are moving ahead with alignment of governance and corporate services at their common facilities in Cotonou (Benin), as discussed later in this report (see Chapter 5).

4.2.5 ILRI

In general, relations between IITA and ILRI are good, but there are some issues that need to be addressed. The two Centers collaborate very well with regard to the BECA facility in Nairobi, in which the IITA has been a key contributor to human resource leadership. The BECA facility brings together, the abilities of AATF, ICRISAT, ILRI and other organizations, creating a center of bioscience excellence, but their collaboration in West Africa is not as good as it used to be a few years ago. ILRI staff turnover at Ibadan has been high; and it has not been easy to recruit new staff for that location, in part due to ILRI's stringent requirements for scientists who are equally able to work on both research and development aspects of its R4D strategy. Collaboration on projects has suffered in part because IITA charges its "standard" 23.5% overhead rate for all partners (including other CGIAR Centers). There are also tensions about the degree of consultation with partners before project proposal development. In addition, ILRI believes that IITA does not seem to be keen on working actively on the sub-regional MTPs even though it is the biggest Center and has an important mandate in the region. This may have delayed action by other Centers and FARA on these sub-regional initiatives.

4.3 Relations with NARS

The longstanding principle for engagement for the CGIAR Centers has been to clearly designate the national agricultural service institutions of the many developing nations as their primary partners, and IITA has been no exception. IITA has a history of building strong and functional alliances with NARS in several countries in Africa. With each of these NARS, IITA developed relationships that built capacity, sharpened the research agenda of partner institutions, and empowered them sufficiently to create teams that responded to national and regional needs.

Early developments of IITA's alliance with NARS emphasized deliberate plans to strengthen national institutions through organized capacity building efforts that included degree and non-degree training, provision of infrastructural support, assistance in design and implementation of joint research agenda, and stocking up the growing NARS with valuable crop germplasm thereby laying out an essential foundation for success. This model has generally yielded strong NARS partnerships for IITA in both West Africa and eastern Africa and has paid dividends in research and impact generation. Early efforts concentrated in developing programs in West Africa, particularly in Benin and Cameroun where successful classical bio-control programs (Benin) and crop management options for forest farming systems (Cameroun) were developed. One of the most successful of IITA's NARS partners is NARO of Uganda, whose banana and cassava programs have been built with direct assistance of the IITA. This program has been truly exemplary with demonstrated capacity to national needs and emergencies, for instance during the sudden outbreak of a new virulent strain of cassava mosaic virus in that country in the late 1990s. NARO is deservedly proud of its accomplishments, but very forthright and effusive in its acknowledgment and gratitude to IITA in building capacity in both banana and cassava improvement in that country.

In one of its most recent engagements, IITA with donor support has embarked on a multi-institutional project in Mozambique with the national NARS (IIAM) as lead on the development and dissemination of cassava varieties with resistance to cassava mosaic virus and cassava brown streak virus. The project, though is still at an early stage, has generated great interest and response.

4.3.1 *Balancing Relations with NARS*

Engaging NARS appropriately and with the view for long term sustainability of the program is a major responsibility of the Centers that should be taken seriously. Initiating partnerships is easier than sustaining these relationships over time. National programs in developing countries generally do not assert themselves as their stance is often weakened by lack or shortage of internal resource support for R&D, limited capacity and critical mass, or the perceived or real lack of voice in the decision making process. But more significantly, NARS remain reserved from making these assertions for fear of withdrawal of the support, however limited, that come to them from external institutions whose agenda may not always be in congruence with the NARS. This leaves the concerns of the NARS and the need to make sound and judicious judgment on programmatic inputs in the hands of the external partner organizations and the donors that sponsor the R&D efforts of these institutions in developing countries. Some program leaders and organizations are more effective at this than others.

The Panel observed, and learned from discussions with NARS and partner programs in eastern and southern Africa, that relations between IITA and its partners are souring. IITA is appearing less transparent in its activities and in the initiatives it rolls out in the region and the new cadre of IITA staff and leadership is distancing itself from NARS and their staff. Problems often arise from failure to carve out a proper division of labor, or inability to find a more equitable and properly rationalized sharing of resources. An appropriate division of labor among collaborating R&D institutions can be readily achieved by faithful recognition of each other's strength and place within the R&D continuum of "discovery to delivery". Limited overlaps may cause no harm, provided that there is the eventual recognition for the presence of other institutions that are better equipped or placed to address the issues further up or down the scale of the research development and delivery continuum. Problems that arise from lack of sharing of resources or lack of trust and/or respect among professionals are often more contentious and lead to

abrogation of relationships.

The longstanding legacy of its successful partnerships with NARS notwithstanding, there appears to be a major shift in IITA's paradigm for engagement with NARS and other collaborators. Director General Hartmann told the Panel that at IITA "we do not have a preconceived notion as to who our partners are; we will work with most anyone that helps us to get the job done".²⁹

The Panel feels that this may be a good stance for expediency in getting a particular mission accomplished, but that it may not be an effective way to build a collaborative program, to develop sustained partnerships, or to build capacity for sustainable institutional interventions to address R&D concerns. There is a risk of "missing the forest for the trees". It does not reflect either a retrospective appreciation of the time and resources committed to building partnerships in the past (and the value of retaining them), nor a prospective outlook on the virtue of building local capacity and partnerships systematically for sustained long term impact. Instead, it suggests an abrogation (perhaps inadvertent) of the Centers' responsibility in capacity building and bringing about long term sustainable change. In particular, the one-dimensional classification of NARS as "strong" or "weak" presented in the IITA draft Strategic Plan, and the implication that only the former are suitable partners, is an indication that the Center may be misconceiving the institutional requirements for the successful implementation of R4D.

Most national research programs are "split images" of the international Centers in their objectives and aspirations, but often with less capacity and resources. As CGIAR Centers see the need for moving downstream on the research continuum to engage other partners to generate impact along the value chain, it can be assumed that NARS do too. If NARS partners are unable to see the opportunities for making these adjustments, they can be prompted to appreciate them. IITA's desire for looking to new partners to facilitate the downstream components of change to identify and exploit opportunities in processing, commercialization, input and output markets or outlets is clearly justified as NARS often do not have capabilities in these areas, but neither do most CGIAR Centers. As IITA looks for creative ways to achieve greater economic impact and gathers experiments to share, it needs to do what it can to bring the NARS into the fold, and not go around them. Bringing about substantive change in agricultural R&D requires deliberate engagement with key agents of change to build relationships and capacity so that the local partners are able to take over from IITA when sufficient strength is gained. It also requires the recognition that local partners have the same aspiration as IITA to effect real change in agriculture, but lack the capacity to get it accomplished and that IITA can help build or catalyze that capacity. There are signs that some collaborating NARS today have sufficiently stronger human and institutional capacity to address important research and development concerns in a fairly comprehensive manner.

IITA needs to make adjustments to the nature and level of national engagement as these developments unfold, and it does. Unfortunately, the new adjustments and modality for evolving partnerships by IITA have stirred some concern and misgivings in some countries. The expectations by collaborating NARS is that the partnership needs to evolve where some responsibility is shifted to NARS and IITA scientists move into research areas and focus where the NARS has not yet achieved sufficient strength. Where relations have soured, partners fear that they are shunned because of their demand for greater role of engagement in joint R&D

²⁹ personal communication

efforts and their request for greater share of research grant support for their higher level of engagement.

In eastern and southern Africa, IITA is shifting its programs and partnerships because of its regionalization rationale. This move has projected a sense of “abandonment” giving a semblance that the Center is conducting a parallel and competitive (and not complementary) research program. Such sentiments, of IITA conducting parallel research to those at NARS, were expressed to members of the EPMR in more than one country during the field visits. NARS also argue that their emerging strength should be an asset where the strong NARS could serve as partners in the new regional effort by sharing their knowledge and experience with neighboring NARS, but facilitated by IITA. This is an approach regional programs such as ASARECA and CORAF would support and endorse.

Furthermore, IITA’s expressed interest and practice for direct engagement with farmer groups, NGOs, and the private sector in host countries in eastern and southern Africa is meeting some resistance. On the part of IITA, engagement with the private sector is essential to encourage commercialization of products resulting from research as well as demand pull for technology generation. The NARS partners acknowledge the need for such engagement, but bemoan the fact that any initiative with local farmers, traders, and agribusiness interests that does not include meaningful host country counterpart engagement and perspective may be counterproductive. They fear that the absence of connection between end users or commercial entities and primary local sources of scientific expertise, the NARS, short changes the NARS’ desire to assert themselves and fails to create a more sustainable relationship between local scientific expertise and the emerging business interests.

The Panel recommends that IITA recognize its broader responsibility for building capacity towards bringing about lasting and sustainable solutions against hunger and poverty. This requires that IITA engage its NARS partners more actively and more broadly in its R for D, so that all partners gain experience in moving through the spectrum of discovery to delivery and along the value chain.

4.4 Advanced Research Institutes and African Universities

The Center has developed strong associations with a number of ARIs in several countries, in which, through proper division of labor, the ARIs provide links to upstream research within joint R4D efforts. Most of these complementary linkages, by design, are in basic molecular biology and genetic engineering. The results from many of these endeavors are at the early stage but with potential application on the horizon. One of the very early projects deals with the genetic engineering of resistance to stored pests (bruchid) in cowpea and has involved initially Purdue University and more recently a joint effort between Purdue and CSIRO in Australia for genetic transformation of cowpeas. In cassava, work is currently underway with the University of Copenhagen (KU) for the genetic transformation of acyanogenesis to produce cassava lines with very low (~1%) of cyanogenic glucosides in African cassava lines. An example in bananas deals with “managing micro-organisms to enhance plant health for sustainable banana production”. Other, representative examples of IITA-ARI collaborative engagements across the commodity crop mandates of IITA include studies of yam flowering and tuber dormancy with the University of Reading; The Danforth Center of Plant Science (Mo, USA) on cassava transformation for virus resistance; SRRC-USDA-ARC (Louisiana, USA) in development of diagnostic screening techniques for aflatoxin contamination in maize; and USDA-ARS to engage in the development

of rust resistance in soybeans. In general, the Panel feels that IITA is creating worthwhile partnerships in these areas, likely to create synergy and a cost-effective win-win relationship for itself and its partners.

4.5 Private Enterprise

One of the features of IITA's R4D model is the deliberate intent to move science towards technology development and find effective mechanism for its deployment. The concept also includes vision for creating a demand pull for technology generation by creating profitable market outlets via the commercialization of the emerging technologies. The IITA Ibadan-based Food Processing laboratory conducts research in local and convenient food products for commercial considerations. IITA has engaged with local small scale food processing industries in several countries including Nigeria and Tanzania in processing food products generated from new cassava, cowpea, and soybean varieties. In addition, the new IITA mega projects such as the Nigerian Presidential Cassava Initiative are based in promoting the processing of cassava for food, feed, and industrial use. IITA scientists have entered into new partnerships with large private companies in the implementation of this project. Another new initiative that potentially offers similar opportunities for IITA to develop new skills and accumulate expertise in public-private engagement is the Presidential Maize Initiative that promises the doubling of maize yields in two years. Unfortunately, this project does not have clear private linkage and is based on high fertilizer subsidy and production and distribution of seed of improved maize cultivars via a network of community-based seed multiplication programs. The Panel believes this to be unfortunate; this project could have prompted the creation at IITA of badly needed expertise in working with the input markets including support for the development of private seed industry. There is an acute need for such expertise in West Africa. IITA can choose to create such a knowledge base for working with private seed companies and particularly with an emerging industry in commercial multiplication and marketing of clonally propagated materials. While other Centers (ICRISAT, CIMMYT) have programs in seed industry development in East and Southern Africa, respectively, there is no base of expertise in Africa better suited for the function of assisting the private industry in clonally propagated material than the IITA. The Panel thinks this to be a good opportunity for IITA to serve the continent and catalyze a successful development of an industry that no doubt will grow rapidly.

4.6 Non-Governmental Organizations

Relations with NGOs do not feature prominently in IITA documents, but NGOs are listed and mentioned intermittently. The panel has also encountered several IITA-NGO engagements during its field visits in Nigeria and in other countries. In Ghana, a Canadian NGO, SOCODEVI works with farmer cooperatives in the IITA tree crop project (STCP) in promoting the marketing of cocoa by local farm cooperatives. In northern Nigeria, a local NGO, CRED assists farmer groups in the IITA led project (PROSAB) in the Mairunguri area. In Benin, the Panel visited a quite impressive local NGO called SONGHAI that is training farmers in entrepreneurial skills for agriculture. SONGHAI uses IITA technology in its educational program but is not formally linked to IITA. In Mozambique, a major IITA initiative is engaged, with donor support in promoting the development and dissemination of cassava varieties with resistance to the cassava mosaic virus (CMV) and cassava brown streak virus (CBSV). IITA is assisted in this nation-wide campaign by the national agricultural research service (IIAM) and several NGOs including CLUSA, World Vision, Save the Children, and TECHNOSERVE. The project was reported as a success to the visiting members of the Panel. The Panel is particularly pleased to learn of the close

partnership with the local NARS (IIAM) to catalyze longer term sustainability from the engagement.

4.7 Sub-Regional Organizations

IITA has built a good working relationship with several of the sub-regional organizations including CORAF and ASARECA, as well as with FARA, that has more continental responsibilities. The Panel interacted with the leadership of these regional programs both in person and via telephone interviews and received a generally positive report about their experiences with IITA. In the past, IITA has supported several of the networks that have been housed by the sub-regional organizations including WECAMAN, SARRNET, FOODNET, and EARRNET. IITA has also been party to some of the discussions and planning that led to the reorganization of the networks that is currently underway, and is expected to actively engage with these newly consolidated networks. The leadership of IITA network coordinators and the contributions of IITA scientists in responding to emerging needs in support of research and educational support in both eastern and West Africa has been well acknowledged.

FARA and IITA report cordial working relationships, and FARA, as an umbrella body of the sub-regional agricultural organizations in Africa, has to some degree been engaged in consultation with IITA's research programs. FARA continues to aspire to the greater alignment articulated at its formation in the Meeting of Minds meeting held at ILRI in 2002³⁰. FARA is pleased that IITA is the lead center for the two pilot learning sites of the SSA-CP, and that IITA has been helpful in the preparation of the MTP. Subsequently, however, there have been disagreements on overhead rates to be charged and the Panel learned that IITA will support the FARA SSA-CP for only one year. The parties are in negotiation as to future arrangements.

4.8 Investor Relations

Key investors in IITA's research program interviewed by phone provided generally positive feedback regarding the Institute's R4D strategy, partnership approach, and results achieved. IITA is viewed as an effective voice for harnessing science for development in Africa, and its research program is seen to be demand-driven and responsive to the needs of the NARS, broadly defined, and the resource poor farmers they are expected to serve. Its major donors believe IITA's science remains strong, despite the Institute's recent emphasis on the development agenda; and this has justified the increased core funding that these donors have provided. They cited a number of activities undertaken by IITA - including its work in tackling diseases in cassava in a number of countries - as examples of its successful development-oriented research. The areas in which some donors would like greater emphasis in the future include linkages with sub-regional organizations, NGOs and the private sector. Evidence of increased effort in biotechnology was also noted by one investor, notwithstanding the considerable progress that the Center had made during the past five years.

4.9 Policy and Advocacy with Governments

IITA has done an exemplary job in cultivating relationships with local governments in Nigeria as well as several other countries in Africa. This is a credit to the Director General, Dr. Peter Hartmann and his commitment to lead a science-based development program through the R4D

³⁰ The transformation of SPAAR to FARA, 2002

initiative. Any development effort in Africa that does not receive due attention of local and national leaders stands little chance for success. Dr. Hartmann has made himself a recognizable face and name in the highest levels of African government organizations including the AU, NEPAD and the associated programs. As a result, he and IITA seem to have been singled out to be approached for initiating major R&D programs in several countries. IITA was requested by the Government of Nigeria to implement two nation-wide Presidential Initiatives on cassava and maize. IITA was also approached by the Governments of Mozambique and Uganda to lead similar programs in cassava and banana, respectively. However these initiatives were rationalized, it is indeed significant that these governments sought out science-based development interventions and singled out IITA for each of their targeted missions.

There appears to be a positive wind of change developing in Africa. IITA's contribution in policy advocacy for agricultural sciences is laudable as it may pay significant dividends for several nations beyond those with which IITA is currently directly engaged. When African leaders believe in the value of science, they are likely to flex their political muscles and help advance the cause of agricultural science in their nations. They may share their excitement with other leaders and inspire others similarly. This may also translate into greater support for agriculture and agricultural sciences and embolden respective national institutions in each of these countries. In general we believe that any time an international institute of IITA's repute is called upon by leadership of a developing country to bring its knowledge and experience to address an emergency (such as a crop disease) or to venture into a hitherto unexplored initiative, the cause of agricultural sciences is better served in fighting hunger and poverty problems.

In summary: The panel therefore applauds Hartmann's promotion of a can-do attitude in advancing the cause of agricultural development in Africa that is driven by science, and his deliberate courting of the leadership in Africa for a significant scaling out of this concept. For this experience to have lasting value, however, we encourage IITA to bring a seasoned scientific perspective to each of these initiatives, be deliberate about engaging local scientific expertise and experiences at all levels and, perhaps most importantly, approach these initiatives as experiments, the results and outcomes of which will be synthesized and shared with other governments and programs.

5 GOVERNANCE AND MANAGEMENT

5.1 Introduction

In November 2001, when the current Director General took office, the EPMR report had just been endorsed by the CGIAR. IITA was expected to speedily implement the report's recommendations, most of which had been accepted by the Board and outgoing Management. Unfortunately, during the same month, IITA was confronted with a significant and unexpected financial crisis. The Center was closing its annual accounts in the red, primarily because a major donor had drastically reduced its contribution by almost US\$2.1M. Notification of this funding cut had come in November, too late for IITA to adjust its expenditures for the year.

The Institute's leadership team was thus severely tested even before the new DG had settled into his new position. It had the option of implementing all or most of the EPMR recommendations despite the funding shortfall, or comprehensively rethinking the way forward and responding forcefully to the unexpected budgetary crisis. Recognizing its own leadership responsibilities, IITA Management, with support from the Board, opted to confront the unanticipated crisis boldly. It considered this approach both prudent and necessary; and was able to convert the funding challenge into an opportunity to undertake a major institution-wide reform effort.

Management launched a plan to address the financial deficit in 24 months, without cutting scientist positions. A decision was made to trim the corporate management infrastructure. Instead of recruiting a DDG(R), as recommended by the EPMR, it was decided to keep some positions vacant, and to reduce staff in corporate units or replace some internationally-recruited staff (IRS) with less-expensive nationally-recruited staff (NRS). In addition, Management sought to reduce administrative costs by outsourcing some services (such as security and grounds-maintenance), and seeking to make some other services (such as housing, food services, and conference facilities) revenue-earners by making them available to external clients on a fee-basis. Through well-attended "town hall" meetings, the Director General personally made the case for putting institutional interest above personal needs, and for deferring salary increases for all staff for two years, or until such time that the financial situation substantially improved.

Recognizing also that the reforms would not succeed without the support of scientists and their managers, the DG sought to develop a broad-based ownership of the proposed changes. He introduced the novel concept of placing all research activities under a newly-established Research for Development Council (RDC) which was to be comprised of three Councilors to be elected by the scientists themselves, and Chaired by the head of research at IITA. This democratization of the workplace, utilizing a participatory approach, fit the personality and management style of the new DG; and was considered by many staff as an improvement over the perceived top-down approach through which previous managers had apparently made decisions.

IITA also streamlined the research management structure, and the research portfolio. After intensive discussions with scientists, the number of projects included in the Medium Term Plan (MTP) was cut (re-grouped) from sixteen to six, thereby reducing the administrative load of research management. The three research Divisions, each headed by a Director who had operated rather independently, were combined into one Research Directorate, guided by the RDC. The six newly-elected Project Leaders were expected to draw their staff from a common

pool of scientists who were expected to devote most of their time to research or partnership activities in pursuit of the newly-announced Research for Development (R4D) strategy.

5.2 Record of Reforms

These major reform efforts took time and effort to implement; but by 2003 had begun to take hold. Scientists lauded the DG's single-minded focus on R4D, his successful fund-raising efforts, and his leadership style; and he apparently earned a lot of goodwill among staff, donors, and partners. The financial situation improved dramatically. The year 2004 marked the beginning of a steady rise in donor contributions, to such an extent that by 2006, IITA's total annual income of over US\$45M made it the largest of the CGIAR-supported Centers. In 2007, with a proposed total funding of US\$ 50.6M, the Center is expected to achieve a 40% increase in funding over the 2001 level.

The Director General, his management team, and staff of the Center deserve full credit for this remarkable turnaround in IITA's financial fortunes, for this success was not easy to achieve. It required a strategic re-positioning of the Center--which the DG personally spearheaded, and continues to champion (as IITA's, by now well-known, "R4D" strategy, which seeks to "Nourish Africa")--as well as concerted efforts to increase restricted project funding, while at the same time tightly controlling operational costs. Almost all the growth has come from the funding of contracts or special projects; and Management gives credit to scientists who have "managed to double the research funding by including research activities in many of these special projects."

However, this hard-won success in implementing major reforms, while controlling costs, has come at a price. Some of the decisions made in 2002-03 had unforeseen consequences that in retrospect have negatively impacted the Center in unexpected ways. Some of these unintended consequences were noted by the Board in 2004, and by the CCER on governance and management in 2005; but corrective actions were not taken until much later. By 2007, therefore, at the time of the current EPMR, the results of implementing the major strategic and organizational reforms initiated after 2001 appear to the Panel to be substantial but somewhat mixed in the areas of research management and effective delivery of corporate services.

IITA Management firmly believes that it took the right steps at the right time; and that the funding shortfall in 2001 warranted cuts in positions or postponement of actions recommended by the EPMR. It also notes that most of the recommendations of the last EPMR have now been, or are soon to be, implemented. The Panel concurs with this last statement; and believes also that many of the reforms undertaken since 2001 were well intentioned and useful.

However, the Panel also believes that in some areas IITA seems to have persisted in utilizing management approaches that were proving to be less successful than originally expected. For example, delays in suitably modifying the TORs and mode of operation of the RDC have meant that this primarily "advisory" body has focused more on project-level issues and administrative matters than on providing clear strategic guidance to the research program, as originally intended; and delays in recruiting the needed complement of seasoned managers, for research as well as corporate services, have exacted a heavy toll. As a result, in the Panel's view, new investments in improved management systems and procedures (and possibly staff) are now overdue, in some areas.

The Panel discusses some of these areas below, and offers a few ideas for consideration. Its overall assessment of governance and management at IITA in 2007 is that the Center has made considerable headway since 2001, has made mid-course corrections during the past two years or so, and is moving in the right direction. If most of the actions planned by the Board and Management are undertaken as intended—and if the additional improvements recommended by the Panel are implemented as well—the Center could soon have an internal enabling environment that truly values good governance and effective and efficient management.

5.3 Pace of Implementation

The Panel's guarded optimism about current plans and proposed recommendations is largely due to IITA's uneven record of implementing actions that the Board and Management had previously endorsed—even when such reforms would not have been costly, or could have been cost-effective. For example, in 2001 IITA had undertaken to carry out a program of Board reform that included such aspects as meeting twice a year, reducing the number of Trustees (including host country members), and commissioning a CCER on Board governance approximately one year after the new DG had taken up his appointment (i.e. in November 2002). In response, the Board did take all these steps—but most of them were taken only recently. The CCER on governance and management was done in 2005; and the EP MR recommendations on Board size and frequency of meetings were implemented during that year as well.

In the management area too, IITA has now implemented most of the 5th EP MR recommendations - but after a significant time lag, and in some instances only partially. For example, the recommendation that a single manager oversee the human resource function was not implemented for several years. The 2001 EP MR recommendations regarding financial management included strengthening the internal audit function, installing an Oracle-based management/financial information system, and engaging an overseas/project development officer. These too have been implemented; but serious action has been forthcoming only in the past few years.

The appointment of a DDG (R4D) is a recent development, even though it was recommended and accepted five years ago. The much-needed revision in the terms of reference of the Research for Development Council (RDC), restricting it to a primarily advisory rather than (also) a managerial role, took place only in March 2007, though it had been recommended by the CCER on governance and management in June 2005—and this recommendation had been accepted by the Board. The CCER recommendation that Program Leaders be selected by Management rather than being elected by scientists, had likewise been endorsed by the Board in 2005, but was implemented in mid-2006--when three Deputy Directors for Research were appointed by Management following an internal selection process, and the positions of the six Program Leaders were abolished. (The DDs are expected to allocate at least 80% of their time to research management).

The Panel is concerned about such delays not only because it is imperative that Board decisions and accepted EP MR and CCER recommendations be implemented by Management in a timely manner, but also because of the opportunity cost of not implementing a sensible decision or recommendation. Delays or inconsistent follow-up of needed actions inevitably results in some ineffective or inefficient practice continuing longer than necessary. The cost of not doing the right thing at the right time can be high, even though it may remain unnoticed for some time--as has happened at IITA in such areas as effective human resource management, and the

introduction of responsive research management arrangements and efficient systems and processes for managing some of the corporate services.

Accordingly, it is these “soft spots” that the Panel addresses below, starting with an assessment of how the Board functions and how its effectiveness could be improved. We then discuss how improvements in IITA’s management of research and resources—in particular, finance, people, materials, and information—could lead to gains in efficiency and effectiveness.

5.4 GOVERNANCE

The comments below are based on data obtained in a number of ways: perusal of minutes of Board meetings since 2001; review of the 2005 CCER on governance and management, and the Board’s response to it; review of documents presented by Management and staff in March 2007 to the Board and its Committees; interviews of individual Board members by the Chair and one member of the Panel; and direct observation of meetings of the Board and its Committees, following the Panel’s first visit to IITA’s headquarters in Ibadan, Nigeria.

5.4.1 Board and Center Leadership

During the past six years, IITA has been ably led by experienced Chairs of the Board and its Committees—Executive, Program, Audit, and Nominating—and by the Director General, who has recently been appointed to his second 5-year term. The Board Chair and members have brought to the Institute a broad strategic understanding of agricultural research and development, an abiding interest in capacity building and partnerships, and a deep commitment to Africa and to IITA’s R4D strategy. In the Panel’s view, the Board is led by a seasoned Chair who is respected by and supportive of Board members, encourages their active contribution to Committee and Board meetings, and has a close working relationship with the DG.

As expected, minutes of some Board and Committee meetings reveal that the Board and DG have not always been in full agreement on key issues, including questions of program strategy and research organization and management. At times, it appears that the Board may have deferred too much to the strong views and personality of the Director General, who is not at all hesitant to express his views on IITA and Africa and the CGIAR. There is a range of views on the Board regarding the support and guidance received from the CGIAR; with some Board members more keen than others to strengthen the collaboration with various components of the CGIAR, such as the Science Council, CGIAR Secretariat, and other Centers.

In terms of management style, the Panel understands from staff that the Director General took a very proactive approach to Center issues during the first few years of his tenure, and personally led the financial and institutional reform effort that is now recognized by many internal and external stakeholders as very successful. The DG’s vision, and the remarkable results it produced, is seen as a significant plus for the future of IITA. In addition, we understand that when the DG trusts someone, he delegates considerable authority to them. This enables him to engage fully with external partners in Africa.

In research management, the DG has introduced an innovative arrangement that encourages participation by scientists; and this approach is generally applauded by IITA staff. However, in recent years, once the immediate financial crisis was over and the Institute had returned to normal operations, the DG’s external-focus and his heavy reliance on a small inner circle of trusted colleagues has been interpreted by some staff as a desire to stay away from the routine of

managing a large and complex institution, and to (appropriately) distance himself from the politics of small groups that inevitably form in a campus community (about 50% of the staff are at Ibadan).

Other staff members at Ibadan perceive the DG as too busy with external engagements, many of which require frequent absence from headquarters, and believe that the time has come for all senior managers to participate more fully in institutional and campus life. The DDG for Research seems over-loaded, is relatively new to the position, and resides in Tanzania although she will be relocating to Ibadan in September 2007. The next DDG-S (responsible for Support Services) will be taking office in August 2007. Their presence at headquarters from August 2007 is expected to help strengthen Center leadership at the Ibadan campus. In addition, when they, and the Deputy Directors, become more firmly established, they would hopefully complement the DG's leadership of the Center with more independent voices, especially on crucial strategic, program, and management issues.

5.4.2 Board Size and Composition

The size of the IITA Board has been reduced from 18 in 2001, to 14 in 2003, and 13 currently (including the Director General). This has required a reduction of CGIAR- and host-country nominees, from 3 to 2 for each of these categories. The Board also includes two members who serve on the WARDA Board and two from the ILRI Board as "common" Board members, in accordance with the January 2006 agreement to align the governance of these two Centers. All these are commendable achievements.

The gender and geographical balance on the Board is reasonable. Besides the two members from Nigeria, there are two members from Africa, three from N. America (including the DG, who is ex officio), four from Europe, and one from Australia/N. Zealand. Four members (33%) are female; which too is noteworthy. The disciplinary composition is appropriate for a Center dealing with tropical agriculture; and includes several members with experience of governance and research management, as well as an expert in finance and administration (see Table).

5.4.3 Board Committees

The Board operates through Committees that generally follow CGIAR guidelines for Boards of Trustees, in terms of their functions, composition, and mode of operations. However, during the period under review, since 2001, minutes of meetings reveal that the Board and its Committees have not always been successful in ensuring that Management actually follows their advice in a timely manner. Several instances of this apparent lack of follow-up have been noted above. In addition, as the CCER noted in 2005, preparation of documents by staff for Board meetings has often been delayed or inadequate, with the result that Board discussions have not been as strategic as might otherwise have been the case. These deficiencies are now being gradually rectified, but it seems to the Panel that more effective involvement of the Board on strategic issues, especially by its Program Committee, would be beneficial, as discussed further below.

Program Committee.

From 2001-2006, the Program Committee (PC), chaired by an experienced science advisor with extensive knowledge of Africa and the CGIAR, has sought to maintain a distinction between program oversight by the Board and program responsibilities of Management. It has diligently undertaken its tasks; and has introduced guidelines for such matters as CCERs on the science undertaken by staff, participation of Board members in visits to IITA's field offices, and involvement of Board members (as link persons) in strategic planning for particular programs of

the Institute. It has also prepared or commissioned forward-looking think-pieces on topics of relevance to the program, such as the positioning of IITA as a sub-Saharan, or Africa-wide, or global research institution. All of these efforts have been very worthwhile, and are commended by the Panel.

The PC has also provided guidance on the structure of the Medium Term Plan, and the research arrangements for carrying it out. In 2001-02, the PC and Board supported the Institute's new R4D strategy, which helped improve the relevance of the research program and the Center's finances. However, the MTP-revision process did not proceed smoothly. Changes in strategy, program, and organization consumed a lot of energy and led to a period of uncertainty, as is common in any significant programmatic or operational change.

As was pointed out by the CCER on governance and management in 2005, the PC was not provided drafts of the MTP in a timely manner, the MTP was not ready for circulation even at the time the Board was in Ibadan, and neither the PC nor the Board were able to give adequate guidance. The process was probably not helped by the changes in guidelines and annual reporting requirements and the short deadlines of the CGIAR Science Council for MTP submissions. Information flow to the Committee may also have been hampered by the fact that the IITA Board Secretary is not a member of the senior management team at headquarters—which, at other CG Centers, greatly facilitates interactions between the Board and Management on an ongoing basis, and makes it easier for the PC to remain up-to-date with program issues.

The problem of insufficient opportunities for adequate program oversight remains unresolved. The February 2006 RDC meeting apparently took place around the time of the PC meeting, and the Board could not discuss in detail the proposed changes in program strategy and priorities until after they had been incorporated into the MTP. In an attempt to almost force-fit the existing research projects into the evolving CGIAR priorities and reporting templates, the Institute seems to have missed a vital opportunity to undertake a more systematic rethinking of research priorities and MTP-project strategies. Such a Board-led strategic thinking exercise is now planned for September 2007.

The PC has also had misgivings about the changing role of the RDC, from a primarily advisory body to one also dealing with research management and resource allocation for projects. The Council's return to its original advisory emphasis was finally achieved in March 2007, as noted earlier. What is still pending, however, is the introduction of a clearer structure of accountability for research leadership and decision-making at IITA; and improvements in the timely flow of relevant analytical information to the PC on proposed strategic options and their rationale and implications. Once these deficiencies are rectified, as is expected over the next few years, the strategic oversight provided by the PC could be much improved, as needed.

During the past year, the PC has also assigned responsibility to its members to serve as link-persons on program issues. Two Board members attended the Strategic Planning Week in November 2006 in which the strategic direction of two projects was discussed in a workshop/brainstorming mode. These members reported to the Board in March 2007 that this interaction with scientists had been positive, and mutually-beneficial. Over the next two years, this practice is planned to be extended to cover all seven MTP-projects, and the assigned link-members will have the opportunity to help shape the strategy and priorities of at least that part of the research program.

Table 5.1 Board Composition

Name	Nationality	Specialization	Gender	Nominated By	2001	2002	2003	2004	2005	2006	2007	Committee Membership	Start	End
Lukas Brader	Netherlands	Entomology	Male	DG-Ex-Officio	X							M-PC, M-EC	Dec-90	Dec-01
Kyoko Saio *	Japan	Nutrition	Female	Board	X							M-PC	Dec-94	May-01
Anastasio Leventis*	UK	Business	Male	Board	X							M-PC, M-AC, C-AC, M-EC	Dec-94	May-01
Guda Abdullahi (1)	Nigeria	Perm Secretary, Min of Agriculture	Male	Member Co	X							M-EC	May-01	Nov-01
Erastas Gyang	Nigeria	Vice Chancellor, University of Agric, Makurdi	Male	Member Co	X							M-PC	May-01	Nov-01
Enrico Porceddu(2)	Italy	Genetics	Male	Board	X	X						M-PC, C-BOT, C-EC	Dec-94	May-02
Jorgen Jakobsen	Denmark	Plant Pathology	Male	CGIAR	X	X						M-PC, M-NC, C-PC	Dec-95	May-02
Limamoulaye Cisse	Senegal	Soil Science	Male	Board	X	X	X					M-PC, M-NC,	May-97	May-03
Eric Tollens	Belgium	Agric. Economics	Male	Board	X	X	X					M-PC, M-NC, C-NC	May-97	May-03
Joy Kwesiga	Uganda	Women in Development	Female	Board	X	X	X	X				M-PC, M-AC, C-AC	May-98	May-04
Geoffrey Mrema (3)	Tanzania	Agric. Engineering	Male	CGIAR	X							M-PC, M-AC	May-98	May-01
Abdoulaye Babale	Cameroon	Political Science	Male	CGIAR	X	X	X	X	X			M-PC, M-AC, C-AC	May-99	May-05
Assetou Kanoute	Mali	Biology	Female	Board	X	X						M-PC	May-99	May-03
Gry Synnevag	Norway	Plant Breeding	Female	Board	X	X	X	X	X	X		M-PC	May-00	Aug-06
Mortimer Neufville	USA	Animal Science, Biochemistry	Male	Board	X	X	X	X	X	X		M-PC, M-AC, C-BOT	May-00	Aug-06
Michael Collinson	UK	Agric. Economics	Male	Board	X	X	X	X	X	X		M-PC, M-NC, C-PC	May-00	Aug-06
Peter Hartmann	USA	Economics	Male	DG-Ex-Officio	X	X	X	X	X	X	X	M-PC, M-EC	Nov-01	Nov-11
B.D. Usman	Nigeria	Perm Secretary, Min of Environment	Male	Member Co	X	X						M-PC	May-01	May-03
Masaru Iwanaga(4)	Japan	Biotechnology	Male	Board		X						M-PC	Nov-01	May-02
Adama Traore	Mali	Animal Science	Male	CGIAR	X	X	X	X	X	X	X	M-PC, M-NC, C-NC	May-02	May-08
Maurice Izard (5)	France	Post Harvest	Male	Board		X	X	X	X			M-PC, M-AC	May-02	May-05
James Ayetse	Nigeria	Vice Chancellor, University of Agric. Makurdi	Male	Member Co		X						M-PC	May-03	May-05
Birger Moeller	Denmark	Biochemistry/Biotechnology	Male	Board			X	X	X	X	X	M-PC, M-NC	May-03	May-09
Cees Karszen	Netherlands	Plant Physiology	Male	CGIAR		X	X	X	X	X	X	M-PC, M-AC, VC-BOT	May-03	May-09
Akira Iriyama(6)	Japan	Administration/Law	Male	Board		X	X	X	X			M-PC, M-AC	May-03	May-05
A. Jaurto	Nigeria	Perm Secretary, Min of Environment	Male	Board				X	X			M-PC	May-04	May-05
O.O.O. Ogunkwa	Nigeria	Perm Secretary, Min of Agriculture	Male	Member Co				X	X			M-EC	May-04	May-05
Oghomaysa Onwudike	Nigeria	V-C University of Agriculture, Umudike	Male	Member Co				X	X			M-PC	May-04	May-05
Bryan Harvey	Canada	Plant Breeding	Male	Board				X	X	X	X	M-PC, C-BOT, C-EC	May-04	May-10
Barbara Becker	Germany	Agronomy	Female	Board				X	X	X	X	M-PC, C-PC	May-04	May-10
Henri Marate	Belgium	Plant Protection	Male	CGIAR				X	X	X	X	M-PC, M-NC	May-04	May-10

Name	Nationality	Specialization	Gender	Nominated By	2001	2002	2003	2004	2005	2006	2007	Committee Membership	Start	End
Amal Pepple**	Nigeria	Perm Secretary, Ministry of Agriculture	Female	Member Co					X	X	X	M-EC	May-05	on-going
Dean Lewis	New Zealand	Finance and Administration	Male	Board					X	X	X	M-AC, C-AC, M-EC	Aug-05	Aug-08
Nthoana Tau-Mzamane	S. Africa	Agronomy	Female	Board					X	X	X	M-PC, M-AC, M-NC	May-05	May-08
Emmy Simmons	USA	Intl Development, Agric. Economics	Female	Board						X	X	M-PC, M-AC	Aug-06	Aug-09
Israel Adu**	Nigeria	Vice Chancellor, University of Agric. Abeokuta	Male	Member Co						X		M-PC	Aug-06	Aug-08
Ishola Adamson***	Nigeria	Vice Chancellor, University of Agri. Abeokuta	Male	Member co							X	M-PC	Mar-07	Dec-07
Paul Matuka	DRC	Faculty, University of Kinsasha	Male	Board							X	M-PC	Mar-07	Mar-10
Notes:														
*Served 6.5 years because of the change in the number of Board meetings from two to one meeting year.														
**Beginning 2XX5 the number of host-country members was reduced from three to two by amendment to the Decree (Permanent Secretary of the Ministry of Agriculture and Vice-Chancellors of Universities of Agriculture by rotation.														
***As Dr. Adamson replace Prof. Israel Adu, his term (officially two years) will expire in 2008)														
(1) Deceased														
(2) The Board extended the term of office of the Board Chair to maintain continuity in leadership at a time of change in Director General and in an EPMR year.														
(3) Resigned at the end of first term May 2XX1 to take up position at FAO														
(4) Resigned in mid 2002 to take up position as DG of CIMMYT; attended Nov 01 meeting as Trustee designate														
(5) Resigned at the end of first term May 2005														
(6) Resigned May 2005														

The Panel also notes that in March 2007 the PC discussed a number of strategic issues, including the evolving concept of regional hubs to serve as decentralized nodes for research partnerships and networks (different from the bricks-and-mortar approach of the Ibadan headquarters/station); the opportunities for and implications of seeking funding from private foundations; the benefits and costs of bidding for big, multi-year, restricted-funded projects; and the need for a well-defined research structure with clearer reporting lines. The PC discussion was, however, not very substantial, and these topics were only introduced at the meeting, with the expectation that they would be discussed at the proposed strategy workshop in September. As a result, almost all of the recommendations submitted by the PC to the full Board related to housekeeping matters or issues of process or information flow. This gives the impression of a PC desirous of, but as yet unable to, focus its attention to the more important strategic program issues facing the Institute.

Other issues that the PC raised, but did not discuss in any detail in March 2007, related to the research program structure (whether it should be based on a cropping-system or regional basis); whether IITA had moved too much to the development side of the R4D strategy, and now needed to re-focus more on world-class science; and the alignment of IITA's research program with other CG Centers, on a case-by-case basis as well as in the context of the CGIAR's evolving MTPs for the WCA and ESA sub-regions. For these and other strategic and policy issues that will need to be discussed at future PC meetings, advance preparation of suitable background materials by Institute staff would be essential. Appointment of a senior IITA scientist as Secretary to the PC would greatly facilitate this.

In this context, the Panel notes that the 2007 CGIAR Guidelines on Center Governance expect the Program Committee to "advise the Board on all aspects of the Center's research and research-related programs, focusing on formulating strategies and program plans and monitoring performance and impact. The key is to ensure that the Board provides broad strategic guidance and oversight but does not micromanage the scientific activities of the Center. Naming the whole Board to serve on the Program Committee, as a reflection of its focus on Center strategy, can blur the distinction between the whole Board and its committees; [and in this case] the preferred alternative may be not to have a Program Committee."

The Panel believes that there is much to be gained by retaining the Program Committee--which in IITA is not comprised of the full Board (the Board Chair and three other members are not listed as members of the PC). The CGIAR guidelines rightly emphasize the strategic guidance and oversight role of the Board on all program matters, and this governance responsibility can be discharged more effectively if there is a well-functioning Program Committee that focuses on strategic program and research-related (but not research management) issues. This role cannot be satisfactorily performed by simply relying on the CGIAR Science Council—which only provides general guidance on System and Center priorities, brief comments on the Center's Medium Term Plans, annual reports on Performance Measurement Indicators, and 5-yearly external program and management reviews (EPMRs, such as this report) on each Center.

Since an effective Program Committee can greatly facilitate the work of the Board (as well as of Management, if the PC is able to do its work properly), and the issue has been of continuing concern to the IITA Board for some time, *the Panel recommends that the Program Committee focus on strategic program issues; ensure that it, and its members, do not micromanage scientific activities; and that the Committee receive high-quality analytical papers and other relevant*

information from Management in a timely manner to enable it to properly undertake its program guidance and oversight responsibilities.

Audit Committee.

Besides providing Board oversight of the Center's annual financial audit, the Audit Committee (AC) is responsible for ensuring the adequacy of and compliance with internal financial controls and the truthful reporting of financial results. It is also responsible for monitoring the efficiency of operations and procedures, and monitoring of compliance with management policies.

The 2001 EPMR had noted a) the failure of the Audit Committee to monitor implementation of the Oracle System; b) the Institute's failure to appoint a Head of the Internal Audit department; and c) that the Director General attended and participated in Audit Committee meetings. In March 2007, however, the Panel observed considerable progress--a comprehensive report was presented to the AC by the external auditor covering the financial audit, internal control, and other related issues; and a summary report from the internal auditor was also presented, itemizing the coverage and results of audits undertaken during 2006. It also noted a few (smaller) items in which further improvements could be made, and these are detailed below.

The Panel noted that the minutes of some Audit Committee meetings do not contain decisions or recommendations reached during that meeting. The minutes of AC meetings on 17 May 2005 and 28 May 2004 are cases in point. However, Annexes to the Board meeting minutes on the relevant dates contained a list of recommendations from the AC. Furthermore, the Audit Committee's recommendation to the main Board for adoption of the audited financial statements and re-appointment of external auditors (where applicable) were not always minuted. It is important that whatever is decided and recommended to the full Board be recorded in the minutes of the AC meetings as well.

CGIAR guidelines on "Building Effective Board Committees" state that in order to assure objectivity the Director General should not be a member of the Audit Committee. The 5th EPMR had recommended that the DG should not attend the Audit Committee meetings; but the Panel notes that the DG has attended all Audit Committee meetings since the last EPMR (up to 2006). The Panel endorses the current practice that the DG attends Audit Committee meetings only at the invitation of the Committee to provide his direct inputs or clarification.

Some decisions on critical matters made by the Audit Committee and recommended to the Board have taken a long time to be implemented by Management. Examples include a) the recommendation to fill the position of Head of the Internal Audit Unit (from 2002-2006, Management and the AC sought to build the needed capacity by grooming the "interim" appointee, who was regularized in 2006 as the Head of internal audit); and b) the recommendation to establish a Procurement Committee to respond to weaknesses noted by the auditors relating to vendor selection and price determination.

In 2001, the Board recommended the appointment of the External Audit firm (which was to retire on conclusion of the external audit of the financial statements of the Institute for the year ended 31 December 2001), to provide internal audit services in tandem with the Institute's Internal Audit Unit. Their appointment was for a period up to May 2002. For the sake of objectivity and independence, particularly in instances where the auditors may have to report on internal controls and matters having an effect on periods on which they already passed a clean report, the

Panel discourages the appointment of retiring auditors as internal auditors immediately after their term as external auditors.

Overall, the Panel found that, at the time of the present EPMR, the Audit Committee is chaired by a very seasoned financial expert, and has well qualified members. It seems to perform its role and responsibilities diligently and effectively. The Committee receives reports from the finance manager and external and internal auditors on a regular basis, discusses them at length, and provides guidance and oversight as needed. The Management, in consultation with the AC, have also developed a “financial stability index” based on the ratio of unrestricted to contract (restricted) funds; and the Board’s Executive Committee and IITA Management use this and other indicators derived from the CGIAR Financial Guidelines to monitor the overall financial health of the Center. The Panel commends this systematic approach.

Nominating Committee.

The 2005 CCER on governance and management made several recommendations for strengthening the Nominating Committee (NC), including making the NC Chair a member of the Executive Committee, and the NC developing a list of governance competencies required on the Board and proposing how existing gaps could be filled. These and other recommendations have largely been implemented. The NC is more active now, and has developed (and uses) a profile of members annually, based on its gap analysis. As a result, as noted above, the gender, regional, and skills balance on the Board is now reasonable. The criteria for selection of common Board members (for IITA and WARDA) have also been established and followed, though there remains the issue of establishing adequate guidelines on possible conflict of interest when these common members attend either Board.

There are a few other pending items as well. These include finalization of the questionnaire used for self-evaluation of the Board, which is being revised in light of topics covered in the CGIAR Board orientation program; preparation of a questionnaire for evaluation of the Board Chair, along the lines of the one used for evaluating the DG in closed session (the DG then receives feedback from the Board Chair confidentially); follow-up by the Board of results of the 2006 staff survey conducted by Management, in which some items were red-flagged during Board discussion; and consideration of a proposal to establish an ad-hoc HR Committee of the Board, which was on the NC agenda for the March 2007 meeting, but was not discussed. It is expected that these items would be covered by the NC and the full Board at its next meeting.

Executive Committee

At IITA, the Executive Committee, which is empowered to act on behalf of the full Board as needed, is comprised of the Chairs of the Program and Audit Committees, the DG, a host country representative, a Vice Chair, and the Board Chair. It meets twice a year, just prior to the meeting of the full Board; but its members also interact by e-mail or phone at other times. The Panel believes the EC has undertaken its functions with diligence; and in recent years has also taken appropriate steps to “align” the governance of the IITA and WARDA Boards. This has required meetings of the two Board Chairs and DGs with other CGIAR stakeholders, such as the Secretariat and selected donors attending the AGM in Washington, as well as phone conferences of members of the Executive Committees of the two Boards on other occasions. These meetings have been productive; have led to the Memorandum of Agreement (MoA) on alignment of corporate services; have resulted in the formation of a joint committee for facilitating the selection of “common” Board members; and have given the CGIAR the assurance that IITA and WARDA are taking governance alignment seriously.

At its meeting in March 2007, the Executive Committee spent much of its time reviewing the Institute's detailed response to the CGIAR's 2006 stripe review on governance, and to the Science Council's lengthy questionnaire on Performance Indicators [which, the Panel notes, could have been done virtually, and signed off in plenary]. While this task was done in earnest, EC members also indicated to the Panel that this activity provided a good example of how "externally-driven" requirements took valuable time away from the more important business of the Center. It reinforced the Board's impression that the Rome- and Washington-based Secretariats are not sufficiently mindful of the limited time available to Board members for addressing strategic issues rather than dealing with seemingly-bureaucratic CGIAR requirements. In the Panel's view, there is clearly a need for more effective communication from the two Secretariats on the need for these periodic/annual questionnaires, and for a better understanding of the mutual benefits to Centers and the CGIAR from the Boards' willing participation in CGIAR-wide monitoring of Center governance and performance.

Concluding Remarks on Governance

It is clear that the Board has made substantial progress since 2001. The recommendations of the 2005 CCER on governance and management, which was undertaken by governance experts with experience of CGIAR Boards as well as EPMRs, has helped improve Board operations and performance. The improvements introduced by the NC and AC, including the appointment of finance and governance experts to the Board and its Audit Committee, and introduction of self-assessment instruments, has helped as well, as discussed above. The Board now consists of members with extensive experience of governance of large research institutions, both in the public and private sectors. They are fully cognizant of the need to distinguish their policy and strategic oversight role from the managerial functions of the Director General and his management team.

However, there remains a need to improve the information provided to the Board; and to ensure more effective follow-up of its decisions. This requires action by Management and a better recognition of the role and responsibilities of the Board. The effectiveness and efficiency of the Board could be enhanced by better utilization of the Board Secretary for preparing the agenda and documents for Board and Committee meetings, and for keeping track of follow-up actions by Management.

5.5 MANAGEMENT

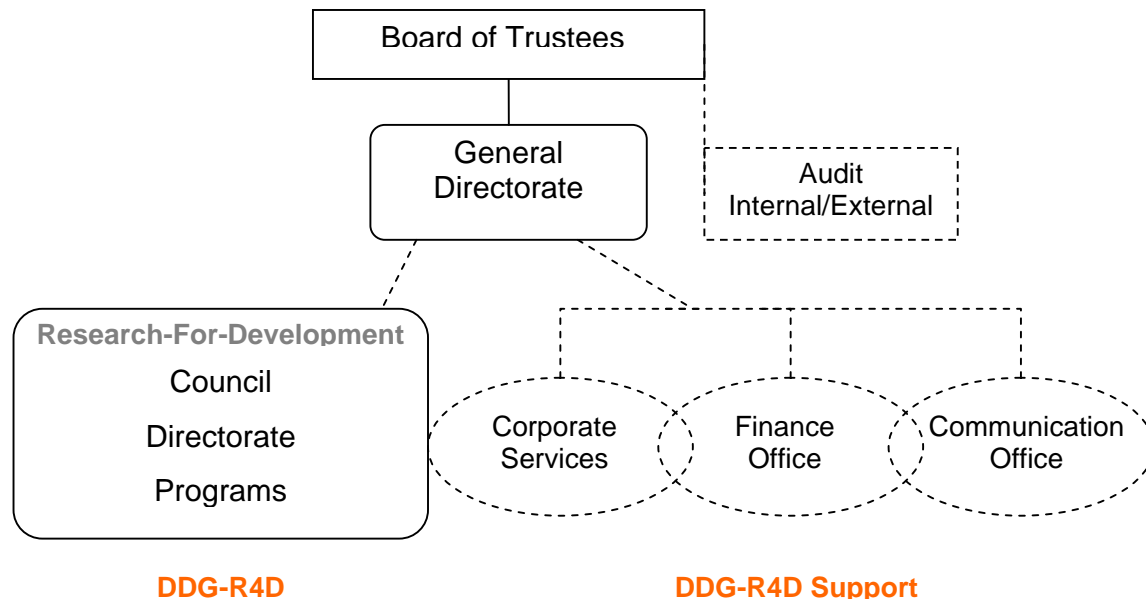
5.5.1 Research Management Arrangement

IITA's organization chart (see Figure) has few of the boxes and reporting lines that would ordinarily indicate the locus of authority for decision making. It reflects Management's espoused preference for a non-hierarchical structure, in which teams come together, as needed, to address specific concerns. Though scientists report functionally to the Deputy Director(s) in charge of their projects, and administratively to the Deputy Director or Officer-in-Charge responsible for the research station where they work, they are encouraged to participate actively in decisions affecting them. The Panel commends this desire for openness, transparency, and involvement of staff at all levels.

The Research for Development Council (RDC), with three elected councilors responsible for providing strategic guidance to the DDG (R4D), is intended to demonstrate the functioning of a democratized and empowered workplace. Three scientists, elected by their peers through secret

ballot, serve as part-time Councilors. The RDC meets every quarter to discuss research-related matters of importance to the Institute; and its minutes are posted on the Center’s intranet and are circulated to staff and Board members. The DDG, as the head of research, chairs the RDC, and is expected to follow-up on the guidance received from the Council, and on its specific recommendations.

Figure 5.1 IITA Organizational Chart



The RDC is popular with IITA scientists, and serves a useful function for Management. Even though it does not include the three Deputy Directors of Research, who report directly to the DDG, the RDC is considered a key component of the research management arrangement. To ensure that the Council has access to the information it needs for its deliberations, the DDs are invited to all Council meetings (which they usually attend), and provide inputs on program- and strategic issues. However, they are not formally part of the RDC, and hence are not party to its recommendations. This arrangement has been in operation for the past four years; and is perceived by staff and managers as an innovation worth retaining.

The separation of functions between the RDC and the Research Directorate (comprised of the DDG and three DDs), allows the General Directorate to subsequently consider RDC recommendations, and to take suitable actions after consultation with the DG as needed. There has never been an instance when major recommendations of the RDC were not accepted by the DDG or DG. In part this is because the DDG (R4D) chairs both the RDC and the Research Directorate; and the DG reviews the agenda of the RDC, and when invited attends its meetings.

To the Panel this indicates that RDC discussions are taken seriously by both Management and staff; and that the scientists/Councilors understandably defer to the views of the DDG and DG—both of whom, by virtue of their wider responsibilities and access to information, are much more knowledgeable about strategic issues faced by IITA. This also allows the DG and DDG to perform their legitimate role in corporate-level strategic decision making. Hence the Panel, noting that the RDC has now returned to its original mandate as a primarily advisory body to the Research Directorate, supports the current role and terms of reference of the RDC, as approved

by the Board in March 2007. Politicization of the election process by which RDC members are elected is a very real risk, and the Panel urges Management to take all reasonable steps to prevent this from happening.

In IITA, as in other Centers, senior managers are accountable for all activities under their charge, including the establishment of new positions in the structure and filling them with suitable staff. Authority for decisions related to the research structure is expected to be matched with the responsibility for ensuring that adequate systems and procedures for recruitment and promotion are in place, and are consistently and transparently followed by everyone, including the DG and DDGs. Deviations from these institutional policies and processes can occasionally be justified--but only as exceptions, to avoid the perception of arbitrariness in decision making.

This principle of matching authority with responsibility and accountability should extend throughout the chain of command, including to levels below the DDG. The Deputy Directors too must have clear lines of (delegated) authority over both strategic and operational decisions relating to the research program for which they are (or should be) directly accountable. In addition, the professional expertise of Support Services staff (e.g. in human resources management) needs to be better utilized while appointing, evaluating, and promoting scientists and other research staff. If this were done, the current research management structure would become more decentralized, and potentially more effective.

Two important components of such a research arrangement are already in place--the RDC and the Research Directorate (see facing page³¹). In addition, the Panel believes there is a need to strengthen the research management arrangements and processes below the level of Deputy Directors. Prior to the appointment of the three DDs in mid-2006, the six research projects at IITA had been managed by elected Project Leaders--whose positions have now been abolished. The CCER on governance and management had noted the shortcomings of the research structure in 2005; and had recommended that research management be strengthened by selection (not election) of experienced scientists with demonstrated managerial talent. It had also recommended that these Project Managers be given opportunities for developing their management skills through training and mentoring.

The Deputy Directors are currently responsible for helping to undertake institution- and project level priority setting, planning, and strategy formulation; ensuring program and project performance; reporting research results; networking with partners; and seeking funds from donors. They also oversee the various research stations in and around their duty station (or as defined by their specific terms of reference); and supervise and assess the large number of scientists working in their Projects. This makes their jobs difficult to do well.

To make the DDs' jobs more manageable, the Panel concurs with the 2005 CCER recommendation that each of the major MTP projects should be led by an experienced Project Manager. These project managers would be practicing scientists who would also be responsible on a part-time basis for leading project-level planning and priority setting, ensuring the quality and relevance of science undertaken in their project, supervising scientists on an ongoing basis, managing operational funds and other resources, delivering and monitoring results, and contributing to preparation of project proposals and fund raising.

³¹ Figure 5.2 IITA's Research for Development Council and Research Management Structure.

R4D Strategy

External Environment
Includes:
• CGIAR
• African Union
• FARA, SROs
• Countries, etc

Strategic Influences

Director General

RDC
• DDG R4D
• Elected scientists
Supported by:
• C&G Officer
• Head of Communication

Makes strategic recommendations
• MTP framework
• Positions
• Locations

Recommend

Board of Trustees

Oversees

Decides

R4D Directorate
• DDG R4D
• Deputy Directors

Directs

Scientists

Implement

R4D Management

Report



The Panel recognizes that having project managers would add to the time and effort devoted to research management, but notes also the very real scientific costs of not managing the research program and scientists as effectively as needed. Strengthening the project management function would give the Deputy Directors time for undertaking their broader research leadership functions; would enable them to disengage from the routine of project- and science management; would allow time for sharing the workload of the DDG (R4D); and would improve the career development opportunities of scientists interested in strengthening their project management skills.

Accordingly, the Panel recommends that IITA's research management structure and accountability be strengthened by: a) clearly specifying the responsibility, authority, and lines of reporting for the DDG (R4D), Deputy Directors, and scientists; b) utilizing the Research for Development Council primarily as an advisory body to the DDG, as per its new Board-approved terms of reference; and c) strengthening the research management function, by appointing Project Managers reporting to the Deputy Directors, for managing the MTP projects included in the research portfolio.

5.5.2 Finance

Fund Raising and Cost Recovery

As noted previously, the review period started with actual operating results for 2001 showing a deficit (of about US\$1.5M). This was largely due to declines in funding from key donors, coupled with a decline in World Bank matching funds. In response, IITA Management put in place a plan to turn around the financial position within two years. The plan focused on: a) reduction on dependence on 'core' funding which had become unpredictable; b) diversification of the funding portfolio (in 2003, a third of IITA funding was from one donor (see Table 5.3); c) a freeze on capital expenditures and staff recruitment for vacant positions; d) emphasis on full cost recovery for special projects; e) emphasis on efficiency in provision of corporate services (which remains an issue, as discussed below); and f) bidding for larger, though managerially more complex, projects.

Table 5.2 Income and Expenditures based on Audited Results 2001-2006 (UD\$'000)

	2006	2005	2004	2003	2002	2001
Grants Received-- Unrestricted	12281	11898	12152	9520	10701	12282
Grants Received-- Restricted	29974	28128	30226	26520	19882	19547
Challenge Programs	2671	1325	971	9	0	0
<i>Sub-total</i>	44926	41351	43349	36049	30583	31829
Other Income	1416	1538	1505	1266	1911	1965
Total Revenue	46342	42889	44854	37315	32494	33794
Direct Operating Expenses						
Research Program	39234	34146	36504	29996	25270	26456
Research Support	1339	1833	1921	2143	1476	1745
Research/Management Operations	784	690	504	266	437	556
<i>Sub-total</i>	41357	36669	38929	32405	27183	28757
Less: Indirect Cost Recovery	4638	4061	4001	2937	2094	2072
Total Direct Operating Expenses	36719	32608	34928	29468	25089	26685
Indirect Operating Expenses						
Management and Administration	5929	5441	5204	5246	4241	4350
Common Sustenance Services	1570	2226	3038	2442	3348	4245
Total Indirect Operating Expenses	7499	7667	8242	7688	7589	8595

Total Operating Expenses	44218	40275	43170	37156	32678	35280
Operating Results	2124	2614	1684	159	-184	-1486
Indirect Cost Ratio						
Indirect/Direct Cost (%)	20.4	23.5	23.6	23.7	24.7	22.6
Working Capital (days)	169	167	140	113	130	110

Table 5.3 IITA's Top Donors 2001-2006 (US'000)

	2006	2005	2004	2003	2002	2001
USAID	12100	9436	11749	12152	9971	10568
Nigeria	2545	3176	4284			
World Bank	2511	2606	3027	2192	2885	3715
Canada	2351	3404	3525	2199		
European Commission*	2059	2221	2293	2942	1874	1170
Japan					1538	3073
Denmark				2020	2081	1790

* Approximately US\$2M of unrestricted funding budgeted for and due from EC in 2006 was unexpectedly withheld towards the end of the year. This is not included in the amount shown above.

Table 5.2 highlights the decline in unrestricted funding for IITA during the review period. Such funding dropped from US\$12.3M in 2001 to a low of US\$9.5M in 2003. On the other hand, restricted funding grew from US\$19.5M in 2001 to US\$26.5M in 2003, and US\$30.2M in 2004. Restricted funding for 2007 is forecast at US\$33M, and unrestricted funding is expected to be stable at about US\$12 M, for a total of US\$45M. The hard decisions taken by Management in 2002-03 have helped return the Institute's finances to a healthy state. Having accomplished this, in 2004 the moratorium on salary increases was lifted; and since then, more scientists have been hired, the positions of DDG (R4D) and DDG (R4D-Support) were created and are currently filled [a new DDG-S is expected to join in August 2007], and the upgrading of some of the infrastructure, which is quite old, has commenced.

In terms of fund raising, the DG has increased awareness of IITA among donors, and has positioned IITA as an institute that serves the whole of sub-Saharan Africa. As a result, IITA has expanded its activities and operations in East and Southern Africa. Some increase in overhead and other costs at locations other than Ibadan can be expected as a result of this expansion; and efforts are being made to share corporate services with other Centers where feasible.

Efforts have also been made to support the capacity of scientists to produce project proposals and to manage projects. The Contracts and Grants Office was established in 2003 to help scientists prepare project proposals and to administratively manage the larger number of special projects. This has helped, and the improvements are commended by the Panel (the ratio of successful proposals to proposals submitted is around 40%). However, there is still the problem of controlling costs at the Ibadan location; in the presentation to the Panel it was indicated that it costs about US\$ 9M annually for the three functions this location serves for IITA—serving as its headquarters, as a sub-regional hub, and as a research station.

Financial Management and Operations

In general, IITA seems to have managed its finances well. It has successfully increased funding, and has rationalized operational expenditure and capital investment. A culture of full cost recovery for all services provided by units is being instilled into staff and work units. The capacity of the staff in the Budget and Finance Unit to undertake financial management and

budgetary control is adequate; and qualified accountants occupy most of the key positions in the Unit.

During the period covered by this review, a number of specific concerns have been raised by the internal and external auditors, and by the Board's Audit Committee in relation to the accounting system. Some of these include: a) inability of the system to bring forward balances of prior years (staff advances) into individual advance accounts; b) difficulty in obtaining a fully-reconciled set of accounts from the system; c) absence of checks and balances on treasury transactions initiated by the then CFO (in 2004, amounting to about US\$0.5M); d) proper accounting of "goods in transit" and "freight suspense" accounts; and e) some inadequacies in the back-up procedures and security of the computer /server room at some stations.

The Finance staff and IITA Management have responded adequately to these concerns. Their corrective actions have included: a) in 2005, an adjustment of US\$2M was made to prior year balances; b) measures to tighten controls over bank transactions/transfers (the case of fraud by the then CFO is in the hands of Interpol and the Nigerian police); c) efforts to strengthen the capacity of station accountants, and to ensure adequate fixed assets custodial controls; and d) improvements in fixed assets management, though this remains a continuing challenge.

The cost of fixed assets owned by IITA as at 31 December 2006 was US US\$31.9M, and the net book value of the assets was US\$6.7M. Laboratory and scientific equipment had the highest net book value at US\$3.1M, followed by motor vehicles at US\$1.2M. In recent years disparities have been noted between assets physically held at station and details contained in the asset register at Ibadan, raising the risk that the values in the financial statements may be inaccurate. Problems have mainly related to non-capture of assets in the register due to delays by staff/stations in providing information on assets transferred or purchased. These deficiencies need to be corrected, as part of the proposed improvement of materials management services.

Financial Planning, Budgeting, and Monitoring

Budget preparation for the following year commences with the Planning Week in November of each year. The total funds available are projected on the basis of donor pledges and other Center income; and strategic allocation of core funds is/was (since the TORs have now been changed) done by the RDC, and annual allocation to Projects by the relevant DD and DDG-R. All estimated costs for R4D and administration are collated and presented to the Board for approval. Once approved, the budget is communicated to DDGR and DDs, who then allocate the budget to scientists and research support staff. The Finance office is advised of the budget spread for input into the Oracle system, and accounts are updated on a regular basis.

Monitoring is done by budget holders who have online access to financial reports, and by the Contracts and Grants Office together with the Budget and Finance Officer. On a monthly basis, management accounts are prepared, with copies to DDs and DDGR for information, and to assist in following up with budget holders. A two-page finance report is prepared for the Board every quarter. Reports on the Institute's financial operations are prepared monthly, quarterly, and annually; and are reviewed by Management and the Board as required. The Panel considers this process systematic and satisfactory.

The Oracle reports enable both the Budget and Finance Unit and the individual budget holders to monitor the expenditure on their projects against the project's budget. Access is available on line for Ibadan staff, and via the internet for other stations. Staff complaints regarding the lack of

timely and accurate information on project expenditures have declined in recent years. Periodically, as required per donor agreements, financial reports are prepared and sent to the Contracts and Grants Office for attachment to the narrative report. There is constant interface and consultation between the manager responsible for special projects and the budget holders.

IITA has been using the Oracle management and financial information system since January 2002. Support for Oracle is provided by Computer Services and MIS. Oracle is robust and capable of accommodating the requirements of IITA for accounting information and financial reporting purposes. It is fully implemented at Ibadan and only partially at the other stations, which use Platinum for Windows, through which they are linked into Ibadan. Stations have to send returns monthly, which are entered onto the Oracle system. It is the aim of both Support Services and Budget and finance to fully deploy the Oracle system in all stations and to obviate the need to manually re-enter station information.

Cash Management and Investment Policy

IITA maintains accounts with 34 banks in different locations. It has 29 current accounts, 5 time deposit accounts, and 24 imprest accounts, 21 out of the 29 current accounts are for stations outside Nigeria. Controls over the treasury function appear to be adequate. Bank reconciliations in stations are undertaken by the resident finance officer and the OIC. Bank reconciliations are sent to Ibadan on a monthly basis where further reviews are conducted by the Special Projects section.

Exchange rates are computed weekly for use for all financial transactions for that week. Obviously, operating in 14 currencies in 11 stations outside Nigeria has implications for currency exposure. In francophone countries, the CFA, aligned to the Euro, is the unit of account. The US dollar, the reporting currency and main denomination in which cash assets are held by IITA, has been falling steadily for over the last 9-12 months. Management needs to limit IITA's exposure to the risk of exchange losses, particularly for transactions in francophone countries.

The institute's investment policy is conservative. Excess funds are invested in banks, in low risk instruments for periods of less than 90 days. As the Institute's liquidity had been increasing over the years from a cash position of US\$18.9M in 2001 to US\$34.1M at the end of 2006, the Audit Committee meeting of August 2006 recommended a review of the Institute's conservative policy to enable IITA obtain greater returns without increasing risk. It called for consideration of investment in US\$ instruments of longer duration providing minimum risk. The Panel supports this view.

The current challenges for financial management are: a) succession planning—only the Chief Finance Officer has hands-on experience and knowledge of all areas of budget and finance and the related management information system, hence it would be prudent for Management to identify and groom his possible successor; b) information from stations outside Nigeria has to be entered into Oracle from Platinum, and full deployment of Oracle in all stations is needed to ensure efficiency and timely availability of information; and c) automation of some processes, such as loan applications, travel advances and retirement, is needed.

Other broader continuing challenges--that do not have simple solutions--are that a) a few donors are unwilling to pay the full overhead rate for projects, necessitating the need for IITA to subsidize overheads from unrestricted funds; b) reporting requirements by donors are different, the timing and formats of the reports are also different, and meeting the needs of the different

donors takes a lot of staff time; and c) IITA is seeking to move away from a large number of small “scientist-generated” projects to much bigger “institute-sponsored” projects, but the latter are managerially more complex, and could require collaboration with partners with insufficient capacity to adequately manage project funds.

Internal Audit.

The fifth EPMR recommended that an effective internal audit function be put in place; and the external auditors have repeatedly recommended in their Internal Control letters the need to appoint an Internal Audit (IA) head to strengthen the Unit. However, IITA was without a substantive Head of Internal audit since 2001, though there was an “acting” Head for four years. In 2005 the Audit Committee recommended that the Acting Head of internal audit be confirmed in the position, as he had demonstrated his capacity to effectively discharge this responsibility. This recommendation was implemented in 2006.

A key challenge for the IA Unit is the turnover of staff as soon as they gain some experience (the average stay of IA staff at IITA is 2 years). Due to the nature of financial operations and the computerized accounting system in use by IITA, the IA Head continually has to orient new IA staff to understand the Oracle system; and as a result he often has to participate in the audits himself, rather than supervising others and providing guidance on the areas being audited.

The Head of Internal Audit reports functionally to the Audit Committee, and administratively to the DG. The Panel considers this appropriate; but believes his job description needs to be clarified. For example, one of his responsibilities is “preparation, review and amendment of revenue and expenditure as well as systems” – which inappropriately connotes a managerial rather than audit responsibility. In addition, the internal audit policy by which the unit is governed is quite old (1986), and needs updating. Its scope does not cover areas such as risk identification and management, fostering quality, and continuous improvement in the Institute’s control processes, all of which are now included in internationally recognized audit charters.

However, on the positive side, the internal auditor has been able to cover about 70% of the audit plans approved by the Audit Committee. IA reports are quite detailed; and of late provision has been made for audited units to respond to issues and recommendations made in the IA reports. On balance, the Panel believes that pertinent issues have been raised by the IA department, and its work has provided a necessary check on controls and operations of the Institute.

External Audit.

A change of auditors was made in 2002 in line with CGIAR practice to appoint new auditors every five years. The external auditors have access to the Internal Auditors’ reports; but it is notable that they were not aware that the former CFO had defrauded the Institute in 2003, a matter which was investigated by the Internal Auditor (but conclusive proof was not available at that time). The external auditors were informed of this possibility during the Audit Committee meeting in 2004. It is imperative that a closer professional working relationship be developed between the external auditors and the internal audit unit to ensure that the service provided to IITA is better coordinated and complementary. The Panel notes that following the appointment of the current chair of the Audit Committee, there is more effective interaction by the external auditors with IITA staff.

A meeting was held with the Audit Manager in charge of the external audit of IITA. The auditors perceive the accounting and internal control environment within IITA to be adequate; and

believe that the capability of the finance department had been boosted by the appointment of qualified personnel to key positions in recent years. They are comfortable with the Oracle system used for financial information management as it is robust enough for the needs of IITA as long as it is well supported. In relation to the internal audit function, the recent confirmation of the Head of the Unit is welcomed. They however felt that the Unit should recruit one or two additional experienced auditors to strengthen its capacity to undertake a larger proportion of the audits planned for each year (currently only 60-65% of the annual audit plan can be covered).

Risk Assessment

The IITA Board and Management agreed in May 2006 on a Risk Management policy for the Institute. This policy, appropriately, covers much more than financial risks; it “applies without exception everywhere and to everyone throughout the Institute. Individual Units must identify risks to which assets, staff, and activities are exposed, the likelihood of occurrence, the severity of consequences and the adequacy of existing controls. Units must plan budgets for containment of their own risks, compensation, restoration and disaster recovery, and have a written emergency procedure, including recovery measures.” The policy recognizes that the overall responsibility for the establishment of an appropriate risk management system lies with the Board, acting through the Audit Committee; the Director General is responsible for institution-wide implementation of the risk management system; and Unit heads are responsible for ensuring that risks are considered for all business processes and for identifying cost-effective risk mitigation strategies. The Panel commends this approach.

For helping implement this policy, IITA has established a Risk Management Committee, comprised of ten members, drawn equally from the R4D and Support Service groups (with the internal auditor assisting the Committee), to serve as a “focal point” for integrating the results of risk management activities throughout the Institute. This Committee has conducted a workshop with Unit heads on the risk management framework; has devised a questionnaire for assessing, reporting, and mitigating Unit-level risks; and is currently in the process of getting this risk assessment activity completed by all Units. Action by these Units has, however, been slow thus far. The Committee and Management are taking steps to expedite the planned actions so that a preliminary Institution-wide implementation update could be submitted for review at the next Board meeting in August 2007.

5.5.3 Support Services

The Support Services division is managed by the DDG-R4D Support. This position has been occupied on an interim basis for the past nine months by an experienced manager who is returning to his parent institution in June. A new DDG-S has already been recruited, and is expected to join in August 2007.

As per the reorganization of May 2007, the responsibilities of Support Services include the following eight areas, each headed by a Manager:

- a) Human resources, with four main sub-units (internationally recruited staff, nationally recruited staff, IITA clinic, and IITA school);
- b) Material Management Area--Corporate service, including materials management and logistics, purchasing, shipping, and expediting;
- c) Computer services, including IVDN and telephones;
- d) Management information services;
- e) Communication service, including library, publishing, and corporate communications;

- f) Hotel and catering (including I-House, staff canteen, I-Guest House, travel services, Ikeja office, sports club, and community store);
- g) Physical plant and engineering services (PPS), with various sub-units (automotive, construction, buildings and grounds, telecommunication, electrical services and water, refrigeration and air conditioning, heavy equipment, and scientific equipment and electronic services), and security and central and farm stores; and
- h) Aircraft operations (under R4D).

Many of these units are covered below. The Finance Unit, which includes finance, payroll, project finance, corporate accounting, and treasury, reports directly to the Director General.

Overall, IITA Management recognizes the challenges it faces in delivery of efficient corporate services, despite the substantial improvements already made or set in motion during the past few years. It considers the effective delivery of corporate services essential for the Institute, and has launched a two-year program to address administrative deficiencies. Some of the issues being addressed are: a) provision of adequate and efficient support to research, and maintenance of staff welfare, despite declining unrestricted funding; b) strengthening the provision of corporate services at stations other than Ibadan; c) retention of staff, particularly in the MIS and finance and budget units; d) strengthening computer/MIS connectivity and capacity at field stations; and e) the improving communication and understanding between the users and providers of support services.

Human Resources Management

The HR Manager, who now reports to the DDG-S is responsible for both internationally- and nationally recruited staff (respectively IRS and NRS) at IITA. For IRS issues she works directly with the Management, scientists, and administrators, both at headquarters and at various locations; and for NRS issues in Nigeria, she oversees the work of the Personnel Manager and his staff at headquarters. However, while personnel policies established by Management and the Board cover all staff--as do the responsibilities of the headquarters-based HR Manager--the station administrators at locations are responsible for personnel management of locally-recruited national staff at their respective locations (e.g. the IITA-Benin station has a Station Administrator responsible for NRS staff issues).

Even though only 45% of IRS and 57% of NRS are located at Ibadan, this centralized management of all IRS from corporate headquarters, and decentralized management of NRS wherever they are located, is necessary and appropriate for a deconcentrated organization such as IITA – which is spread over 12 locations in 9 countries over sub-Saharan Africa (including the Ibadan station/headquarters in Nigeria). However, the HR Manager is unable to have regular face-to-face contact with most IRS; and this presents challenges common to other similarly dispersed organizations. This has been the case even for IITA's station in Benin--where substantial NRS issues, with potentially-major implications for both Centers, need to be addressed, as part of the proposed alignment of corporate services with WARDA, as further discussed below.

Several other factors have added to the complexity of managing IITA's dispersed workforce. The number of internationally recruited staff at IITA has not been very stable during 2001-2006. About half the current IRS joined IITA during the period 2001-2005; and many of the IRS are in mid-career (two-thirds are in the age range 45-59, and only 3% are in the "young scientist" age bracket of 30-34 years). Furthermore, although most stations/sites have been in operation for a decade or more, the staff at these locations has not remained the same, mainly due to shifts in

research program activity from West and Central Africa (WCA) to East and Southern Africa (ESA). During the past 5 years, 10 IRS have been relocated from headquarters to field sites; 45 IRS have been recruited for non-Ibadan locations; and 276 NRS have been hired at these non-Ibadan facilities.

Personnel policies and procedures, especially for IRS, have also undergone considerable change during the past 3 years. These include new policies for housing; standardization of education, shipping allowance, and other benefits at different locations; introduction of the option of self-managing the employee's contribution to retirement funds; the withdrawal of the provision of a vehicle exclusively for family use; and changes in policies regarding spouse travel, and the duration of contract terms. In addition, a salary adjustment for IRS was undertaken in 2003; a market adjustment increase was granted in each of the years 2004-2006; a central HR database system was installed in 2004; and an on-line recruitment system was established in 2006. These are commendable achievements.

For undertaking salary reviews for NRS in Nigeria, a new process was put in place in 2004. It requires inputs from the joint staff/management consultative committees, an external market survey conducted by an independent consultant, and professional advice from the HR and Finance Managers and the DDG-S—based on which, the DG decides. The methodology for doing the market survey is the same every year, though all comparators to be used are decided by the DDG-S and the DG in consultation with HR. This process has been accepted by staff as reasonable and fair, given the financial situation faced by the Institute, and has led to much better staff-management relations than was the case in IITA some years ago.

However, some other policies and the online HR management systems for IRS, such as for annual work planning and performance appraisal, have at the time of the EPMR only been in place for a few months, and both staff and their supervisors/managers are still getting used to making them work as intended. There are established policies and procedures for IRS recruitment, promotion, and contract renewal; but the Panel has been confidentially informed by staff (including through the anonymous "staff satisfaction survey" undertaken by the Science Council for the EPMR) that in some instances they perceive that these policies have not been followed in a rigorous or transparent manner.

One reason for this could be the frequent changes in the HR Manager position at headquarters (there have been 3 incumbents in this position since 2001). HR management is expected to be headed by a qualified specialist who could ensure that all line managers (including the DG and DDGs) routinely and in a fair manner follow institution-wide policies, systems, and procedures rather than seemingly-deviating from approved processes for recruitment, promotion, and contract renewal of individuals.

This is a source of concern to the Panel; but we consider it inappropriate to comment on specific instances, if any, of such deviations, except to say that managerial discretion in such matters is expected to be used only on a truly exceptional basis, and for reasons that are included in the official record of such decisions. This will enable IITA to move closer to its goal of attracting "the highest quality and most diverse pool of candidates in an efficient manner," in accordance with its recently-updated procedures for IRS recruitment. These procedures are expected to be utilized for recruitment and promotion of all scientists and managers, including Deputy Director and DDG vacancies, so that these senior managers are recruited only after an open and

transparent external search for the best available candidates (internal candidates can of course compete openly for promotion to these positions).

Another area in which improvements are needed is the objectivity and process for performance management, for IRS as well as NRS. The performance appraisal form for IRS consists of the job description (TOR), work plans for the current and next year, report on achievements for current year, and the performance rating/score. Detailed guidelines have been provided for the professional activities report for scientists. The form includes the criteria to be used, and provides for the customization of weights for each criteria depending on the work plan of each IRS. The criteria include work plan achievement, quality of science, communications, capacity building, resource mobilization, management of staff and resources, other professional activities, personal effectiveness, constraints, and career development needs.

While this system seems appropriate in principle, and the work plan is expected to be “reviewed intermittently between the staff and the supervisor(s) in the course of the year and updated as needed,” it appears from the staff survey conducted for this review that supervisors/reviewers are sometimes unable to devote sufficient time and attention to monitoring the work of scientists and providing timely feedback. As a result, some staff members believe that there is scope for increasing the fairness of the annual performance appraisal exercise, as well as its usefulness for staff and their managers.

The annual appraisal ratings are also expected to lead to decisions regarding career advancement and salary increases. As in other organizations, nationally recruited staff (NRS) expect annual salary increases based on a market survey, as well as a performance-based increment (as a % increase in basic salary). However, it appears that in IITA most NRS also expect high ratings, which are apparently routinely given by their supervisors; and this defeats the purpose of an “objective” performance appraisal system, and makes it difficult to link rewards with performance. To remedy this deficiency, the Personnel Unit has arranged training seminars for supervisors, but this effort has apparently not been sufficient to change their behavior.

A related problem is that there are few possibilities for re-classification or promotion of NRS from one grade to another. Such progress is possible only if an employee successfully competes for a vacancy at a higher level, or if the incumbent was initially appointed (for developmental or other reasons) at a grade lower than that specified in the position description. However, there are few such opportunities for re-classification; and most employees remain in the same grade for long periods of their tenure at IITA—and hence, salary increases based on “high” ratings are seen by both the NRS and their supervisors as the only means available for tangibly linking rewards with performance.

Since the workforce at IITA headquarters has few opportunities for internal mobility--and the overall numbers at Ibadan are unlikely to grow (and might even need to contract) as part of the upgrading of support services or shifting of research programs and projects from headquarters to field locations--there is no easy solution for the lack of opportunities for career advancement and salary enhancement. However, some attempts could still be made to increase the job responsibilities, and hence the salaries, of individuals--but in many cases this would also require that they have opportunities for skill upgrading, so that they could improve their contribution (and value) to IITA.

This would be especially important for some highly-technical positions (e.g. in Physical Plant and Engineering Services-PPS, accounts and finance, materials management, information technology, hotel catering etc) in which skills need to be periodically upgraded to remain competitive with the changing external marketplace. The institution-wide training budget for IITA is low—it was about US\$6000 in 2006 for long-term courses that the individual staff member was attending, excluding the substantial funds expended on short courses to which the individual was sponsored by the institute. The investment in skill development could be increased; and needs to be utilized for targeted-training of individuals, linked to their career advancement plans. For this, staff of the HR Unit would have to devote more attention to identifying and responding to the training needs of staff.

This “raising of the bar” in the performance of the HR function appears to be needed not only at headquarters, but at the Benin field station as well, in the context of the proposed alignment of corporate services with WARDA. Under the recently-signed Memorandum of Agreement (MoA) between the two Centers, all of IITA’s NRS at Cotonou would cease to be its staff; and some of them would become part of the corporate services at that location. This agreement is expected to be fully implemented by December 2007.

The DDG-S (IITA) and the ADG (WARDA), as well as the HR Managers (and other Unit heads) of both Centers have recently started taking suitable anticipatory action to address the complex HR issues involved in aligning corporate services between IITA and WARDA. However, there still remains a lot of difficult preparatory work that would have to be done by both Centers before the two institutions can be ready for moving into the final “implementation” phase of the MoA. Both Centers have recently appointed professionally-qualified HR Managers; and IITA has finalized the recruitment of a new DDG-S. These new appointees will now have an opportunity to work closely with their counterparts in WARDA, as one team, so that potential HR problems that will affect both Centers—that already share common physical facilities at Cotonou—are managed smoothly.

In view of the above pending requirements for strengthening the effectiveness of the HR Unit at IITA, the upcoming needs of the IITA-WARDA alignment of corporate services, and because the results of the staff satisfaction survey indicate some concerns regarding the consistent use of existing HR systems for staff recruitment, promotion, and retention, *the Panel recommends that the HR management Unit at IITA become more proactive in establishing effective systems for recruitment, performance management, career advancement, and retention of both IRS and NRS; and in ensuring that the approved HR processes and procedures are consistently followed by managers and staff throughout the organization.*

Materials Management

The Materials Management and Logistics (MML) Unit at IITA is responsible for about US\$13-14M of annual purchases of goods and services to support research and related activities at its headquarters and field stations. The staff satisfaction survey conducted by the Panel indicates that most respondents are not satisfied with the timeliness of the procurement undertaken at IITA; and this impression was reinforced by interview data that indicates a high level of frustration among scientists and managers regarding the quality and responsiveness of services provided by the MML unit. Staff members are concerned about long delays in processing requests for purchases and receipt of goods; and believe that the price of goods charged to their budget is higher than the prevailing market price.

This “over-pricing” is in part due to the high transportation cost for obtaining goods from overseas. IITA currently uses an agent based in the UK to handle its international procurement; and has a shipping consolidator in the US to expedite shipping of goods originating there. Delays in the receipt of goods are partly attributed to the shippers requiring that a container be full before any goods can be shipped. This requires advance planning by scientists to accommodate the expected lead time and “delays”; but this planning has not been easy to do in practice, since many scientists apparently prefer to order as need arises. In 2004, credit cards were introduced, as part of the fast-track purchasing system meant to hasten the purchase of urgently required materials. However, an internal audit review of usage of the credit cards found that they are not used as frequently as had been expected--only 19 purchases valued at US\$32,500 had been made over a period of 21 months.

Local procurement has not been efficient; e.g. in some instances, stock purchased some years earlier are more expensive than those available on the market today, or staff can find lower cost items in the local markets. To avoid the high stock costs, staff has been known to purchase their requirements directly and request for reimbursement from stores later. The purchasing system uses Oracle software to enable staff to track the progress of their orders. A new head of materials and stores was recruited in 2004 after the dismissal of the former Unit head and his deputy for unprofessional conduct. Purchasing and inventory management have improved somewhat after this, but not up to the level expected.

In addition, large amounts of inventory, costed at US\$4.2M (before obsolescence provision of US\$2.8M) was held in stores, as of 31 December 2006. Although recommendations have repeatedly been made to dispose of ‘obsolete’ stock, some inventory, such as spares for old equipment, is still kept in stores because these spares would be almost impossible to find in the market. However, retention of large amounts of stock has its attendant costs and risks; for example, spare parts for generators worth US\$30,000 disappeared from stores in 2005, and some staff had to be dismissed.

Management is aware of the major problems related to procurement; and in February 2007 commissioned an external procurement expert to undertake a comprehensive review of the Institute’s materials management and procurement system. The consultant’s report of March 2007 confirmed that IITA faces substantial challenges in its procurement operations, in part due to the institutional context prevailing in the countries where IITA operates, including poor infrastructure, limited pools of qualified staff, and unstable and limited scope of local supply markets.

In addition, the report noted significant issues of procurement delays, poor quality, high prices, as well as an ineffective procurement and communication system. Many of these issues were being exacerbated by the geographic spread and decentralization of IITA’s operations; but the report also traced these deficiencies to lack of clarity of policies, duplication of effort, ineffective application of systems and procedures, and gaps in the human resource capacity of the MML unit. The report noted that these problems were inter-related, and recommended that follow-up actions be taken by IITA at the institutional, policy, systems and procedures, and HR levels over the next few years.

The Panel commends Management for having commissioned a comprehensive review, and believes that the consultant’s report provides a good starting point for markedly improving the procurement function at IITA. As follow-up, Management has developed a road map for

implementing the report's conclusions and proposed actions. In view of the importance of ensuring that materials management becomes fully capable of supporting IITA's research operations, *the Panel recommends that suitable follow-up action for strengthening the procurement function be taken by Management in the coming months, along the lines proposed by the external procurement experts.*

Physical Plant and Engineering Services (PPS)

PPS is critical to IITA, especially in the context of the weak infrastructure and engineering services available off-campus, in the town of Ibadan. The scope of work covered by PPS includes maintenance of buildings, houses, motor vehicles and equipment at the Ibadan campus and at other IITA campuses in Nigeria. PPS is also responsible for production of potable treated water, treatment of sewerage and waste, and ensuring constant power supply to the whole campus. The stations outside Nigeria rely on Ibadan for technical assistance where the service required is critical or cannot be efficiently sourced locally. PPS currently employs 191 NRS and 2 IRS staff. This is far fewer than the 280 staff employed by PPS in 2001, and reflects the substantial productivity gains and streamlining of work achieved by the manager and staff of PPS in recent years.

In 2003 IITA embarked on a major infrastructure upgrade with a capital expenditure budget of US\$3.6M. Some of the major works being undertaken at the Ibadan campus include installing a 5 mega-watt transformer to replace the old unit; replacing the 11kv overhead line and underground cable; waterproofing roofs of the international guest house (I-house), dormitories, apartments and other buildings; installing centrifugal water chillers to replace old units; refurbishing the old sewage plant, and constructing a new plant; installing a new digital telephone system and link with IITA Benin; replacing underground pipes for all houses and apartments on the Ibadan campus; constructing new water pumping station, and refurbishing water treatment plant. Work has also been commenced or completed at other stations, including a variety of works at Maiduguri, Kubwa-Abuja, Kano, Onne, Tanzania, and Cotonou. All this has been done despite the reduced number of staff and with a stable operating budget of US\$1.15M for 2006 (the same as for 2005 and 2004). The Panel commends PPS for these achievements.

The main challenges faced by PPS are: a) the fleet of trucks and tractors used to service research sites are very old and frequently break down; b) the machine used for removing weeds from the lake is very old and is no longer effective; c) irrigation pipes and attendant equipment is no longer adequate to efficiently irrigate research fields; and d) the level of education and capacity of some support staff is low, and they require additional training to remain current, particularly those handling high-tech machinery and equipment.

Since IITA's financial situation is better now, it should be possible to improve, in a phased manner, the physical plant, equipment and facilities that enable PPS to continue to provide efficient support to research operations and to staff and residents on campus. Additional efforts and funding are also needed for in-house as well as external training of staff so that their technical skills can be upgraded. This would enable the PPS staff to be utilized to their full potential; and could facilitate their retention and possible career advancement at IITA.

Management Information System

The MIS unit provides computer hardware and software applications/services to support IITA's research, financial, administrative, and managerial information needs. The Oracle management

and financial information system has been in use since 2002. Because of the many sites/stations in which the Institute operates, many of the MIS products and services are deployed over the internet. For processing accounting information, the Platinum-for-Windows system is deployed at IITA locations outside Nigeria. Weekly batches of information are sent from these locations to Ibadan for input into Oracle. Many add-ons to support specific end-user needs have been developed in house.

These information products and services include: a) the operating details report, which provides budget and performance information to budget holders; b) the projects management information system for contracts and grants office, enabling management of projects from conception through funding and conclusion; c) the purchasing tracker, which enables tracking of overseas purchases through the system; and d) the personnel accounts report, helping staff to track their personal accounts with IITA.

Some of the challenges faced by the MIS unit include: a) providing timely solutions to MIS related problems identified by end users; b) loss of skilled and experienced staff to competitors within Nigeria and abroad; and c) concerns relating to physical security. A recent internal audit report on risks and controls related to IITA's corporate computer operations points to the need to strengthen server room security, and improve the back-up facility. The Panel was informed that computerized information is backed-up on a daily basis, but the back-up tapes are stored in the same building that houses the MIS. The Unit's staff have proposed an off-site back-up facility.

There is also a longer-term issue of ageing hardware that needs to be upgraded or replaced. For this, a three year salvage plan has been put in place, to phase out old and critical software and cables, and to enhance efficiency of the MIS. In addition, the Unit has profiled risks for its operations and continuity, and has outlined mitigation plans and safeguards to counter such risks, and to ensure adequate and uninterrupted support to IITA's needs. The Panel commends this forward-looking approach.

Hotel and Catering

The hotel and catering services Unit provides accommodation and meals at the I-house on the Ibadan campus and at the Ikeja guesthouse in Lagos. It also manages the dormitories at Ibadan which are used to accommodate staff and external guests. These facilities were built in the early days of IITA, when training was a major activity on campus. A few years ago, occupancy rates had dropped due to various reasons--including transfer of IITA staff to other stations, and relocation of the national capital from Lagos to Abuja (thus reducing the use of IITA facilities by staff members affiliated with the CGIAR system, diplomatic missions, UN agencies, and other multinational organizations). This had led to the need for increased subsidies to the Unit to keep its services operational.

With the recruitment of the current head of the Unit, however, a number of measures have been taken to cut costs and improve revenue generation. The quality of services has been enhanced, and staff have been involved in making decisions, with positive results. Cleaning services have been outsourced, and staffing levels have been reduced to save costs. Additionally, the reduction in charges for IITA projects and for collaborators using the Institute's facilities has increased occupancy rates. As a result, the Unit has become a net-revenue generator--with income in 2006 in excess of direct expenses by almost US\$300,000. This is a commendable achievement.

Medical Services

Following the accidental death of an IITA member of staff on campus in 2002, a team of consultants was appointed to review the medical services offered. A medical services committee was set up to implement the recommendations of the consultants. The changes made include increasing the operational hours of the clinic to keep it functioning 24 hours a day (including weekends), and the recruitment of a general practitioner. There are now two resident doctors on campus, a senior nursing sister plus support staff, and a 24-hour ambulance service. These improvements are appreciated by staff and families living on the Ibadan campus.

Security

Security services were outsourced to a private company in 1999. Annual savings from outsourcing the service are estimated at US\$100,000. IITA, however, employs a Security Manager and Security Supervisor who reside on campus. The security situation in Nigeria remains volatile; and this has necessitated the cultivation of a strong relationship with the Nigeria police service. Regular police patrol the Ibadan campus perimeter fence, and routinely provide escort service for IITA's official vehicles. As a result, safety and security on campus is not considered problematic at present.

Alignment of Support Services with WARDA

In April 2007, IITA and WARDA signed a Memorandum of Agreement (MoA) for eliminating duplication of corporate services in Benin, Tanzania, and Nigeria. The CGIAR expects this alignment of services will capture efficiencies, and will serve as the building block for CGIAR-wide corporate services alignment in West and Central Africa (WCA). Accordingly, IITA's station in Cotonou (Benin) is expected to be used by IITA, WARDA, Bioversity, and possibly IRRI, CIAT, and other Centers operating in the WCA region.

For IITA's Nationally Recruited Staff (NRS) and WARDA's General Support Staff (GSS), both Centers have agreed in the MoA to work toward the goal of "harmonization of all human resource aspects as much as possible including remuneration packages". Both parties will also endeavor to appoint common external auditors. At Cotonou, IITA will retain legal ownership and management of the property, land, and facilities, and will thus retain a responsibility to maintain these. However, it has agreed that "WARDA is in the best position to manage and deliver corporate service functions in Benin"; and accordingly IITA will transfer the provision of corporate services from IITA to WARDA. Such services include general administration, farm management, information technology (computer systems), library and communications (multi-media), physical plant services (PPS), and finance. [Details of these services are given in Appendix 1 of the MoA.]

Both IITA and WARDA will retain their current legal status in the countries of origin. The Agreement also notes, in particular, the expected impact on IITA's nationally recruited staff in Cotonou, and outlines the process envisaged for their transition from IITA to WARDA. It states that the transfer of corporate services from IITA to WARDA will be implemented in four phases, with a target implementation date of September 2007 (as agreed at the CGIAR's annual general meeting in 2006). These phases are: a) the design phase (for developing a staffing plan, plan of action and budget); b) the proposal phase (for preparing final proposals to IITA/WARDA managements for approval of implementation); c) the notification phase (for notifications and explanations to staff); and d) the implementation phase (from September to December 2007).

An overall Agreement Management Committee is to be established, as well as a Local Implementation Committee for each of the three locations (Cotonou, Ibadan, and Dar es Salaam) covered by the MoA. The Agreement stipulates that WARDA will provide corporate services in support of IITA's research agenda at Cotonou; while IITA will provide such services to WARDA at Ibadan and Dar es Salaam. It gives details of how the two Centers will share facilities, services, and staff at each of the three locations. The items covered include office, laboratory, and field research space; irrigation; human resources; other services and utilities; and miscellaneous facilities and services. The cost of providing these services plus overheads will be recovered on a charge-back or cost-sharing basis, depending on the type of service, in the manner specified in the MoA.

The MoA is a detailed document; and the two Centers are working on a draft "road map" for the coming six months. A number of "transition task forces" are expected to be appointed in June (for HR, finance, computers, purchasing, PPS, general administration). This approach is promising, and hopefully will be implemented systematically and with sensitivity to the people-, system-, policy-, and legal issues that are bound to arise in the coming months. Some of these issues have already been anticipated by staff of the two Centers, and by the Unit heads and Managers responsible for the transfer of corporate services—and detailed planning is now underway (though somewhat belatedly) to address them. Hence the Panel commends IITA Management for its commitment to eliminating duplication, and for the steps being taken to implementing the MoA. It cautions, however, 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.

It believes also that as the two Centers move ahead with alignment of their support services, it would be useful for them 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 IRSS 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 if the harmonization process is not managed well, *the Panel recommends that the staff and DDG-S (IITA) and ADG (WARDA): 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 and the Local Implementation Committees at Cotonou and other sites covered by the MoA; and c) seek to benefit from the experience of other Centers that are aligning corporate services.*

6 IITA TODAY AND IN THE FUTURE

6.1 IITA today

The enduring assets of the Center are its capable and highly motivated staff, its array of germplasm, and its fund of documented research experience on the management of natural resources and farming systems.

Today, IITA's staff possesses a diverse range of complementary skills needed for improving germplasm that can be utilized for sustainable farming systems in SSA. Historically, IITA has had major success in the development of crop cultivars with resistance to diseases, and in the deployment of biological control agents against pests. The impacts of this type of research, measured many years later, show productivity gains estimated at US\$1.36 billion for improved maize over a 20 year period and benefits 100 times larger than costs of the biocontrol research. IITA's current contributions to cassava brown streak and banana wilt, if successful, would be expected to generate similarly large returns to the research investment.

The balance of disciplines amongst staff is well suited to deal with research issues, though key areas such as biometrics, soil fertility and agronomy for yams and cassava still require strengthening. Staff are well trained, and IITA's facilities are generally adequate to maintain the quality of research. There is a culture of science that exists among staff; and it is fostered through cordial staff relationships, teamwork, a strong work ethic and a shared vision of what science can accomplish in development. Retaining trained staff at IITA has proved difficult, in part because of the Ibadan environment, but despite this difficulty, the Center has the needed complement of well qualified scientists. A relatively recent innovation in research leadership, the RDC, includes elected members chosen because of their experience and wisdom from among staff. It now operates as an advisory body to senior management, and is expected to provide strategic advice. The Center has in place an IP Policy, an effective germplasm health unit, and good biotechnology capacity in Ibadan and at the BECA facility in Nairobi to serve IITA and partner needs. The guiding principles for biosafety are in place, and the Center's biosafety regulations have been of value to countries in Africa seeking to establish national legislation in this area. IITA has a comprehensive approach to the storage and management of research data.

During the past five years, the leadership of IITA has set in motion the new Research for Development (R4D) approach that positions some of IITA's research staff a little further downstream than previously. As a result, IITA is currently in transition. It is vigorously pursuing the DG-initiated, but now staff- and Board-supported, R4D strategy that requires a deeper involvement in development. At the same time, it is protecting its core competencies by ensuring that they continue to be adequately supported by unrestricted funding. Despite Africa's challenges of low literacy rates, HIV/AIDS, inadequate infrastructure, and sometimes difficult policy environment, IITA has cultivated an optimistic attitude towards its potential contribution to Africa's development. It has consolidated and built on its previous technical accomplishments, and has chosen to create awareness of what targeted agricultural technology can contribute to national- and, by aggregation, Africa-wide development.

IITA is a dispersed institute with around half its staff at locations outside Ibadan. A number of restricted core projects are underway at these locations, some with significant administrative loads. All this, plus the administrative requirements of seven MTP projects, has placed additional demands on management. As this Report has sought to make clear, the Center needs to invest

further in managing research so that senior staff can better address the strategic needs of the Center and conduct thorough planning for the future. The Program Committee of the Board plays a role in this planning process, but IITA needs to tap this resource more effectively. In other respects, the Board and financial oversight functions are generally sound. Improving the Center's procurement function will increase the timely conduct of its science. IITA is seeking to improve the number and stability of its senior managers, having recognized that it has been somewhat 'under-administered' during this EPMP's review period. IITA has also started to engage professional project managers in some projects in Nigeria.

New crops have been added to the research agenda, a new Strategic Plan is being drafted, and the current MTP describes seven projects that encompass IITA's current research agenda. There are many research topics in the discovery to delivery continuum; the formulation of researchable questions in the new areas for IITA needs to be continually addressed by staff from the appropriate scientific disciplines. There has been a significant expansion in promoting cassava production for a wide range of end uses. This is largely uncharted but exciting territory for IITA, and it will be important that it synthesizes these experiences and defines principles for success. IITA has opted for active engagement with a range of new partners in agroindustry and ARIs, sometimes to the detriment of the older established partnerships with NARS. Sustaining development with new partners will be challenging, and there will be both successes and failures that the Center can learn from along the way.

IITA has the largest budget of CGIAR Centers and its R for D approach is strongly supported by its key donors, and by the host Government in Nigeria with whom it has established excellent relations. The resurgent attention to agriculture in Nigeria and incentives to agricultural research and production (like the regulation to include 10% cassava flour in all bread flour in Nigeria) have placed IITA in a strong position to make visible contributions to Africa's most populous country and to assist others. It is imperative that the Center react to new opportunities, and strengthen the alignment of its MTP- and restricted grant projects with its forthcoming Strategic Plan. When its crop improvement programs, the conservation of agrobiodiversity, and the emerging focus on diversification and value addition are considered, IITA's program is, however, well aligned with the CGIAR System priorities for research.

6.2 Continuing Challenges

Germplasm of IITA's mandated crops is broadly based and generally widely adapted, and has been tailored to fit most of the major ecologies and farming systems of SSA. It now needs to be selected for input responsiveness so varieties with this characteristic will be ready for release when the inevitable intensification of crop production occurs. The conservation of agrobiodiversity within mandated crops continues to be effective and secure, though the regular regeneration of vegetatively propagated germplasm is costly and can lead to genetic drift. Long term cryopreservation of tissues may relieve this burden. Some progress is being made on characterization of accessions, and core collections have been identified in major crops. The challenge is to use the growing molecular information on genetic diversity in an effective manner. Genetic variation generally has not limited breeding progress, except for intractable traits such as *Maruca* resistance in cowpea, or resistance to the parasitic weed, *Striga*. In the first of these cases scientific partnerships with ARIs have provided access to transgenic variation from outside the species, and Bt cowpea may shortly be in the hands of IITA scientists. Genetic gains in yield potential appear to be taking place, though the Center needs to document the impact of its progress in that regard. These gains are effectively safeguarded by crop protection specialists

and biocontrol experts second to none in expertise. Improved germplasm is being tested and distributed to NARS through testing networks linked to the SROs in West, East and Southern Africa. However, delivery of improved germplasm to farmers remains a major problem. The seed industry in SSA is still modest in ESA, and is pitifully small in WCA. Few of IITA's breeders can point to solid evidence of seed and planting materials being moved out to farmers' fields via the private sector. The panel is convinced that there is progress, but in the absence of an established industry that markets seed, propagules or other planting materials, use of improved materials is hard to quantify and difficult to sustain. Rapid progress will be thwarted until this bottleneck is resolved by a healthy and expanding private sector. There are signs, however, that this is starting to occur.

The natural resource base of much of SSA is deteriorating, and net nutrient outflows are thought to be occurring from most farming systems across much of the continent. In the Guinea and Sudan savannas, often considered the bread basket of West Africa, fallows have disappeared and almost all suitable land is farmed. Fertilizer use per hectare in SSA averages less than 10% that of tropical Asia and the farm-gate price for fertilizer is amongst the highest in the developing world. IITA has made solid attempts to address the issue of soil fertility decline, and after a period of reliance only on biological N fixation and manure, is now establishing sustainable cereal-legume cropping combinations augmented by judicious amounts of fertilizer. Unfortunately these are still operating at yield levels well below the potential limits set by climatic factors. The carrying capacity of farm land that supports a growing human population along with animals dependent on crop residues for feed could be significantly increased with additional crop nutrients. And while improved cereal legume cropping systems have been developed, critical measures of widespread impact and of farmer modification are scarce. There is a strong cadre of socioeconomists on staff to analyze these trends, but many have recently joined and lack adequate mentoring.

It is likely that as new political alignments take place in Africa, there will be more formal and informal exchanges of agricultural materials. There are many benefits of this, but there will be associated challenges as well. IITA will probably have to enhance its capacity for phytosanitary engagements across Africa. It is likely that IITA will be expected to take a leadership role in relation to information on seeds and seed systems. The area of vegetatively propagated material is particularly challenging for most countries due to its potential for distributing dormant disease agents. IITA has a long history of handling such materials, and it will be important for the Center to provide greater leadership in this area.

The major emerging topic of biotechnology is of critical importance, especially because of national and regional biosafety considerations. This will certainly impact on technology generation decisions and delivery pathways, and IITA should look at the implications of the opportunities for introducing GMOs as well the challenges posed by regulatory requirements.

6.3 Where can IITA be in five years?

In 2012 Africa's agriculture will almost certainly be more productive and diverse, but there will be 80-100 million more people in Africa who will require feeding. Farmers will be a smaller proportion of the African population but they will be more efficient in supplying the food and feed needs of their countries. They will be earning higher incomes and their efforts will be a source of non-farm income for people working in agricultural processing, marketing and related issues. Input markets will have become more efficient. As a result, fertilizer use, especially in the

savannas, will be increasing. The greater productivity of farmers and the diversification of agriculture will provide larger food baskets and increasing incomes to ensure greater food security. It is hoped that IITA will be receiving deserved recognition for its role in these developments and, consequently, will gain increasing influence in the decisions that guide the future of African agriculture. To succeed in this role IITA will have maintained a vibrant and dedicated group of researchers, and it will have a well-established presence throughout sub-Saharan Africa.

Some of IITA's success will be based on its traditional skills. It will have maintained strong breeding programs in important food staples that will be the sources of productive varieties. It can be expected that the breeding programs will continue to be a crucial bulwark against devastating plant diseases; and they will be doing this by maintaining adequate genetic variation that leads to resistant varieties, and by ensuring that they are deployed in a timely manner. Its plant protection and crop management skills will provide additional methods that help protect farmers from biological and climatic risks.

In addition, some of its success will be based on new science. It is expected that IITA will have invested resources in learning how to get beyond genetic barriers that currently limit plant breeders' capacities to take advantage of the plant genome. The use of biotechnology will have provided markers and other tools to speed the work of the breeders, and genetic transformation will have begun to fulfill its promise of delivering varieties that meet the needs of Africa's smallholder farmers.

But the success will not simply be due to the science practiced in the laboratory and the field. The innovations emerging from IITA's research will increasingly be the products of demands from agricultural markets that require crop varieties for expanding markets and a wide variety of uses. Africa's agricultural research systems will be responding to the incentives of the commercial agriculture envisioned in IITA's R4D paradigm. At the same time, a more market-oriented agriculture will require high quality inputs, many of them, such as seeds, planting material and biocontrol products, that embody IITA's research products. The growing strength of commercial agriculture will provide more incentives for land stewardship and some resolution of the challenges of resource degradation and soil fertility decline.

The confluence of advanced agricultural technology and a more diversified and demanding market will require supportive policies from African governments that provide farmers a strong voice in technology generation, provide strong and efficient input and output markets, and offer opportunities both for a growing sector of commercial farmers and for those households for whom agriculture is part of a more complex livelihood strategy. IITA will be using its experience and accomplishments to provide guidance for the formulation of such policies.

6.4 How would it have got there?

IITA's vision and goal is to alleviate poverty and reduce hunger with the commitment to bring about positive change through the power of agricultural research.

New opportunities are emerging as governments in many African countries are liberalizing their policies to encourage the development of the private input market. The lack of such markets (e.g. for both seed and agro-chemical products) have significantly curtailed advances in African agriculture in the past. IITA will need to pay close attention to these developments and position

itself to be counted among the important players in African agriculture. The NEPAD-CAADP program will impact heavily on what direction African agriculture will take.

The success of R4D and the destiny of IITA's mission and goal are going to be tied to its continued commitment to science. The adoption of the Research for Development paradigm encompasses different trajectories and points of application for research. Firstly, there is the improvement of crops to enhance yields and ensure food security in the face of increasing human population pressure and the stress of crop diseases and pests. Secondly there is the possibility of creating local income from the diversification of farming systems (to include higher value commodities such as fruit and vegetables, as encouraged by the new CGIAR System Priorities for Research). Thirdly, and as proposed in the new IITA draft strategy document, is the possibility of developing agri-industrial approaches for commodities (such as cassava) that have alternative products and outlets. The Panel believes that IITA will require new expertise to accomplish the agri-business approach.

There will be an increased need for economic and market analysis, and increased sophistication in the development of public private partnerships and business plan development. There will be a requirement to balance the long term research thrusts of the Center on commodity improvement (which has provided IITA the comparative advantage to enter into agri-business ventures as the technical backstop) with the shorter term analyses, adaptive product development research and formation of partnerships with the private sector that such an approach requires. It is not clear that IITA is currently staffed appropriately for this third task and may need to link with adequate long term support of these types. Further, IITA needs to address issues of sustainability – which includes the underpinning of continued crop production, the sustainability of partnerships and of markets. Cassava lends itself to the production of a variety of products (food, feed, and industrial glucose, starch and ethanol). Understanding feasibility and market interplay is necessary.

The Panel is concerned that the natural resource management issues which underpin crop production are losing prominence within the agenda focused on production and income. And there is some concern that in the current focus on the commodity chain, research may be overlooked and this needs to be a feature of the new Strategic Plan. IITA's wish to derive quick impacts should not lead it to circumvent traditional NARS partner contacts in some areas in favor only of universities and SMEs, who are unlikely to support these major projects in the absence of national programs. Indeed the Panel views IITA's efforts in the agri-business approach as legitimate experiments. There is evidence that success of particular national initiatives can draw the attention and involvement of other countries. IITA therefore must continue to bear in mind the appropriate reach of public funded research vis-à-vis the private sector and, secondly, set up the means to share the lessons learned so that a broader set of countries can benefit from the experiments. The ability of IITA to create feasible and lasting agribusiness ventures founded in solid institutional arrangements rather than on individuals will be the judgment of the next EPMR.

In summary: For the first time in the history of the continent, the leaders of African nations are beginning to dedicate their attention to key drivers of change in African agriculture and to understanding better the value of science in agricultural development. The Panel sees several interrelated elements that IITA should continue to address to help meet the research goals for African agriculture and to help build the necessary enabling environment:

- Ensuring that it is able to synthesize, learn from and transmit lessons from R4D

- Maintaining strong science and ensuring it is well planned with clear strategies.
- Taking advantage of new science (e.g. biotechnology)
- Maintaining and expanding understanding of political support and policy input
- Promoting commercial input delivery
- Addressing resource degradation and soil fertility decline
- Building NARS and other partners.

IITA has already started to develop strong partnership with some of these national, regional, and international organizations. The Center has earned some recognition by these governments, having been singled out to partner with these governments towards joint establishment of programs. IITA's successful approach to agricultural research in Africa in the past has emphasized working through partnership, particularly with the NARS and increasingly the SROs. IITA's philosophy was, and to a large extent still remains, one of active engagement with key contributors to accomplish its mission. Since 2002, IITA has reduced its role in traditional capacity building through courses, focusing more on project associated training. The Center's stance on type and mode of partnerships also appears to be unclear and ambiguous. However, the Panel believes that IITA should *"engage its partners more actively and more broadly in its R4D, so that all partners gain experience in moving through the spectrum of discovery to delivery and along the value chain"*. In its urgency to have impact IITA should not pursue what some of the NARS perceive as a "go it alone" approach. To have effective improvements in farming system productivity, and to raise debates to the policy level in germplasm conservation, input markets or other aspects of agriculture will require that the IARCs and their partners speak with the voice of their communal experience. Managing partnerships effectively will be one of the keys to IITA's success in the future.