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**CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
SCIENCE COUNCIL**

**CENTRE AND CHALLENGE PROGRAMMES
MEDIUM TERM PLANS 2005-2007
SC COMMENTARY AND CENTRE RESPONSES**

**SCIENCE COUNCIL SECRETARIAT
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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Consultative Group on International Agricultural Research (CGIAR)

**SCIENCE COUNCIL
Per Pinstруп-Andersen
Chair**

30 September 2004

Dear Ian,

I am pleased to submit to you the Science Council's Commentary on the Centre and Challenge Programme 2005-2007 Medium-Term Plans (MTPs). This year the Centres were also requested to prepare logframe plans to the Systemwide and Ecoregional Programmes they convene, and the commentary includes this programmes.

The Science Council was pressed for time when reviewing MTPs. We hope that rescheduling the meetings of the CGIAR Group, the ExCo and the SC will allow more time for this important exercise in the future. This year the SC decided to distribute final commentaries to each Centre and Challenge Programme inviting them to prepare a response, as there was no time for a round of factual corrections. In the attached documents the Centres' responses follow the SC commentary for each Centre and Challenge Programme.

I wish to thank all Science Council members for undertaking this challenging task in such a short time and the SC Secretariat for assisting in the process.

Yours sincerely,

A handwritten signature in black ink that reads "P. Pinstруп-Andersen".

(Signed)

Per Pinstруп-Andersen
SC Chair

Mr. Ian Johnson
CGIAR Chair
World Bank
1818 H Street, NW
Washington, DC 20433
USA

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CENTRE AND CHALLENGE PROGRAMMES MEDIUM TERM PLANS 2005-2007

SC COMMENTARY AND CENTRE RESPONSES

1. OVERVIEW

Evolving Role of the Medium-Term Plan

The Medium-Term Plans (MTPs) continue to evolve as a planning, management and evaluation tool. The Science Council (SC) reviews the plans for programmatic content, for significant programme changes, and for evidence of synergies, conflicts and overlaps between Centres, systemwide programmes and Challenge Programmes (CPs). The MTPs are becoming increasingly important as programme and Centre monitoring and assessment tools. As the CGIAR moves towards defining new System Priorities more clearly, it becomes imperative that Centres align their work programmes adequately with these priorities using the MTP. The MTPs are expected to show the vertical logic from project to Centre to System allowing more effective monitoring at all levels. In a parallel on-going process, CGIAR is moving towards more systematic performance management including defining annual and periodic performance measurement indicators. The MTPs and their logframes will become the primary document specifying targets for annual and longer-term achievements against which indicator data for assessment will be provided. The SC believes that programme outputs and outcomes should be key indicators of short-term programme performance, measuring the adequacy of progress toward mission accomplishment. These must be followed by impact assessment. In the logframe presentation Centres will be expected to adequately spell out the horizontal logic from individual activities to the expected outcomes and impacts. It is expected that the new approach will result in greater impact of CGIAR research through more focused and accurate planning.

The SC review for this year has been done with the future approach in mind. The SC will continue to work with Centres and CPs to develop the MTPs in light of evolving System Priorities, the requirements for performance measurement and the changing external programme review process. As the MTPs become an effective mechanism for tracking past science as well as looking forward, they become increasingly useful for external evaluation panels, being the only document which provides a comprehensive overview of programme and which links inputs to outputs, and tracks progress through milestones to outcomes. Through this process the SC aims at increasing impact from the investment in CGIAR research and facilitating monitoring of impact.

There is need for clearer and uniform definition of logframe terminology, for clarifying the logic of logframe structure, for sharpening definition of milestones, outputs and outcomes, and for greater consistency in detail, including criteria used for assessing the MTPs. The SC will provide clearer MTP logframes and guidelines to improve the use of the MTPs for these multiple purposes. The SC hopes that with these improvements some reduction in length will be possible for many MTPs.

Current Status

In guiding the Centre to prepare the MTPs for 2005-2007, the SC anticipated some of the changes discussed above and asked Centres to pay particular attention to the clarity of the logframe presentation and milestones, as far as possible within the very limited time period available for the preparation. The MTPs for the 2005-2007 period show significant improvement. Every Centre and CP has been reported in considerable detail. This has been accomplished in spite of the earlier reporting time (deadline end of July), necessitated by the requirements for submission and review for ExCo and AGM scheduling. Overviews, commentary and logframes are extensive and provide, for most programmes, quite a complete picture.

Centre programmes are well presented, but with some variability in completeness and detail. The logframes, in particular, require modest adjustment. The linear nature of logframe structure continues to present difficulty in dealing with the more complex, highly interactive programmes such as those dealing with integrated natural resources and production systems.

The CPs have reported separately from the Centres, with logframes providing programme content and plans for all partners. This provides the first complete overview of CP with scientific direction and planned outputs and outcomes. The CP staff are to be congratulated on this very significant effort.

Systemwide and ecoregional programmes were to be reported this year as an identifiable part of the MTP of the lead Centres. These reports remain highly variable, with few SWPs/ERPs being presented in their entirety. Some presentations focus on the activities of the lead Centre only. This appears to be partly due to the highly variable nature of the programmes themselves. Some are more informally convened as “communities of interest”, while others have greater structure. The System still does not have a good overview of those programmes. In drawing the list of programmes that were requested to report, the SC was assisted by the CDDC Task Force working on SWPs and ERPs and is pleased to note that the purpose, functions and organization of SWPs in general and their role and place within the portfolio of programmes and structures within the CGIAR is being carefully examined. It is likely that a range of structures, appropriate to the purpose of the initiative and problem to be solved will evolve. The SC will work with the CDDC Task force to further clarify those roles.

Programmatic Changes

The general trend observed in last years MTPs of consolidation of Centre programmes continues. In many cases these changes are in response to changes in the Strategic Plans of the Centres. In others the MTPs go through a transitional period where the forthcoming changes in strategic direction are anticipated with minor project adjustments and subsequently implemented in refining the portfolio content. Thus some of the MTPs do not provide a clear explanation of the specific changes in eth project portfolio in response to changes in the strategic direction. The SC accepts that these strategic planning exercises help Centres to check their course and consolidate as needed, but do not necessarily result in a dramatic change.

In a number of cases there is a shift towards large theme-oriented projects covering a range of very different kinds of activities often due to the amalgamation of many smaller

projects. This does not necessarily reflect major change in programme direction or new research focus. The SC notes that several recent EPMRs have called for sharper focus among such activities within a project and encouraged strategic planning and priority setting to guide that process. This is essential to maintain the quality and relevance of the science, even where there are financial opportunities to diversify. The SC in its specific Centre commentaries reminds the Centres to focus their efforts on their comparative advantage on activities, which are most likely to result in significant international public goods.

As programmes become fewer and more broadly defined it is essential that the research priorities and goals are clearly spelled out in the MTP. Along with the integration of research and development the Centres need to provide scientific clarity for international public goods to permit extrapolation of results and outscaling for reaching large impacts across localities and ecosystems. The SC finds some Centre activities appearing to have primarily a local public goods nature, and questions whether these activities fit the IARCs' mandate. Centres are understandably responding to demands to fill the gaps at national and local levels and to show on-site impact. There is a noticeable trend, particularly in these very complex environments where progress in sustainable productivity is difficult to achieve and demonstrate, to focus on institutional processes. It is important that generalisable lessons can be drawn in reasonable time limits for expanding the use of the experiences from local processes. The MTPs often do not indicate strong links in this research to generalisable lessons learned, nor to the thematic areas of the programmes that would provide such extrapolation. The SC cautions Centres against drifting into development activities of local importance even when they would seem to be most needed by the targeted poor, and into site-specific activities without adequate provision for eventual scaling.

With several Centres the SC has observed the increasing proportion of restricted funding in the projections. This is a worrisome trend where funding influences priorities. The SC hopes that broad agreement and donor support to a limited number of System Priorities will help direct the funding to strategically prioritised areas of research in a coherent CGIAR agenda, which aims at generation of international public goods.

The SC plans to use the MTPs to monitor the implementation of agreed changes in programmes following EPMR recommendations. Thus the SC has made specific mention to EPMR recommendations to those Centres who have had EPMR over the last two years. This practice will be continued and strengthened in future commentaries.

Overall the Centre programmes are well in line with the CGIAR goals with the allocation across regions, crops and sectors, and they are in line with previous MTPs. The science is relevant to the CGIAR goals and the overall planning indicates high quality science. The SC cautions on the increasing number of activities at the local level that may deter from the focus on the IPG nature of the CGIAR.

Systemwide Synergies

In principle the MTP provide the only tool in the CGIAR System to analyse System linkages, synergies and overlaps between the different research modalities: Centre programmes, systemwide programmes and challenge programmes. Although there is progress towards these different kinds programmes providing detailed programme and project logframes, it is currently still difficult to get a comprehensive picture of collaboration and

complementarities within the System. Some of the MTPs do not give a clear explanation of the specific nature of the internal and external partnerships in different programmes.

Regarding external partnerships, many Centres list very large numbers of partners. The CPs are also meant to encourage development of broad partnerships with new types of partners. The SC encourages Centres and programmes to develop and maintain partnerships that are mutually beneficial and meaningful for the goals of the research and cautions against proliferation of partnerships for their own sake, which could lead to unjustified transactions costs without comparable gains.

The SC has for the first time reviewed the CP research plans as presented in their MTPs. These programmes are still at the early stages of implementation and they don't all have their research priorities yet clearly defined, which leads to variability in reporting for some projects. There is very much commonality in activities between the CPs and Centre programmes in areas such as crop improvement, networks and delivery mechanisms for results. If synergies are effectively built, this is a major strength of the System and its diverse components. The MTPs both at Centres and at systemwide programme level need to make these synergies easier to detect and monitor.

2. COMMENTS TO CENTRE MTPs

2.1 CIAT

CIAT's research portfolio is effectively coordinated along three major research thrusts: agrobiodiversity, land, and innovation. This allows clear specification of goals and expected outputs. These development goals are aimed at improving food security and agricultural competitiveness of the rural poor, help manage the key resource, land, and strengthen capacity for innovation.

CIAT has 17 projects and programmatically there are only minor adjustments from the last MTP which carried on from a significant revision of project portfolio in MTP 2003-2005. The main change in MTP 2005-2007 is closure of CIAT's project on climate change although activities relevant for the theme continue in other projects, including carbon sequestration within the Tropical Soil Biology and Fertility Institute (TSBF). Otherwise there are no large shifts in programme direction or in allocation of funds among CGIAR output categories. There has been a relative increase in activities in Africa and a reduction in Latin America.

The research activities at CIAT include work on beans, cassava, and rice improvement for Latin America and the Caribbean, on tropical grasses and legumes and on tropical fruits, IPM, and three projects on land degradation and three projects on Rural Innovation. This is a complex portfolio and since it includes crops researched by other Centres, a close scrutiny on CIAT's and other CGIAR Centres comparative advantage in some of these areas may be needed. The SC expects that similar projects undertaken by various Centres will be brought together under the emerging System priorities.

Projected increases in the areas of germplasm collection and improvement, and decline in the area of sustainable production are consistent with the outcomes of the SC

consultation in 2003 related to CGIAR level priority setting. An increased share of expenditures in Africa is also consistent with the 2002 CGIAR vision and strategy.

The financial situation appears sound. CIAT has been successful for some time in fund-raising, and a positive development is a shift from restricted to unrestricted funding with some donors (UK and New Zealand).

Project Portfolio

CIAT reports only minor changes in its project portfolio. The main driver for terminating the climate change project was the lack of adequate donor interest (CP proposal on Climate Change was not successful) and CIAT has included some of the project content in other projects, i.e. carbon sequestering in the TSBF Institute and modelling in the Land Use Project. This is a sensible solution, given current indecision among donors, as selected research themes fit into well-established on-going projects. Following the recommendations of a CCER, CIAT has sharpened the strategic objectives of its Land Use Project which has now outputs clearly realigned with the three developmental challenges. Other than these changes, CIAT has made only minor modifications to its earlier project portfolio.

CIAT's 17 projects contribute to one or several development goals. However the level of interaction among the 17 projects of CIAT is not always evident; for example the linkage of the process-driven work of the "enhancing of livelihoods" to the biological and resource based research of the other projects should be highlighted.

CIAT maintains a strong Genetic resources and germplasm enhancement programme covering beans, cassava, rice, *Brachiaria* and tropical fruits. The activities include a strong component of biotechnology. CIAT has major involvement in both HarvestPlus and Generation CPs. Given that CIAT's investment on rice is projected to be about US\$ 10 million in the three year MTP period, it is important to consider comparative advantages that IRRI, WARDA and CIAT have on research on rice to avoid duplication and enhance synergies and collaboration. The SC will consider whether it could play a role in bringing together the Centres doing research on rice.

With regard to work done on high value crops, it is questionable whether CIAT has a core competency in the type of research and development required for impact. The biological work on horticulture serves as an example; transgenic flowering procedures of mango, which involves techniques for clonal propagation developed with participatory selection of elite lines being used for the commercial multiplication of ten fruit species. The user groups of this work are described as "Farmer groups, farmers, entrepreneurs, and any development agencies interested in increasing rural incomes in areas where tropical fruits may have a role to play; local research and development organizations; importers/exporters of tropical fruits". The SC questions whether such research actually produces international public goods.

The TSBF has been a CIAT project since 2002. The institute's integrated activities have a strong soil nutrition entry point and the project has ambitious medium-term targets in achieving visible gains in farmer adoption, capacity building, network coverage and poverty reduction in the relevant regions.

The responsibility of the Rural Innovation Institute and its role in producing international public goods within the Project “Enhancing Rural Innovation” needs to be clarified.

Logframe Analysis

The overall goals, purposes and outputs are well defined. Projects also identify both intermediary and ultimate beneficiaries. However there is variability among projects regarding logframe specificity and clarity. The logframes for each development goal with clear longer term targets are very helpful. The achievement of milestones for research outputs should be possible to monitor. With the agrobiodiversity and land research activities, milestones are specific and quantified. In the innovation activities milestones are less precise. Milestones such as “capacity established”, “new partnerships”, “methodological approaches”, or “initiatives” verifiable through “reports” or “recognition” do not allow accurate monitoring of achievement against clearly stated plans. The logframes for the TSBF activities and systemwide programmes are very brief and general.

Systemwide Linkages

CIAT is involved in a large range of partnerships, which in general are logical and assist in fulfilling the CGIAR mandate. However their linkage to CIAT MTP projects needs to be more clearly spelled out.

CIAT coordinates the HarvestPlus CP jointly with IFPRI and hosts the coordinators for Breeding and Reaching the End User CP activities. Its research focuses on improved iron for beans and Vitamin A in cassava. CIAT’s programme components are extensively described in the MTP as separate logframes for beans, cassava and impact activities. This work appears to be integrated with the CIAT research on cassava and bean improvement but the linkages are shown only through reference of partners in CIAT’s commodity projects. The level of the integration needs to be spelled out.

In the Water and Food CP, CIAT is leading the research theme on upper watershed management. However it is not clear how these activities fit with the CIAT MTP activities. Principle integration seems to be in CIAT’s projects on Communities and Watersheds and Land Use in Latin America. However the possibilities for more cooperation with scientific institutions and organisations in the developed world should be explored, for example in the Overcoming Land Degradation Programme which is of global interest and where cooperation could be beneficiary.

In the Generation CP on Genetic Resources CIAT has new research on beans, cassava and rice. These activities seem to be well integrated and represent a logical extension of CIAT’s own research activities.

CIAT has also participated in the design of the Sub-Sahara Africa CP currently under evaluation.

CIAT is involved in a Global IPM network and knowledge systems developed with the development of Network, Web pages and databases etc. There is no indication of how this links to the Systemwide IPM Programme.

CIAT convenes the SWP on Participatory Research and Gender Analysis and is starting phase two of this systemwide programme. Around 80% of the budget is for the CIAT Project and the balance is spread among 6 other collaborators. More clarity is needed on the balance of the participatory approach at the field level (and the number of participants) with the process analysis and on the international public goods from the programme.

CIAT has been the convener of the Systemwide Soil Water Nutrient Management (SWNM) programme, which was folded into the TSBF Institute. Consequently SWNM was not included in the CDDC Task Force list of on-going systemwide programmes. CIAT has provided a separate logframe for this SWP, but its relationship with the TSBF and with the CP Water and Food needs to be described.

CIAT Response

CIAT welcomes the SC's thoughtful comments on its MTP 2005-07 which are in general accurate, constructive and conducive to an ongoing fruitful dialogue between the SC and CIAT. Because many of the most important SC comments point to future conversation, for brevity this response will only note a few of the main lines along which it is anticipated that this discussion will develop.

For example, on rice, CIAT sees the need to explain more clearly how its research programme draws down on IRRI's global rice research to add unique regional values for rice improvement in Latin America. CIAT regularly receives a wealth of improved materials from IRRI to which it incorporates a number of regionally important characteristics including early vigor for direct seeded rice (in contrast to the prevalent transplant system in Asia); specific grain quality characteristics for the Latin American market (grain size and amylose content); and resistance to unique neotropical insects and diseases not found in Asia (e.g. sogata, hoja blanca virus). A broad variety of IRRI materials including the new plant type and wide crosses are being exploited by CIAT for Latin America. A forward looking dialogue between CIAT, IRRI and WARDA with the SC to further clarify these relations would therefore be quite appropriate.

Likewise, CIAT sees the need to further interact with the SC on the nature of its international public goods research in both tropical fruits and rural innovation. In both of these cases CIAT's principal outputs are of a methodological or informational nature, and CIAT is confident that the SC will agree that such outputs can indeed represent international public goods. For their development, CIAT conducts specific work on particular issues of interest to partners who are often interested in location specific application of the results, while CIAT's objective is to extract generalizable principles that constitute international public goods. In particular, CIAT would like to engage in a broader discussion than space permits here of the inadequacy of the classic technology transfer model that has so long underpinned the work of the CGIAR, and the need to move on to an innovation approach in which users and stakeholders are intimately involved in the innovation process from an early stage.

CIAT agrees with the SC on the importance of consistent and precise approaches to the specification of milestones and on clarity on the interactions among CIAT Projects and between CIAT Projects and CGIAR Challenge Programmes and Systemwide Programmes. In the latter, in particular, there appears to be a confusion which has led the resources assigned to the Systemwide FPRGA secretariat and FPRGA research staff as being accounted as CIAT project

resources when in fact these resources with small exceptions are only administered on behalf of the FPRGA and not implemented by CIAT as such.

2.2 CIFOR

As indicated in the previous MTP, CIFOR re-evaluated its medium term strategy last year. The current Plan reflects the resulting strategic programmatic revisions for its three programmes. The resulting changes increase the Centre's emphasis on improving communication, outreach and impact. Africa is now a priority region for CIFOR, and a strategy for engagement with Sub-Saharan Africa (SSA) is being developed. CIFOR's planned expenditures in Africa are expected to increase.

In the 2005-07 MTP, CIFOR presents a clear and comprehensive overview of the research portfolio for the coming triennium, and provides a summary of its recent major accomplishments and impacts. It follows closely the format requested in the MTP guidelines. In addition to providing the centre and project logframes in the annex, the MTP narrative includes a more detailed description of each project's goals, objectives, planned outputs and future milestones.

Project Portfolio

The new project portfolio has a substantially revised structure with nine new CGIAR Projects managed within the three research programmes (Environmental Services & Sustainable Use of Forests, Forests and Governance, Forests and Livelihoods). The Plan describes the strategic context of each programme, laying out the rationale and basis for CIFOR's strategy. Despite the new structure, the SC notes that main focus and priorities of CIFOR's research over the coming triennium builds on plans presented in previous MTPs. For example, the strong focus on developing a livelihoods/poverty-oriented agenda continues, encouraged by increased focus on ecosystems that support large numbers of people. As CIFOR moves gradually to research of systems supporting human livelihoods, increased coordination with ICRAF would seem appropriate. Increased attention to dry forests and woodlands is expected to continue. For the entire period, all of CIFOR's Research projects are expected to show modest growth, but at differing rates, reflecting priorities developed by the BOT and management and donor funding patterns.

The SC considers that CIFOR's portfolio of projects has a good balance and approaches major and important issues in its three research programmes. The programmes take a broad, strategic view of the whole range and complexity of forest related parameters and issues that have to be dealt with in order to achieve the goals of the CGIAR. In developing a Plan to 2007, it is projected that overall revenues will increase by 2-3% per year. The Research Agenda requirement for 2005 is projected at \$15.3 million. The distribution of effort across the CGIAR output categories is nearly the same as in the previous plan.

CIFOR is considered as a leading institute in the area of tropical forestry and forests. Cooperation with other forest organizations is very important in order to CIFOR to stay in the front line of this research. CIFOR keeps a high profile in publishing high quality articles and books. In addition to publishing, it is important that CIFOR's research results are transformed

and implemented as planned in the output sections. It is clear from the project descriptions in the MTP that CIFOR has strengthened its emphasis on communication, outreach and impact.

In contrast to agriculture in general, only a few key institutions shape the progress that goes on in forestry, both globally and regionally. CIFOR has been active with most of the key initiatives, providing information and advice and helping through its research to shape programmes of these key international institutions, such as the UNFF, IUFRO, the World Bank, FAO, the CBD, the Convention on Climate Change, IUCN and others. This appears to be a sound strategy and reflects careful consideration as to how a relatively small institute can have maximum impact.

Logframe Analysis

The logframe presented for each individual project by CIFOR is clear. It should be possible to monitor the activities according to the formulation of milestones, which appear rather to the point in most cases. The means of verification is also very helpful in order to give the concrete reference to criteria for evaluating the success of the project. The SC is pleased with the increased emphasis on assessment of the impacts of CIFOR's research beyond publications and similar outputs that dominate many of the milestone lists.

The project outputs and milestones appear to be realistic and have an appropriate budget. The number and quality of partnerships, involving developed and developing countries and collaboration both within and outside the CGIAR are impressive. The transactions costs involved in collaborative and partnership arrangements should be monitored and consciously justified in terms of value added from such collaborative arrangements.

Systemwide Linkages

CIFOR currently participates only in the Water and Food CP, although it has been active in preparing research proposals (or components thereof) for different CPs, e.g., climate change, coastal zones and the Rainforest CP pre-proposals. CIFOR was a major partner in the latter, as the research described in this CP pre-proposal is consistent with a large component of CIFOR's own agenda. To the extent that resources allow, CIFOR is actively pursuing some of these research activities.

The SC notes that CIFOR has played an active role in the inter-centre INRM group and has spearheaded the development of the principles for successful INRM initiatives. These principles are widely used throughout the System and are also used in some of CPs and systemwide programmes, such as the ASB programme.

CIFOR is not a convening Centre for any of the SWP/ERPs, although it participates in many. It participates in the Alternatives to Slash and Burn Consortium (ASB), where it now chairs the steering committee.

CIFOR Response

CIFOR would like to express its thanks to the SC for the comprehensive and detailed feedback on the Centre's MTP. Having restructured our Project portfolio, we were especially encouraged by

the positive nature of the commentary relating to our strategy, the balance of approaches we use and the major issues we address.

We note the SC's suggestion to increase co-ordination with ICRAF on topics aiming to improve systems supporting human livelihoods. CIFOR and ICRAF have created a special joint task force to examine the relations between the two Centres and how they can be improved in the future to ensure that both our individual Centre and our combined efforts are complementary and synergistic.

Following recent internal discussions we are making minor adjustments to the Project entitled "Biodiversity in Fragmented Landscapes ". The changes are intended to better reflect the integration of biodiversity oriented research that cuts across our portfolio. We will be submitting a slightly revised MTP Project narrative incorporating these changes very shortly.

2.3 CIMMYT

The MTP is based on CIMMYT's new Strategic Plan developed in 2003. The main elements of reorientation and strengthening include:

- Social Science methods and tools will be increasingly employed in research to understand user perspective, local knowledge and learning from participatory methods in defining intervention strategies at different levels.
- Policy research will be strengthened to overcome constraints to enhancing productivity such that likelihood of products and services reaching potential user quickly are enhanced.
- Continue to strengthen use of GIS, GPS remote sensing and modelling tools in aiding decision making with respect to targeting and promoting technologies, managing information etc.
- Increasingly adopt integrative approaches in addressing Natural Resource Management Research for enhancing productivity and sustainable use.
- Increasingly use new knowledge and advances in molecular biology and biotechnology tools to leverage genetic potential to the needs of small farmers.

The MTP is structured around six programmes and five disciplinary groups. Two of the programmes are global (Genetic Resources and Impacts Targeting and Assessment) and the other four are eco-regional (African Livelihoods, Rainfed Wheat Systems, Tropical Ecosystems, and Intensive Agroecosystems).

CIMMYT does not report its actual resource allocation for the CGIAR output categories for 2003. Compared with the actual resource allocation in 2002, the relative allocations to the CGIAR output categories are changing considerably along with the new project structure. In 2005 the planned allocations are as follows: Germplasm Collection 28.2% (13.8% points up from 2002), Genetic Improvement 26.5% (4.8% points down), Policy 7.7% (3.3% points up), Sustainable Production 21.9% (5% points down) and Enhancing NARS 15.8% (7.3% points down). The changes particularly in Germplasm Collection and Enhancing NARS indicate major programmatic shifts. Participation in the Generation CP is partly responsible for the increase.

CIMMYT is in the process of implementing a major change from the commodity based programme of the past to one with a focus on improving livelihoods and contributing directly to poverty alleviation. The Centre is currently undertaking action to improve its core competencies to undertake this change. The project portfolio meets the four general criteria of the CGIAR research, although the international public goods nature of the research is not always clear. It will be important for the logframe to clearly indicate the outputs of international nature --what are the lessons for institutional innovation? How are partnerships and participatory approaches strengthened and widened, etc? Also how the use of social science tools and policy research will accelerate technology generating and adoption? One particular need is to clarify how the relatively large investment in seed systems contributes to international public goods and indeed, what is the comparative advantage for CIMMYT (and the CGIAR) in this activity? The 5th EPMR of CIMMYT will begin at the end of 2004. This is timely with the new programme direction of CIMMYT as the EPMR can better judge the likely outcomes of this major change than is possible on the basis of a single MTP.

The budget is planned at about US\$ 50 million for 2005 (36.8% above the budget in 2003) with unrestricted funding declining to about 27% in 2005 from 35% in 2003. This increasingly low level of unrestricted funding is an alarming trend for a large Centre like CIMMYT and could indicate that the new agenda is dependent on funding opportunities.

Project Portfolio

The overall project portfolio presents a good balance of efforts to address global and ecoregional issues and crop improvement and natural resource management research. CIMMYT's programmes are also contributing to several CPs.

CIMMYT is appointing two seed system specialists to work on seed production and dissemination in SSA and in south Asia. This is in response to the "bottle neck" of seed systems for the delivery of improved varieties. The SC notes that other Centres are also involved in seed system delivery raising the question whether seed systems are a core competency of the CGIAR system. Will this work be focused primarily on least-developed countries where alternative sources of technology are limiting?

Logframe Analysis

The overall goals and outputs are well defined. The milestones are for scientific research outputs with good means of verification. However there is no attempt to develop milestones for "outcomes" particularly for the new direction of the programme in livelihoods and poverty with appropriate means of verification.

Systemwide Linkages

CIMMYT hosts the Generation CP and has an extensive involvement in it where the activities are well integrated mainly with the MTP Programme 1, Genetic Resources.

CIMMYT is a member of the Water and Food CP but the links to the CIMMYT programmes are not clear. For example The MTP Programme 6 of CIMMYT has considerable activities in the integration of natural resource management at different levels including the development of models to integrate plot-level water savings to outcomes at

higher levels of analysis i.e. at the river basin. This would seem a logical target for the Water and Food CP.

CIMMYT has a focused activity within the HarvestPlus CP in developing improved nutrient content of maize and high iron and zinc content in wheat with these activities being integrated into the MTP.

CIMMYT manages the Ecoregional Programme of Rice Wheat Consortium for the Indo-Gangetic Plains. This programme was externally reviewed in 2003 and found to be very effective. The external review of the Consortium noted a need for more socio-economic studies on impact pathways, and new market pathways (for diversification), and for more linkage with IWMI for the integration of water savings from the plot/farm to the basin system level. That integration and the linkage of the CP to this very effective ecoregional initiative are not apparent in the MTP.

CIMMYT Response

CGIAR output categories - As noted in the commentary, the main cause of the shift in output percentages may be attributed to funding for the Generation Challenge Programme, which has been fully accounted for in CIMMYT's MTP budget tables.

The 2005 budget figure of 50M includes the Generation Challenge Programme budget of 13.3M. It should also be noted that CIMMYT's budget estimates include provision for budgeting expenditures at the level of approximately 2M less than income to allow for rebuilding of our reserves. Note also that the inclusion of Challenge Programme funds as restricted funding distorts the overall core unrestricted proportion.

Water and Food Challenge Programme - CIMMYT is not a full Consortium member of the CP, although it actively sought full membership. Therefore, collaboration with the CP was necessarily channeled through the competitive grant mechanism, and CIMMYT joined with partners in submitting numerous concept notes and full proposals for CPWF competitive grant funding. Some were approved; however, due to CP funding shortages, the approved projects did not immediately receive CP funding and were not allowed to proceed. At the time of submission of the Programme 6 MTP logframe, no CPWF projects had been funded, so none were included in the logframe. Shortly after MTP submission, two CIMMYT-led projects - one in the Yellow River Basin of China - were finally funded from the CPWF. Finally, CIMMYT participation in proposals for CPWF competitive grant funding is also found in the ecoregional programmes for Africa and for rainfed wheat systems.

Link between Water and Food CP and Rice Wheat Consortium - Point taken. The RWC has a separate MTP log frame and the logframes for Programme 6 and the RWC are closely linked, but to the extent this is not clearly seen in the documents, corrective action is in order.

Social science tools and methods - We will increasingly employ social science methods and tools in research to understand user perspectives, local knowledge, and learning from participatory methods, and thus better define intervention strategies at different levels. We are hiring two specialists to strengthen our social science capacity. The new Social Sciences Disciplinary Group recently organized a training workshop for all social scientists at CIMMYT on poverty. CIMMYT already conducts many participatory research activities, but

in an ad hoc manner. We are performing a qualitative assessment of participatory research at CIMMYT with Nina Lilja, to better direct future efforts. Policy research will be strengthened to overcome constraints to enhancing productivity and thereby increase the likelihood of products and services reaching potential users.

International public goods - *We agree this emphasis needs strengthening in the documentation. Methodology development and testing is a component of our work in a number of projects, but we need to do a better job of documenting and sharing our experiences in participatory research. The current study on qualitative impacts of participatory research is a step in this direction.*

Seed systems - *There is little doubt that a lack of seed production systems are a constraint to the adoption by small-scale farmers of improved varieties of many crops. Research in this area by Future Harvest Centres, including CIMMYT, should be strategic, with an emphasis on interdisciplinary approaches, and should consider the incentives (or lack thereof) for the evolution of sustainable seed systems and the required supports (markets, regulatory systems, infrastructure, among others). Clearly there are opportunities for inter-Centre collaboration in the least developed countries.*

2.4 CIP

In 2003, CIP adopted a new vision and new Millennium Development Targets-based strategy. The strategic planning exercise was in response to recommendation of the 5th EPMR in 2002. The MTP 2005-2007 represents further alignment of the Centre's programmes from previous years to reflect the new strategy. The project constellation now described in 6 Research Division projects and 6 Partnerships Programmes was largely in place in 2002. There is modest programme realignment from previous years.

CIP has long felt that the CGIAR investment in roots and tubers, based on a poverty-weighted congruence analysis of production total value underestimated the contribution those crops make to alleviation of poverty and hunger. The recent targeting exercise, using GIS-based technologies, overlays hunger, poverty, child mortality and maternal mortality maps with those of production areas for potato and sweet potato. The results are a major step both in justification of the investment and in better targeting of the specific production regions. Follow-up on-the-ground studies are needed.

By strengthening its potato and sweet potato research, CIP is responding to the projections that production of these crops is growing rapidly relative to other major commodities and that this growth is occurring in developing countries. Allocation to Germplasm enhancement is projected to increase from the actual allocation of 16.6% of the 2002 budget to a planned allocation of 23.7% in 2005. CIP's recent global analysis of potato and sweet potato production correlations with poverty supports the current balance of its activities in the different regions.

Reductions are considerable in the projects Integrated Crop Management (2005 projection 9.8% points down from 2002 actual level) and Country Projects and Regional Networks (10.8% points down).

CIP states that its longstanding mandate for genetic improvement, sustainable production systems and human dietary improvement remain at the core of its programmes. Its strategic planning exercise has thus resulted in only modest realignment, and strengthened its planned research on agricultural production, environmental health and human linkages.

Project Portfolio

The bulk of activities in the project Impact Enhancement focus on need and opportunity identification and studies on adoption, dissemination and impact. There is new emphasis on institutional learning for pro-poor impact. Continuing from 2003, only 10% of resources in this project are allocated to policy and as much as 70% to germplasm improvement and sustainable production CGIAR output categories. This appears to be in contradiction with the main objectives and milestone described for this project. This is partly a problem with the older CGIAR undertaking characterization, as nearly all of the work described for the project falls within the social science/policy realm. Its ultimate impact will be to change genetic improvement and sustainable systems, but that is not what the resources are being directly spent for. Total funding for this area is projected to remain constant. CIP's post-harvest research has been relocated to this division. In "Programme Highlights", it is stated: "New processed products from native potatoes and arracacha (*Arracacia xanthorrhizae*) have been developed and successfully introduced into markets". One new product is projected as a 2006 milestone. The 5th EPMP suggested that CIP should carefully consider its comparative advantage in commercial product development.

CIP is assuming a larger role in aspects of genetic resources policy through its involvement in the Systemwide Genetic Resources Policy Committee. The budget for Genetic Resources Conservation and Characterization shows steady growth. Conservation and characterisation remain priority areas. In its search for useful genes, CIP has made advances and is focusing on identifying genes for biotic resistances and nutritional factors, which is in line with nutrition becoming an important element of future work. Linkages with the Generation CP are important, and drought tolerance screening to the extent possible would also seem a future priority. CIP is encouraged to collaborate with national laboratories with adequate facilities in germplasm evaluation. It is likely that the importance of diversity assessment is going to increase. This may warrant shift within the project, if the relative allocation to CGIAR output category Germplasm Collection is going down as projected (from 11.4% in 2002 to 8.9% in 2005).

Along with the realignment of projects, CIP's crop breeding has been brought to a single project, Germplasm Enhancement and Crop Improvement, which for potato was one of the 5th EPMP's recommendations. While CIP's overall relative investment to the CGIAR Germplasm improvement output category remains at the current level, the relative investment to this project is planned to go up by about 7% points in 2005 from 2002 level. Nearly all of that change will occur in 2004, with steady investment afterwards. It is likely that this coordinated germplasm enhancement programme will capture the full potential of the resource available. Two past EPMPs have cast doubt whether CIP should continue with its TPS (true potato seed) research. Although it is noteworthy that products from CIP's TPS research are being taken up in parts of Asia in particular, transfer of further activity to NARS or private sector might be timely.

Research on various constraints to production; seed, soils, diseases and pest are not in project Integrated Crop Management. It is projected for considerable drop in funding as

compared to the 2002 level (see above). While research in genetics of resistance is in germplasm enhancement, research on epidemiology, diagnostics and pest and disease management, including the most important diseases bacterial wilt and leaf blight, is housed in this project and form the bulk of work for 2005. The Global Initiative on Late Blight is now housed in this project rather than becoming a separate SWP.

CIP's project on Natural Resources Management shows increasing integration of commodity research and respective production systems with the broader natural resources management approach complying with the EPMR recommendation to develop multidisciplinary approaches for sustainable improvement of cropping systems under CIP's mandate commodities. The research on systems analysis and INRM at large in mountain ecosystems is now in a separate partnership project, Global Mountain Programme.

The project Agriculture and Human Health aims at strengthening research on linkages between agricultural production, human and environmental health. This project demonstrates new visibility of nutrition and health-related research. It encompasses the research on Vitamin A in sweetpotato and links CIP's research to the HarvestPlus CP. New research on pesticide use and health risks is launched with aim at pesticide reduction. Research on the effects of neurological changes in humans caused by pesticides should be outsourced to a suitable ARI partner if this is considered an essential part of the project.

CIP's partnership programmes have been given more visibility in order to increase likelihood of funding of collaborative activities. However, it is not entirely clear how separation of the research components, such as Vitamin A research from the VITA A partnership, or the natural resources management research from the Global Mountain Programme (GMP) will allow maintaining coherence in these important areas of activity. VITA A project focuses on promotion and has over 50 collaborators that should be able to carry the responsibility for product development and local promotion. Papa Andina Initiative focuses largely on methodology and capacity development for project implementation, institutional innovation and technology dissemination. With these projects, the division of roles and responsibilities between CIP and the partners is not clear.

In project 12, Country Projects and Regional Networks, all operations are implemented through regional networks. In CONDESAN (Consortium for Sustainable Development of the Andean Ecoregion) CIP plays a coordinating role, but the Coordination Unit also manages the Andean Basin for the CGIAR Water and Food CP. This is likely to foster greater beneficial involvement of CIP scientists in CONDESAN, gaining from the "neutral role as coordinating entity" mechanism it offers - a point raised in the 5th EPMR recommendation. The GMP and CONDESAN have several areas of overlap, with resulting synergy.

Logframe Analysis

CIP reports that the project milestones derive from outputs, outcomes and impacts of logframe analyses that date back to previous programme and project structure. The milestones are specified for the first time in this MTP although the project structure was introduced a year ago. CIP expects to further refine the milestones in next year's MTP. Several of CIP's projects combine rather diverse objectives which are described in general terms. In the absence of project targets and time lines it is not easy to assess the relative importance of the objectives or the priority focus areas within them. The information given

on resource allocation or and the detailed milestones do not adequately reflect what major results are expected to be achieved within each broad output area, as compared to the CGIAR output characterization. In some instances, the logframe beyond milestones, to reflect expected outcomes and assumptions and conditions for them to occur are missing. For instance Project 1, Impact Enhancement, has three major expected outputs, one to add value to CIP's commodities through post-harvest innovations. This broad output goes largely unexplained in the logframe presentation with the exception of one product developed as 2006 milestone. Similar lack of clear alignment of milestones to main expected output areas through defined research targets applies also to other projects. The milestones themselves are clearly defined and the indicators quantify the expected annual achievement.

Systemwide Linkages

CIP is the convener of three Systemwide initiatives, Global Mountain Programme, Urban Harvest, and CONDESAN, which all are separate partnership projects in the new structure and have been going on for some years. Nearly all of CIP's own research projects have linkages with these partnership programmes. The project work within CIP is defined in its regular projects, with reference to the SWPs. Each SWP is provided in totality as separate programmes. This is commendable.

CIP is involved in all three on-going CPs. CIP's work on screening of genetic resources and germplasm enhancement is linked to the Generation CP. Its research on breeding for enhanced nutrition in general and Vitamin A research on sweetpotato in particular is linked to the HarvestPlus CP. The CONDESAN Coordination Unit manages the Andean basin for the CGIAR Water and Food CP. CONDESAN and GMP are also linked to the African Highlands Initiative.

From 2005 CIP will assume the convening role for the Systemwide Programme on Integrated Pest Management (SP-IPM), to which the projects on Impact Enhancement, Natural Resources Management, Agriculture and Human Health, Urban Harvest and Integrated Crop Management are already linked. The latter has also linkages to the Systemwide Programme on Participatory Research and Gender Analysis and the Collaborative Research Programme for Sustainable Agricultural Development in Central Asia and Caucasus. CIP participates in the Systemwide Genetic Resources Programme through its Genetic Resources project. The Natural Resources Management project is linked to the Systemwide Livestock Programme.

CIP Response

With respect to the Visioning, Realignment, and Impact Targeting Exercise, we would like to thank the SC for recognizing that the results are a major step to justify donor investments for research and development in target poverty regions. This target definition is indeed strongly driven by the high coincidence between production areas and poverty, and the high potential for growth in area and productivity of our principal commodities. We agree with SC that on-the-ground follow-up work is needed. As indicated in the proposed Pro-Poor Research and Development Cycle (see page 83 of CIP's 2003 Annual Report), the next step is more fine-tuned on-the-ground participatory needs and opportunity assessment. And, as indicated on page 4 of the MTP, the Impact Enhancement project on Characterizing User Needs and Opportunities for Agricultural Knowledge and Technologies will take the lead in this work.

Project Portfolio - One aspect of the Impact Enhancement Project, adding value to commodities through post-harvest innovations, will focus on how to utilize the germplasm that CIP holds in trust, not just to alleviate hunger but to target specifically poverty through adding value to products. This research will continue work of the previous Post-harvest Project and explains the significant emphasis on genetic resources within the Impact Enhancement Division – enhancing impact through added value to genetic resources. Within this Project and in the uptake and utilization platforms for the post-harvest research pursued by the PapaAndina Partnership Program, we are working with a consultant to consider our competitive advantage in commercial product development, as suggested by the 5th EPMR and the CIP Board of Trustees. We expect to incorporate the outcome of the consultancies into the CIP Research Programme as we move forward.

Within the Research Division on Germplasm and Crop Improvement, we actively pursue participation of NARS programmes in Latin America (LAC) and Asia. Public and private sector based LAC potato breeders recently met at CIP to create a Latin American network of potato breeders. This cooperation, as well as the linkages with the Generation CP, will assist in our search for useful genes. In discussing research needs with the Latin American scientists, several of the NARS scientists (especially Argentina and Chile) emphatically voiced their desire that the TPS research not be discontinued. We have learned a great deal about where TPS may (and may not) be expected to contribute to potato production systems, but our NARS partners feel that research is still needed to develop lower-cost reproduction systems for TPS. Within the spirit of redefining our relationship with our NARS partners full research collaborators we are developing a project proposal to carry out further TPS research as a joint NARS-CIP initiative.

Within the Research Division of Agriculture and Human Health, the research on neurological impact of pesticides on human health and decision-making has already been conducted and published in refereed journals (in English) and a CIP-published book (in Spanish). This research was designed and overseen by Dr. Donald Cole, a physician and specialist in community medicine from the University of Toronto Department of Public Health. Dr. Cole is a CIP Associate Scientist. This groundbreaking research has been an essential part of the “Trade-Off” analysis to understand the links between production economics- ecosystem health and human health (the theoretical framework of the Division of Agriculture and Human Health). The research outputs have been critical in developing community training materials and policy briefs for national decision-makers. Follow-up studies will continue in conjunction with partners who possess expertise in human epidemiology and community medicine.

Logframe Analysis - The Project Structure specified in this MTP became operational in January of 2004, and we have not completed the in depth logframe analysis of outputs and outcomes. We appreciate the SC's feedback that the milestones and indicators under the new Project Structure are clearly defined. We, likewise, welcome its advice to focus now on clearer alignment of the milestones with principal expected outcomes. This will be a primary objective of CIP's November 2004 Annual Review.

Systemwide Linkages - We are grateful that the SC recognizes and commends CIP for convening and managing the Systemwide and Eco-Regional Programmes (SWERPs) as distinct programmes. This philosophy extends to all of the Partnership Programmes (PPs). By clearly identifying each of these partnerships (including the SWERPs) we seek to provide greater visibility and at the same time respect that each of these Partnerships, hosted and convened by CIP, has a mandate that is broader than the CIP research programme. Each has its own

Steering Committee that approves and oversees the R&D agenda for the partnership. These Partnership Programmes are linked to CIP by what we call Collaboration Plans. That is, only a part of the research conducted or supported by the PP will be directly related to the CIP Research Divisions. Other parts of the PP research and development agenda will be conducted in collaboration with other partners that could be other Future Harvest Centres, universities, NARS, NGOs. Referring back to the example above, if we look at the PapaAndina initiative, the Impact Enhancement Division is addressing the research question; What is the proper process model for linking small potato producers to the market?, and they are testing two different process models. The PapaAndina Initiative is applying these models within partnerships in Bolivia, Peru and Ecuador and is asking research questions related to organizational learning; i.e. How do we facilitate learning among partners within the region and turn the learning process over to the partners? The needs expressed by the partners have come back to influence the research in Germplasm Enhancement and Crop Improvement, i.e. screening native potatoes for commercial traits. The needs and opportunities are negotiated between CIP Research Divisions and Partnership Programmes and presented as Collaboration Plans.

We appreciate the SC's stressing of the linkages between the Systemwide Programme on Integrated Pest Management (SP-IPM) and other initiatives, as an example of the way SWERPs convened by CIP create synergies with and Research and Challenge Programmes and SWERPs convened by other Future Harvest Centres. We hope to capture similar synergies from the contribution of CIP's Research Divisions and Partnership Programmes with SWERPs and CPs convened by other Centres.

2.5 ICARDA

The ICARDA Strategic Plan was completed in 1998 and was the basis for the earlier MTP, which had 19 research projects. The project structure described in the current MTP has changed, nesting the 19 former projects into six themes, or integrated Mega-projects (MPs), and an ecoregional programme Collaborative Research Programme for Sustainable Agricultural Development in Central Asia and the Caucasus (CAC). Drivers of this change have been the response to the recommendation of a CCER of ICARDA's "outreach" in 2003; inputs and updates from the CAC NARS forum, and regional stakeholder meetings, beginning of a new strategic planning process (embarked upon in 2004) and a focus on the goal of poverty alleviation.

The ICARDA MTP 2005-2007 thus represents an interim MTP leading to ICARDA's next strategic plan. Although there is no substantial change in direction in the new MTP and the reduction in project number (as advised by the earlier CCER) is commendable, it is not clear what activities have been deferred, transferred or finalised as a result of the focus from the former 19 projects to 6 MPs.

While the MTP MPs contribute to CGIAR goals, the international public goods nature of some of the research in Projects MP 4 (Diversification and Rural livelihoods) and MP 5 is not clear. ICARDA is also a key member of the Future Harvests activities to rebuild Afghanistan (and possibly Iraq). The EPMP conducted in 1999/2000 raised many recommendations about the direction of the research programmes at ICARDA. It may be opportune for ICARDA to commission an external review on its current programmatic direction, as an input into the next EPMP tentatively scheduled for 2006.

The overall budget estimate is for US\$ 26.7 million of which around two thirds is from restricted funds. There are large changes in the financial plan between actuals for 2003 and the proposal for 2005. Germplasm improvement and Sustainable production are expected to go up by 5% points and 9.3% points respectively. Germplasm collection and Enhancing NARS are projected to go down by about 6% points and 9% points respectively. It would be essential to know the reasons for changes in the budget in order to better understand the shifts in direction apparently made by the Centre.

Project Portfolio

The first four MPs address specific themes: Management of scarce water resources; Integrated Gene Management/ Conservation of Agrobiodiversity; Combating Desertification; and the Diversification of Rural Livelihoods. MPs 5 and 6 are cross-cutting: MP5 supports the research agenda by providing knowledge and feedback required to refine the targeting of research to alleviate poverty. MP6 focuses on the management and dissemination to end users of the research knowledge generated by the other projects.

Much of the earlier germplasm enhancement and integrated pest management research is now collected under MP 2 (Integrated Gene Management) and MP 4 (Diversification and Rural Livelihoods). The latter encompasses a large number of outputs across different disciplines. In consequence, these MPs are large (around 8 million dollars each) and have a large number of activities (as indicated by milestones numbers); they need more focus on activities that will produce regional/international public goods.

Logframe Analysis

The overall goals and outputs are defined. In some projects the milestones for the scientific research outputs are described in a way that they can be measured (e.g. MP 2), a tendency enhanced by the inclusion of the different CP outputs and milestones. Other MP milestones are not described in a means for easy verification and remain vague. A consequence of the adoption of the MP format is that there would appear to be far too many milestones for each output / project for sensible monitoring, suggesting a need for more focus (as was recommended in the EPMR).

The MP output indicators have been revised, but the activities under the six MPs include the intermediary targets (project milestones) of the former 19 MTP projects.

Systemwide Linkages

ICARDA convenes the Eco-regional Collaborative Programme for Sustainable Agriculture Development in Central Asia and Caucasus (CAC). The CAC has nine collaborating CGIAR centres and addresses work relevant to the five countries of Central Asia; and three in the Caucasus. The overall impression is of an active and productive research-for-development programme, particularly in Central Asia.

ICARDA also contributes to:

- The HarvestPlus CP (aiming as part of a focused activity on beta carotene, iron, and zinc to improve the nutritional quality of durum wheat (phase I) and barley and lentil (Phase II) – included under MP4.
- The Generation CP with activities included in MP2 (Integrated gene management).
- The Water and Food CP (three projects – which contribute to MP1: Management of scarce water resources). It is not clear if these are entirely new activities and how the interaction through the CP increases outcomes.

ICARDA participates in joint staff appointments with ILRI on small ruminant health (in the NENA region), with IFPRI on community approaches to integrated feed/livestock management strategies, with IWMI on marginal water quality.

ICARDA is the CGIAR focal point for the United Nations Convention to Combat Desertification and although a pre-proposal for a CP was not successful, planning for a regional consortium on Desertification, Drought, Poverty and Agriculture (DDPA) is continuing.

ICARDA participates in the SWPs: SGRP, SLP, SP-IPM, CAPRI; PRGA, and the Comprehensive Assessment of Water Management in Agriculture.

At the time of the last EPMR, ICARDA was the convening Centre for a system wide programme for “On-farm Water Husbandry in WANA”, but this initiative is not reported as such in this MTP.

There would seem to be much scope for the sharing between ICARDA and ICRISAT of methods and tools for research on natural resources management in dry areas and its impacts as well as the development of best bet, pro-poor options (e.g. MP 5) and for the dissemination of this information (MP 6).

ICARDA is a key member of the Future Harvests activities to rebuild Afghanistan, but the role and time frame for engagement of ICARDA is not clearly defined. In 2002/3 under the Future Harvest Consortium to Rebuild Agriculture in Afghanistan, ICARDA received funding from USAID to establish quality seed systems and needs assessments of various agricultural sectors. This country-specific development programme to assist the re-establishment of aspects of the agricultural system rendered timely assistance, and emphasised the utility of the CGIAR gene bank holdings for such purposes. This involvement has attracted other country-specific projects from bilateral donors. This produces a conundrum for the Centre. Another consortium is being prepared to play a similar role in Iraq. However, apart from the germplasm replenishment role, it is likely that other providers could provide the needed assistance in the future. A long-term national development role for CGIAR Centres, whose *raison d'être* is to conduct research for international public goods, is not favoured by the SC. It is appropriate to ask if this development activity is regarded as a one off short-term engagement and how has it affected the main programme of ICARDA.

ICARDA Response

ICARDA sees the SC commentary on its revised-format MTP 2005-2007 as positive overall. The key driver for evolution in the Centre's research agenda is our focus on poverty alleviation in the dry areas eco-region. The six new megaprojects (MPs) have been formulated keeping this focus in view incorporating elements of the research already being covered under the earlier 19 MTP projects. Given the size limitation of the MTP summary it was not possible to clearly indicate what activities have been deferred, transferred or finalised as a result of the focus from the former 19 projects to 6 MPs. However as appropriately identified by the SC in the Logframe section of their commentary, 'The MP output indicators have been revised, but the activities under the six MPs include the intermediary targets (project milestones) of the former 19 MTP projects.' For example research on germplasm improvement has become more focused on enhancing water-use efficiency and adaptation to increasing aridity, as well as improved nutritional quality and functional traits for added value. As we complete the strategic planning the focus would become sharper in our future submissions.

The SC comments that while the presented MPs contribute to CGIAR goals the international public goods (IPG) nature of some of the research in Projects MP 4 (Diversification and Rural livelihoods) and MP 5 is not clear. Given the need for brevity and exactness in project milestones it may sometimes be unclear how a milestone is an IPG. However the research is planned with IPG in focus but in a pilot study format, which will then be the basis for scaling up and out as part of the integrated natural resource management (INRM) approach.

The SC suggested that it might be opportune for ICARDA to commission an external review on its current programmatic direction, as an input into the next EPMR tentatively scheduled for 2006. In fact the ICARDA Board of Trustees being conscious of this need has already commissioned a series of CCER reviews to encompass ICARDA's research: A CCER on 'Outreach' was completed in 2003, as mentioned in the MTP 2005-2007 summary; a CCER on Integrated Gene Management was undertaken in June 2004; and a CCER on Natural Resource Management and Social Science research is planned for early 2005. These reviews would thus provide input for our strategic planning and the next EPMR.

The SC has commented on changes in the financial plan between the actual values for 2003 and the proposal for 2005 and has asked for the reasons behind such changes. 'Germplasm Collection' and 'Enhancing NARS' are projected to go down by about 6% points and 9% points respectively by 2005. The reduction in allocation to 'Germplasm Collection' is partly because the grant to upgrade the ICARDA gene bank, as part of the CG-wide Global Public Goods Initiative, started in 2003 but winds down by 2005. Additionally, the major GEF-funded project on 'Conservation and Sustainable Use of Dryland Agrobiodiversity with the NARS of Jordan, Lebanon, Syria and the Palestinian Authority' will end in 2005. The reduction in allocation to 'Enhancing NARS' is because during 2002/3, under the Future Harvest Consortium to Rebuild Agriculture in Afghanistan, ICARDA received funding from USAID to support emergency quality seed activities, and needs assessments of various agricultural research and development sectors in Afghanistan. The bulk of these funds were attributed on Strengthening National Seed Systems. During 2004 the proportion of funding allocated to seeds systems declined overall in Afghanistan with a corresponding 'bounce-back' effect of the proportional allocation to other CGIAR outputs. This reduction in seed system activities in Afghanistan will continue in 2005.

Project Portfolio - *The SC commented that MP2 on Integrated Gene Management and MP4 on Diversification need more focus on activities that will produce regional/international public*

goods. Space did not allow us to explain that activities in MP2 on Integrated Gene Management are producing for Dry Areas participatory methodologies and approaches for national programmes; and a wide range of improved germplasm based on wide crosses with land races and wild relatives adapted to specific niches within the dry ecoregion all of which are IPG. In MP4 on Diversification, as mentioned earlier, space did not allow it to be explained that the research is planned in a pilot study format which will then be the basis for scaling up and out.

Logframe Analysis - The SC noted that there were far too many milestones for each output / project for sensible monitoring, suggesting a need for more focus (as was recommended in the EPMR). While there is a need for focus, the MTP is not only written for monitoring purposes, which requires a few large aggregate milestones but also for internal use where the preference is for dis-aggregated milestones. A balanced approach will be used in the future.

Systemwide Linkages - Regarding ICARDA research within the Challenge Programmes, the SC indicated that it is not clear if these are entirely new activities and how the interaction through the CP increases outcomes. The activities in the CPs are new to ICARDA but build on existing activities and expertise. We will wait to see how the interaction through the CP increases outcomes.

The SC noted that at the time of the last EPMR, ICARDA was the convening Centre for a system wide programme for “On-farm Water Husbandry in WANA”, but this initiative is not reported as such in this MTP. This eco-regional programme ran from 1997-2001. Learning lessons from this program, we continue activities within MP1 on this important theme with non-Centre partners – beyond the Systemwide umbrella.

The SC recognized scope for the sharing between ICARDA and ICRISAT of methods and tools for research on natural resources management in dry areas and its impacts as well as the development of best bet, pro-poor options (e.g. MP 5) and for the dissemination of this information (MP 6). We concur and for this reason ICARDA with ICRISAT developed a Challenge Programme pre-proposal on ‘Agriculture to Combat Desertification and Poverty (DDPA),’ which is evolving into a Consortium. Through this vehicle, we aim to capture the synergies of ICARDA in non-tropical dry areas and ICRISAT in the semi-arid tropics.

ICARDA leads the Future Harvest Consortium for the Rehabilitation of Agriculture in Afghanistan (FHCRAA) comprising IARCs, ARIs, NGOs and national partners. The SC indicated that the role and time frame for engagement of ICARDA is not clearly defined, and asked if this development activity were a one off short-term engagement and how it has affected the main programme of ICARDA. As Afghanistan lies within ICARDA’s ecoregional mandate (CWANA) and is one of the poorest countries in the world, our involvement there will inevitably be long-term. However our role there has evolved from the initial necessity of rehabilitation into one of research for development with strong links to development partners. The FHCRAA Consortium provides a platform for both research and development members. To illustrate this changing role, in the first 18 months (2001/2) ICARDA focused on Needs Assessments and Quality Seed to kick-start the seed system. We look for International Public Goods in these rehabilitation activities and for example plan with FAO to publish ‘Lessons from Seed Systems Rehabilitation in Afghanistan’. Now, however, our focus has shifted to research for development (rather than development per se). The decrease in proportional allocation of resources to ‘Enhancing NARS (Seed Systems)’ from 2003 to 2005 was perceptively noted by the SC (see bottom paragraph on Page 1).

ICARDA's current portfolio of projects in Afghanistan includes: (a) adaptive testing of improved germplasm funded by OPEC Fund; (b) rainfed seed system study and germplasm diversity investigations funded by IDRC; (c) testing of feed and dairy options funded by RALF-DFID; (d) human resource development funded by JICA; (e) field crop demonstrations funded by USAID; (f) adaptive research on protected agriculture (low-cost plastic houses) funded by USAID; and (g) action research on village-based seed systems funded by USAID.

We are also managing the Research for Alternative (for opium cultivation) Livelihoods Fund (RALF) of DFID, the results of which are international public goods. This mission in Afghanistan has strengthened the other research at ICARDA by testing technologies previously identified in other countries with similar ecologies, and, because of the close feedback link with development partners, provided an avenue for innovations from adaptive research to flow into development and into 'needy hands' of the poorest in the region.

2.6 ICRISAT

ICRISAT has developed its 2005-2007 MTP in response to the recommendations of the 2003 External Programme Review and External Management Review and subsequent commentary received from the interim Science Council, ExCo and the CGIAR AGM in late 2003. These reviews and a strategic planning process initiated in 2003 were critical inputs in formulating global, regional and sub-regional logframes and the resulting programmatic adjustments that are intended to bolster ICRISAT's presence in SSA. The MTP describes the modified research portfolio, 5 global themes (GT), that have emerged as a result of that exercise. These are:

- Harnessing Biotechnology for the Poor (GT1)
- Crop Improvement, Management and Utilization for Food Security and Health (GT2)
- Land, Water & Agro-diversity Management - Agro-ecosystem Development (GT3)
- Sustainable Seed Supply Systems for Productivity (GT4)
- SAT Futures and Development Pathways (GT5)

Project Portfolio

The structure of ICRISAT's research portfolio has been tightened in accordance with the EPR recommendation to reduce the number of GTs (MTP projects) from six to five. The work of the previous GT "Enhancing Crop-Livestock Productivity and Systems Diversification" has been incorporated into GT2 and GT3. The detailed scientific recommendations in the EPR were largely accepted by ICRISAT and changes along the lines suggested have been incorporated into the plans of the GTs and their supporting units.

The retention of a visible social sciences presence (GT5) is not fully in line with the recommendations of the EPR Panel, however this decision is supported by the Science Council commentary on the EPR. ICRISAT has decided to retain the momentum of its portfolio of projects on integrated natural resource management in Asia for the time being. These projects, ICRISAT believes, are making a major impact on their target group of poor farmers and, additionally, valuable international public goods are expected to be generated through this research. For credibility, it is essential that ICRISAT makes efforts to systematically document these impacts.

Responding to EPR suggestions, prioritization of research focus in crop improvement in all the regions has occurred and closer working relations with scientists in GT Biotechnology have been engendered. The EPR had observed that it is not prudent for ICRISAT to mainly rely on breeding programmes at Patancheru, India as the source of germplasm for Africa. Hence, ICRISAT is strengthening the plant breeding programmes in SSA (in Bulawayo, Malawi, Nairobi and Niamey), with additional staff positions. Emphasis on the development of parental lines for cereals and varieties for legumes will continue in Asia. However, in SSA, emphasis will be on varietal development and strengthening of participatory breeding and varietal selection approaches.

In response to the recommendations of the EPR, last year's GT on Water, Soil and Agrodiversity Management for Ecosystem Resilience and parts of the GT on Crop-livestock Systems and Systems Diversification have been merged into the new GT3 with a greater focus on the African SAT. Core resources are to be redeployed in a phased manner to better address the major challenges of land, water and agro-diversity research.

ICRISAT's research on food security and poverty alleviation is highlighted in GT5. Emphasis is given to the direction of future investment in research, the assessment of commodity and market trends, understanding rural livelihoods and the dynamics and determinants of poverty, and identification of constraints to adoption and impacts. The recent EPR recommended a more vigorous implementation of the recommendations of the Socio-Economics and Policy Programme (SEPP) CCER. The focus therefore is now on strategic research, synthesis studies, and micro (VLS) and macro studies, sharply focused to best inform macro and longer-run priority setting in ICRISAT. It is essential that these efforts materialize and that their specific outputs, presumably information and publications, are linked to outcomes that ensure intermediate and long-term impact. Attention should be given to documenting SEPP's influence and impact.

In response to the EPR recommendation specific to the GT4, Sustainable Seed Supply Systems for Productivity, links with other GTs on biotechnology, crop improvement, agroecosystems and SAT Futures are being strengthened in recognition of the importance and need for greater interaction between upstream and applied crop improvement research and the broader range of institutions that are involved in seed supply.

The final recommendation of the EPR was that ICRISAT should transfer its HQs to Africa and re-orient its scientific effort and resources to tackle the problems of SSA more demonstrably and effectively. Moving its HQs to Africa is being studied but ICRISAT is responding to part of this recommendation in the current Plan and will continue to in subsequent plans. Since the end of the review period (December 2002), ICRISAT has strengthened its presence in SSA with eight additional International/Regional/PDF staff positions (one jointly with ILRI), two JIRCAS joint appointments, two ASARECA Coordinator joint appointments, and one CIRAD joint appointment. ICRISAT has also initiated a Task Force composed of Governing Board members, donor representatives and representatives of African Regional and Sub-Regional Organisations to advise the ICRISAT Board on ways to both increase its research commitment to Africa and also to foster the visibility of this effort. The SC is pleased to note the positive response of ICRISAT in this regard.

Last year ICRISAT launched its 'flagship information, education and communication initiative', known as VASAT (Virtual Academy for the Semi-Arid Tropics). This is intended

to be a coalition of partners to develop an effective, impact-oriented information and communication programme that uses the methods of contemporary non-formal or open learning paradigm. It is difficult to determine the extent of effort, specific activities, and outputs and milestones associated with this ‘project activity’ (only ‘VASAT consortium reports’ are listed in the logframe). More importantly, the SC fails to see in this MTP a sufficient rationalization for this initiative, particularly in response to the assessment by the EPR team, who had had serious reservations about the role, scope and objectives of VASAT. Indeed, the EPR team seriously questioned ICRISAT’s comparative advantage in operating this distance learning initiative. The SC encourages ICRISAT to seek collaboration with the proposed CGIAR Global Open University.

Overall, the project portfolio appears balanced and realistic, but the Centre could improve the presentation and substance in the MTP in two ways:

- (1) providing a greater number (in some cases) and specificity for critical elements such as outputs and milestones – to permit solid performance assessment in subsequent years; and
- (2) providing more evidence that the projects are ‘making a major impact on our target group of poor farmers’ and producing ‘valuable international public goods’ – could be linked to verifiable indicators in the project logframe.

Logframe Analysis

Centre and Project Logframes have followed recommended guidelines. Centre logframe lists 2004 milestones but not 2005-2007, and there are some definitional questions – elements listed as ‘impacts’ are not impacts per se.

There is considerable variability across (and sometimes within) the project logframes for outputs and milestones, in terms of both quantity and quality. Outputs and milestones in some cases are vague (e.g. Output 2 under the Land, Water and Agro-Diversity Management project: “Soil, water, crops and agro-biodiversity interactions for improved crop-livestock system productivity understood in Asia and Africa”). For some of these it will be difficult to determine whether an output deliverable was achieved or not.

The logframe for the SWP on Desert Margin Programme (DMP) requires further elaboration/description in terms of outlining the critical researchable topics and the scientific tools to be applied, as well as greater definition of the milestones – outputs – uptake and likely outcomes pathways. Only seven milestones are listed for 2004, and six each for 2005 and 2006, and only three for 2007. These are too few and not specific enough for a programme budget of approximately US\$ 155 million for 2002-2008 (budgets for 2005-2007 not provided). This logframe presentation needs considerable improvement. The “highlights of progress” are just a listing of appointments, various meetings, etc. e.g., “funds transferred to DMP partners” is listed as an indicator of progress. Results of substance are too few. The budget categories are not transparent, e.g., “baseline” “alternative”. Generally, this logframe needs a clearer articulation of the major research thrusts with greater specificity in terms of the expected milestone – output – outcome pathways. It is not clear to what extent activities within the DMP reflected are housed in the Centre MTP programmes.

Systemwide Linkages

ICRISAT has taken steps to integrate the current CP and other systemwide activities into its research mainstream indicated in the MTP. GT-Biotech is actively involved with the scientists in GT Crop Improvement in two CPs. In HarvestPlus CP ICRISAT has two projects - Groundnut fortification for β -carotene and Pigeonpea enhancement for sulphur-rich amino acids. In the Generation CP, ICRISAT is involved in all four sub-programmes, which include activities related to diversity assessment and marker-assisted improvement of drought tolerance in sorghum, pearl millet and chickpea. The GT Agro-ecosystems, GT Crop Improvement, GT Seed Systems and GT SAT Futures are involved with the Water and Food CP.

ICRISAT is involved in many of the CGIAR's SWPs, and its involvement appears to be substantial in more than just a few. It is the convener for the DMP, in which a number of CGIAR Centres and NARS partners are actively engaged. The DMP is a collaborative initiative of five CGIAR Centres with UNEP's Global Environmental Facility (GEF) involving nine African countries.

Good information and progress updates are provided for each of these SWPs, but it is not possible to identify the specific elements of the DMP and the other SWPs within ICRISAT's MTP projects, nor is it possible to identify ICRISAT's specific contribution (in terms of outputs, etc.) vis-à-vis its partners in the DMP and other SWPs.

ICRISAT has provided a brief summary of its informal centre-to-centre collaboration with other CGIAR Centres (outside of CP and SWP), providing a useful snapshot of the extent of its joint work with other Centres. These bottom-up, demand driven collaborations are no doubt adding good value to ICRISAT's (and the System's) outputs.

ICRISAT Response

ICRISAT welcomes the SC's positive commentary on the details of its MTP 2005-2007. We offer responses on the few points of contention and information where mitigative action has already occurred.

In its continuing efforts to address further the thrust of the EPMR recommendations, ICRISAT management recommended to the ICRISAT Governing Board at its September 2004 meeting that its portfolio of global themes be further rationalized from 5 themes to 4 in order to enhance the integration of the work on seed systems with that of crop improvement, policy and impact. The proposal has now been approved by the ICRISAT Governing Board for implementation in 2005. This re-organization involves the partial merger of the Global Theme on Seed Systems with the Global Theme on SAT Futures and Development Pathways in order to create a new Global Theme entitled Markets, Policy and Impact. The remaining crop improvement- specific elements of the Seed Systems Theme have been incorporated into the Crop Improvement Theme. This administrative adjustment not only creates Themes of more equal size at ICRISAT for logistical efficiency but also responds to the SC's call for greater documentation of impact and international public goods. This is evident particularly within the context of the social sciences and for greater integration of the work of the upstream work in crop improvement with the broader range of institutions involved in seed supply. More evidence will now be provided through this new Theme of institutional impact on poor farmers and the articulation of new

international public goods. Milestones and outputs linked to verifiable indicators in the Theme and associated logframes in support of this move will be reflected in the 2006-2008 MTP for which the 1st draft has to be available for the ICRISAT Governing Board in March 2005.

ICRISAT is encouraged by the support of the SC to retain a visible social science presence. Our social science research team is now vigorously implementing the EPR/CCER recommendation to sharply focus on strategic research, synthesis studies, and micro (VLS) and macro studies to best inform the macro and longer term priority setting in ICRISAT. In addition, it has productively benefited from the strong EPR/CCER recommendation to conduct an Annual Social Scientists Meeting. This once-a-year meeting has been conducted during the period 2002-2004, enabling all social scientists from all ICRISAT locations and global themes to effectively compare experiences, methodologies and research findings, as well as identify and brainstorm cross-regional and cross-continent burning issues and inter-disciplinary initiatives/projects towards achieving IPGs. The team also developed a monitoring and evaluation strategy for ICRISAT, now approved by the ICRISAT Governing Board, to achieve a systematic monitoring and documentation of ICRISAT's output-outcome-impact pathways.

The ICRISAT Governing Board now regards the EPR proposal of shifting the ICRISAT HQ to sub-Saharan Africa (SSA) as a closed issue following the CGIAR decision in Nairobi at AGM 2003. However, the Governing Board is strongly in support of the efforts for increasing ICRISAT's research commitment to SSA and the fostering of the visibility of this effort. They approved ICRISAT's Management proposals at their recent meeting which were designed to empower further the two ICRISAT regional hubs in SSA (East & Southern Africa and West and Central Africa) through the elevation of the Regional Representatives to Regional Director status with consequent much enhanced delegation of authority & budget from the Centre. The Regional Directors become permanent members of the institute-wide decision making Management Group. This change, which will also be implemented at the beginning of 2005, is designed to continue to bolster ICRISAT's SSA agenda and to permit it the greater visibility which it deserves.

With reference to the logframe analysis, ICRISAT has declined to go beyond 2004 in providing projected milestones for its global logframe outputs as it awaits clarification resulting from the system's ongoing debate on performance measurement indicators. Likewise, definitional issues are currently on-hold until the specific instructions are finalized. The SC is aware that ICRISAT is a leading member in this debate and can be assured that the institute will respond appropriately once it is timely. ICRISAT has also recently concluded its Global Planning Exercise for 2005 and new, tighter logframes with better-defined milestones and outputs are in preparation. These are presently being finalized at a sub-regional/regional level. The Theme logframes are also being re-worked to nest more logically with the sub-regional/regional/global logframe series. It is expected that this upgraded logframe series which will not be available until early 2005 and will be presented in the 2006-2008 MTP. This will include new logframes for Knowledge Management & Sharing activities (incorporating VASAT) and the Desert Margins Programme.

ICRISAT is concerned by the SC's views on their response to the legitimacy of their VASAT initiative. The CGIAR at AGM 03 stressed the importance of IT and knowledge management in the promulgation of good science. The demand for such information is apparently great and the new opportunities in providing such information to farming communities need to be exploited. VASAT is designed to be a dominant tool in ICRISAT's efforts to scale-out its research findings. It provides information in user-friendly form and at minimal cost directly to the disadvantaged farming communities of Asia and sub-Saharan Africa through a consortium of diverse partners

who can contribute effectively in this area. As the SC wants ICRISAT to have more visible impact and to disseminate its public goods more effectively, it seems illogical to question the validity of a tool designed to achieve precisely this outcome. In addition, ICRISAT's VASAT initiative is already active as a major proponent of the CGIAR Global Open University in South Asia and ICRISAT's Director General is one of the five principals on the Centre Directors Committee tasked to ensure the CGIAR GOU's immediate growth and development.

ICRISAT accepts the somewhat critical tone of the SC's commentary of Phase 1 of the SWP Desert Margins Programme but notes it is somewhat premature for a project which has only just become fully operational. However, as an external review of the 1st phase of the DMP (18 months) has just been completed by the GEF, we are in the process of absorbing the recommendations of their report. These were in general favourable but also noted that more concrete results needed to be forthcoming in phase 2. It should be noted by the SC that this SWP is essentially designed only to facilitate what is otherwise a wholly NARS-driven process over 9 countries in SSA and this has been slow to become operationalized but is now fully functional. As the logframe detail and research thrusts are determined initially by the DMP steering committee (largely external to the CGIAR Centres), it will be necessary to report improvement through the vehicle of the 2006-2008 MTP as the documentation cannot be directly modified by ICRISAT without their consent. However, the steering committee of the DMP will be informed of the SC's commentary to facilitate appropriate remedial action. At present the DMP activities are almost completely subsumed in the planning and reporting of the ICRISAT Global Theme on Agroecosystems Development. In future, additional contributions are also likely from the new ICRISAT Global Theme on Markets, Policy and Impact.

2.7 IFPRI

The IFPRI 2005-2007 MTP highlights new projects and modifications to existing (2004-06 MTP) ones. The Centre plans to provide a more complete summary in next year's MTP. This intent seems appropriate in light of the Centre's ongoing EPMR, which will be completed (with relevant analyses and results available) well before the 2006-2008 Plan is due. In addition, the ISNAR programmes have been brought under IFPRI management administratively but the ISNAR Programme Advisory Committee has only recently met, with recommended programmes not scheduled for finalization until later in 2004. The present ISNAR-related logframes are thus a continuation of the relevant projects from the last ISNAR MTP.

IFPRI's mission statement and the three priority themes (Global Food System Efficiency, Food System Governance, Food System Innovations) which constitute its strategy are clearly and concisely stated, and seem very relevant for guiding the Centre during this period of rapid change and expansion. The addition of ISNAR activities broadens the institutional and human resource development beyond those concerned with policy, so some re-working is in order. The added nutrition and food quality research through HarvestPlus CP seems an excellent fit.

Changes at IFPRI during 2003-04 have been significant and positive. There has been a major expansion in its research and outreach portfolio with the incorporation of the ISNAR programme. Equally significant has been the initiation of the IFPRI co-led HarvestPlus CP, accompanied by successful additional funding. IFPRI's budget rose by 38% in 2004, roughly half of which (\$4.4 million) is from the new ISNAR programme.

Project Portfolio

Clear narrative descriptions of new projects, major project and activity modifications, concluding projects and exploratory research are provided in the Plan – providing a good overall picture of what's new, what's changing and what's continuing.

Of the four new projects described by the Centre in this MTP, three are ISNAR-related: *Institutional Change in Agricultural Innovation Systems*; *Organization and Management for Strengthening National Agricultural Research Systems*; and *Agricultural Science Policy*. The fourth, (*Country Development Strategies* - and one of IFPRI's largest projects (\$3.1 million budget for 2005), focuses on development strategy options best suited to different types of developing countries. The Project on *Biosafety Systems* is another ISNAR-related project now housed completely within IFPRI's structure.

With incorporation of ISNAR projects into IFPRI and as the "ISNAR" portfolio is developed, strategic planning is needed to lay out just how the "ISNAR" part of the portfolio will be integrated into ongoing and other new programmes. That integration is presently not seen in the IFPRI projects. It is accepted that the ISNAR projects have not yet been fully developed. Will the new "Division" become known as "ISNAR at IFPRI", or will there be a new dimension to the IFPRI portfolio that strengthens what was ISNAR, while enhancing IFPRI in its institution strengthening? It is highly important to spell this out early in programme evolution so as to not create confusion in the eyes of both donors and clients. Once an impression becomes apparent it will be hard to change. The SC suggests that the new "ISNAR" portfolio take into account the range of "institutional" partnerships that cut across traditional NARS institutions and seem to be a necessary precondition for linking many of the natural resources "research for development" efforts.

There are seven new "exploratory research" activities for the coming year, slated for possible expansion for those that merit increase based on ex-ante review in 2004/2005 to full projects for the next MTP. These are commendable, and reflect the dynamic, vibrant character of the institution, but one that plans expansion carefully. Two projects will be concluding: *Urban Challenges to Food and Nutrition Security* in 2004 and *Sustainable Development of Less-Favoured Lands* in 2006, with elements of each slated for inclusion in other projects.

There is considerable deviation between the 2004-2006 MTP projection for funding in 2004 and the 2005-07 actual funding (estimate) for projects in 2004. Eight projects are found to have increased or decreased in funding by more than 50%--with little explanation given. One must presume this is driven by special project funding opportunities / shortfalls but this should be made explicit – and the consequences of the changes in planning made clear, e.g., opportunities foregone.

In the 2005-07 MTP narrative, twelve projects are identified as having no significant modifications in 2005. In fact, most of these will undergo changes in funding on the order of more than 25% (increase or decrease) between 2004 and 2005 - with one more than doubling in funding. Neither the MTP narrative nor the logframe description provide any sense of shifts of this nature. Furthermore, there does not seem to be any adjustment made by the centre in its projections of 2005 funding availability for projects between the 2004-2006 and 2005-2007 MTPs, as one would expect after observing major changes in funding available in

2004. This suggests that either the estimates for the next year's funding are very rough (casting doubt on centres views about secured funding) or that IFPRI is not doing the expected update on projections in each MTP.

When compared to other Centres, the IFPRI research portfolio seems excessively dispersed with over the 25 continuing and 7 new projects. It would benefit from consolidation (focus) along a few major research axes. Major expected discoveries and contributions along each of these research axes could be specified. This would help achieve more cumulative research efforts as well as economies of scale in the quest for specific achievements.

The research portfolio could give greater emphasis to rural development strategies as an integrative device in poverty reduction efforts. This could be part of the national development strategies and governance projects, and of the project on effective pathways from poverty. Better, it could be defined as a research axis that would coordinate several of the current research projects.

Logframe Analysis

Overall, the logframe as presented represents a considerable improvement for IFPRI. There is, however, variability in the level of specificity of Indicators and Milestones in the project logframes. In some cases, the milestones are too vague; and in many cases milestone target years are not specified. Outputs to be achieved are often more process than output oriented. Some confusion may result from their conceptual linkage to "activities" rather than serving as indicators of output. Thus, more consistency is required.

IFPRI has included their component of the HarvestPlus CP in its project listing and MTP, but the entire HarvestPlus CP has been presented in a separate MTP as requested, and will be commented on separately. Likewise, CAPRi, the Collective Action and Property Rights Programme, the Systemwide programme (SWP) for which IFPRI has the lead, is listed as a separate project within the IFPRI portfolio as requested. There are references to CAPRi outputs and milestones within the appropriate IFPRI projects, showing the integration.

Systemwide Linkages

IFPRI, along with CIAT, is the co-leader of the HarvestPlus CP, with an IFPRI staff member as the project leader. This CP has active participation from ten CGIAR centres and includes an impressive range of partners from the outside. The CP has tremendous scope for leveraging resources within and outside the System and creating synergies across a wide spectrum of organizations (see section 3.3).

IFPRI is the lead centre for CAPRi, a SWP that has active involvement from most CGIAR centres. IFPRI has produced a full MTP on the CAPRi SWP. However, costs (\$1.07 m in 2005) appear to be only associated with the IFPRI component, rather than the entire SWP. This figure is part of the IFPRI MTP budget estimate for 2005. Other partners are listed, and reference is made to their projects, but it is not clear which sources of money go for which projects, and whether it comes through the core CAPRi programme or through other Centres.

There is no indication of the full CAPRi programme from this MTP without the non-IFPRI components. Output Indicators and Activity Milestones for CAPRi are few in number,

often listed without target dates and insufficiently specified. Eight primary (IFPRI) indicators are listed of which only one indicates the target date of delivery and only three secondary (other 14 CGIAR centres) indicators are provided. Sixteen Activity Milestones are identified of which only three have specified the delivery date and the distinction between primary and secondary Milestones is no longer maintained. In addition, the Indicators and Milestones are not sufficiently well specified to provide a benchmark against which performance can be measured in subsequent years. Milestones listed, for example, include the following: (i) Increase in CAPRI membership, presence at other CGIAR and external conferences; (ii) Conceptual papers finalized and published; and, (iii) Training course held in at least one region. It will be necessary for future MTPs to lay out the full CAPRI programme with some reasonable level of detail so as to not make the logframe too cumbersome. Partners should be required to forward their project inclusions to the coordination office.

On a project by project basis, IFPRI has collaboration with virtually all other CGIAR Centres. The specific collaborating Centre(s) and the nature of the collaboration are described in the logframe.

IFPRI Response

IFPRI appreciates the comprehensive review undertaken and comments provided by the SC for the IFPRI's 2005-07 MTP. In general, IFPRI agrees with the assessment provide by the SC and will work to implement its recommendations for the 2006-08 MTP.

Project Portfolio - *IFPRI is scheduled to reassess and update its Strategy to include ISNAR themes and most likely enhanced communications and capacity strengthening components. The next MTP will more fully detail how the ISNAR part of the portfolio will be integrated into ongoing and new programmes. ISNAR has already become a division of IFPRI. IFPRI's current MTP documents three thematic areas that are being managed by the ISNAR division (Institutional Change, Organization and Management, and Agriculture Science Policy). Two former ISNAR activities have been integrated into other divisions' portfolios (Programme for Biosafety Systems, HIV/AIDS and food security) with emphasis on interdivisional cooperation. Input from the ISNAR "Programme Advisory Committee" (PAC) and from the recently begun consultations with Regional Organizations, Sub-regional organizations, and NARS will be critical to shaping the divisions' programme of work. This process will also allow IFPRI to incorporate the range of institutional partnerships that cut across traditional NARS institutions, as suggested by the SC.*

During the next year, IFPRI aims to consolidate the portfolios around the themes of a then updated IFPRI Strategy document. We note that the (14) strategic themes are our move in this direction and the (25) projects are the building blocks of these themes. We also note that the pressure for relevance of IFPRI policy research and its unique role linking to all CGIAR Centres calls for a rather broad agenda.

In the context of the re-visiting of strategy and MTP in 2005 also the potential of rural development strategies as an integrative device in poverty reduction efforts, as suggested by the SC will be considered. Rural development strategies are directly related to IFPRI strategic themes 11 and 12, and partly relate to many of the other strategic themes.

Budget Variations - IFPRI uses a comprehensive and methodical approach to projecting expenditures over the MTP period. The process begins with an inventory of existing projects for which the estimated expenditures are spread over the period of performance based on funds available under the project. Outstanding proposals as well as projected proposals are then taken into consideration by distributing the prospective project expenditures over the life of the proposed project. This exercise is performed each year; therefore the projected expenditures in each year's MTP are based on the most current data. The MTP acknowledges that the funding gap is sixteen percent of total budget. As noted in the narrative, IFPRI is reasonably confident that proposals under discussion with donors will result in the gap being filled in the coming months. The funding gap is in line with the corresponding position reported in September 2003, which was subsequently filled.

Explanation for the most significant variances between 2004 and 2005:

GRP3 Priorities for Public Investment in Agriculture and Rural Areas - Projected growth of \$300K for 2005 over 2004. As noted above, the 2004 activity experienced delayed funding. The projection for 2005 restores activity level to original expectations.

GRP4 2020 Vision for Food, Agriculture and Environment Initiative - Expenditures for 2004 were exceptionally high due to 2020 Conference in Kampala. After adjusting for \$1.5M of costs associated with the conference, the 2005 projected expenditures are consistent with previous years.

GRP22 Water Resource Allocation - Productivity and Environmental Impacts Current outstanding proposals for the Water Challenge Programme are expected to drive the increase in expenditures for 2005. The funding for the policy research under the programme was below expectations.

GRP23 Institutions for Market Exchange - As noted above, submitted proposals totaling \$996K are included in projections for 2005. Only \$57K in expenditures on restricted projects is expected for 2004.

GRP25 Policy Processes related to Nutrition and Food Security - This Nutrition Policy Project has been slow to get moving and it is hoped that 2005 will see funding levels meet original expectations. In IFPRI's 2003 submission \$1.0 million was budgeted for 2005. Thus the current projection is only 80% of that level.

Explanations for the most significant 2004 variances between the 2005-2007 MTP and the 2004-2006 MTP:

GRP2 Globalization and Markets - A larger amount of core funding in the current MTP than last year. \$549K of core allocated this year for 2004 versus \$128K last year. Current amount is in line with actual budget for 2003.

GRP3 Priorities for Public Investment in Agriculture and Rural Areas - This project included a \$462K proposal last year that was funded for only \$268K over 3 years. The dip in expenditures in 2004 is projected to be temporary

GRP4 2020 Vision for Food, Agriculture and the Environment Initiative - Increase due to the 2020 Conference in Kampala. The demand from stakeholders and contributions from

donors for this event including its preparation and follow-up exceeded initial expectations and projections.

GRP23 Institutions for Market Exchange - *This GRP was funded 100% by unrestricted core in last year's MTP. Current year funding consists of project funding plus unrestricted core. Proposals submitted are included in the pipeline for 2005*

GRP25 Policy Processes related to Nutrition and Food Security - *The current MTP amount is comparable to actual budget figures for 2003. The increase in expenditures projected for 2005 includes \$700K restricted proposals.*

MP11 Property Rights and Collective Action - *As noted in the text of the MTP, CAPRI was previously a component of this project but is now included as a separate project.*

SYNs & Exploratory - *Decrease due to reclassification of planned activities to the new GRP32 Country Development Strategies in current year MTP.*

Logframe Analysis - *We are pleased by the positive overall comment on the logframe. For the next MTP document, IFPRI will work to ensure greater consistency of outputs and activities and a similar level of specificity of indicators/milestones.*

Systemwide Linkages - *Unlike the approach used with Harvest Plus, the entire budget for CAPRI appears in IFPRI's budget tables, as we are the executor of the funds received from numerous sources. The funds passed through to other CAPRI partners are indicated in the logical framework under the cost section. In future plans, IFPRI will show CAPRI's allocations to other Centres in the budget tables. CAPRI funded projects do leverage matching funds for projects involving Property Rights and Collective Action within other CGIAR Centres, and the matching funds do not appear as part of CAPRI.*

IFPRI will enhance the CAPRI logical framework in the next MTP. The output indicators and activity milestones will be more clearly specified so that they can be benchmarked and include completion dates. The partner contracts for the grants were completed just as the MTP was being drafted so the Institute was unable to include specific partner activities, however, for the next MTP IFPRI will do so.

2.8 IITA

IITA's 2005-07 MTP carries forward its three-year Plan presented last year. The current MTP is presented in six (6) projects which are administered by a Research Council. The projects are of two types: disciplinary projects (3) on germplasm, pest science and policy; and agro-ecological zone projects (3) for eastern and southern Africa, the humid and sub-humid zones of west and central Africa, and the savannahs of west and central Africa. These are supported by staff in the relevant IITA stations. These seem appropriate to meet the general criteria although there are questions about the international public goods of some activities.

Considerable space is given to explaining IITA's perspectives on its role in the overall development strategy for Africa. IITA states it is a development institution with a focus on problem definition to effectively alleviate poverty and hunger. It focuses on research-for-development (R4D) methods, a concept fully described in last year's MTP. The IITA strategy

emphasizes three dimensions: Encouraging local production, Finding ways that create wealth, and Reducing risk for farmer/producers (with focus on biological risks).

The approach raises questions about the level of international public goods (IPG) that could be derived from R4D activities e.g. the developmental activities that create new markets at the local level as in the RUSEP in Nigeria and FOODNET in Uganda. This concern was also raised in a recent CCER conducted by the Centre and by the EPMP in 2001. While encouraging local production, creating wealth and reducing risks are sound objectives and worthy of reflection, they don't by themselves offer guidance and direction in terms of IITA choosing an optimal research portfolio. If the research, for instance, were to define how local food systems shift across gradients of market structure or of physical infrastructure, the results would have greater widespread relevance. The challenge for IITA is in selecting the right balance of research and research-related activities whose outputs help solve major (i.e., widespread) constraints that limit local production efforts and keep farmer risks high. In doing this it is imperative that the IPG focus is maintained and IITA's comparative advantage carefully considered. The SC does not consider any of the CGIAR centres as development institutions and therefore would caution IITA about going too far down the R to D continuum, even when some opportunities for impact may present themselves. The real trade-off may well be larger impacts elsewhere foregone.

IITA observes that the first Centres founded within the CGIAR, and particularly those with an agroecological mandate such as IITA, were established under a 30-year disengagement vision whereby the "international" nature of the centre would be replaced by regional centres of excellence. IITA believes this vision is as compelling as ever, but does not in this MTP spell out its role in this "disengagement" strategy.

IITA's proposed budget for 2005 is US\$ 45.3 million, including US\$ 31.5 million of targeted funding and about US\$ 9 - 10 million unrestricted. The SC notes with grave concern the low level of unrestricted funding for this large Centre – now below 25% of the total. It would not be unreasonable to assume that targeted funding opportunities have significant influence over the defined agenda – a point highlighted in one of IITA's recent CCERs.

Project Portfolio

Since the 5th EPMP in 2001, IITA has made large changes to its programmes and gone through considerable staff turn over, including in management. The programme changes represent a new strategic direction. This MTP does not specifically identify the major changes, if any, in programme/project direction from last year. IITA's overall strategy and evolving development perspective, however, as described in the first part of the MTP (pp1-15), make it clear that it intends to continue to develop new strategies and pursue new approaches. In addition to re-launching the ERA--EcoRegional Alliance (described below), combining hard and soft sciences, and integrating the benchmark approach (BMA) with the sustainable livelihood (SL) framework, it also includes stationing staff in new locations particularly in east / southern Africa, e.g., IITA will have an office in Tanzania which will be shared by WARDA. This would seem to raise a question of strategic location of CGIAR centre activities in SSA in general.

The 5th EPMP raised many questions about the direction of the research programmes at IITA. The IITA Board has established a self-assessment process to track the implementation of the agreed upon recommendations¹. Given the major shifts in strategy/approach (R4D, ERA,

¹ In an Annex, IITA provides an update on the implementation of the recommendations of the EPMP.

BMA/SL), programme and research structure (Research Council replacing division leaders) and the wider distribution of staff in Africa, the SC believes in the near future an appropriate external review on the new direction could be useful to the Centre. Given the strategic importance of IITA's new direction, the SC could assist in preparing the Terms of Reference for such a review. The Centre has not yet commissioned the EPMR-recommended CCER on Board governance but that it is waiting for a signal from the SC on the role of the CCER in the monitoring process.

IITA have advised the SC in their MTP of the progress from CCERs conducted since the 5th EPMR. The three CCERs have been conducted with one external referee. This highlights the need to put in place some standards and quality assurances for the CCERs so that they can play a role in the EPMR to reduce the scope of the latter.

The CCERs have raised issues that need to be addressed and tracked. For example, the CCER recommendation on **Market development** stated that:

1. IITA's involvement and recent expansion in market development for its mandate crops are appropriate, but it needs to be linked at all times to process research conducted in the benchmarks.
2. IITA should limit its work on (macro) market development to pilot schemes, not state or nationwide, but pilots large enough and diverse enough to provide adequate feedback to the biophysical scientists, and the other projects at IITA.
3. It may be appropriate for IITA to develop also some (new) benchmarks particularly suited to market development, especially when they involve industrial type processing of commodities.

And on **Agricultural policies** that:

4. IITA needs to permanently monitor macro agricultural policies and even help in the development of better agricultural policies when opportunities arise. But at the same time, IITA does not have a real comparative advantage to do policy analysis research on its core budget, on a continuing basis and with sufficient critical mass. Thus, IITA needs to link up and work together more frequently and more regularly on agricultural policies, particularly with IFPRI, but also with NARS and other partners.

Another CCER raised similarly fundamental questions about the focus and direction of the respective programmes and disciplinary capacity. A third CCER was deemed by IITA as not having been effective in producing **an appropriate appraisal report**. This raises a long-standing issue: the need to develop guidelines for CCERs to ensure they are useful to the Centre and EPMR teams.

Logframe Analysis

IITA has summarized its research achievements in 2003 on the basis of the milestones listed for each project. This provides a very effective means of monitoring the progress of the scientific outputs. Because this list is long and extensive it is difficult to determine what are the major research successes in terms of key outputs. If these could be identified and subsequently tracked for eventual uptake and adoption by the direct and indirect clients, it would underpin future assessments of outcomes and impacts.

IITA has provided a comprehensive logframe for each of its six projects in narrative style. Except for the verifiable indicators, assumptions and indicators of assumptions, all other components of the logframe are provided. An overall centre logframe is not included.

What is missing in the Plan is an overall summary of the 2005-2007 MTP (listed in the Table of Contents but not found in the narrative) that specifically addresses major programmatic changes, the research and impact highlights of 2003 and progress in 2004 and the strategic highlights of the 2005 project portfolio.

Systemwide Linkages

IITA lists its involvement in all CPs but does not articulate the specific activities or their synergies with the IITA projects.

A major new initiative that IITA, together with ICARDA, ICRISAT and CIAT, is embarking on ('re-launching') is the CGIAR EcoRegional Alliance (ERA). The ERA emphasizes a coordinated approach to addressing trans-ecoregional research for development issues. The rationale for adopting a cross-ecoregional approach is compelling (e.g., use of common methodologies and approaches for increasing research efficiency, economies of scale, etc.). However, this was also the rationale for adopting an eco-regional approach during the early 90s and from which eight systemwide programmes evolved, most of which are still operational today. Before embarking on a new ecoregional initiative, the SC believes IITA and its partners should re-assess the successful (and not so successful) aspects of the CGIAR's systemwide ecoregional programmes. One of these, the Ecoregional Programme for Humid and Sub-humid Tropical Agriculture (EPHTHA), relates directly to IITA's past work and for which IITA was the convening centre. This no longer features in the MTP, and no account is given for its apparent disappearance or consolidation into the other MTP projects. Is there a compelling reason to believe that the ERA would succeed where the ER/SWP have faced great difficulty? Have the advantages and lessons learned in the ER/SWPs been neglected in favour of a "new" modality – the CP? Is it appropriate to have equally compelling modalities to address the critical roadblocks in meeting the various goals of the CGIAR? IITA should also carefully assess the role of the proposed ERA in light of the forthcoming CP for Sub Saharan Africa and the work of the CGIAR Sub-Saharan Africa task forces. There should not be a competing and overlapping series of programmes adding confusion to an already complex SSA project matrix.

In the main MTP narrative, no separate mention is made of the systemwide programme of IPM (SP-IPM). However, the SP-IPM is included in the project logframe. This 'project' is housed in one of IITA's six main projects (Project B). No separate budget for this programme/project is provided, however, and it is not clear whether the budget and outputs of SP-IPM are subsumed under Project B and no evident distinction is made between IITA's outputs and those of its partners. As of 2005, CIP will become the convening centre for the SP-IPM (according to CIP's MTP).

There is no project logframe nor even reference to the EPHTHA in the MTP narrative (except in the list of networks, SWP/ER provided).

IITA Response

Research for Development: IITA is a Research for Development, not a development institution as was erroneously stated in IITA's MTP. Conceptually we encourage local production, in ways that create wealth (poverty reduction). Reducing producer risks is a staple thrust of the CGIAR. The R4D to us is a continuum where different stakeholders play their part based on their

comparative advantage. The R4D concept leads to greater relevance but also requires one (IITA) to be mindful of their comparative advantage as a CGIAR Centre. We define researchable issues based on the priorities and demands of the sub-regions and we seek solutions. These could be prototype models, basic information and enhanced knowledge bases, or systems, all of which contribute to IPG. IITA's development partners ensure that the developed IPGs have the desired impact on the target beneficiaries. These partners address the lower end of the continuum.

The RUSEP project, highlighted by the SC, is an excellent example of what the SC proposes. RUSEP was designed as a pilot programme tested out in four states in Nigeria. In a very short time its powers were appreciated and its concepts now integrated into several regional and sub-regional programmes by key bilateral donors. Recently it has also been incorporated into the NEPAD Pan-African Cassava Initiative. While this initiative is on one commodity, the systems to be established will serve all commodities and food products. So in a remarkably short time the RUSEP design has moved from a pilot project, to a national and now pan-African programme. Impact at this pace is hard to come by.

The STCP programme is target funded yet is almost all about research. One dimension funds IITA biotechnology work on plant improvement, another funds a regional innovation system. It deals with the ability to look at a problem along a system and see how it can be solved. The results of such work would contribute to increased public efficiency, by which problems are solved in the agricultural sector. Still another dimension of this target-funded project is the link to some of the most advanced health research in the world and its implications for growers in Africa and elsewhere who can translate such knowledge into varieties and create wealth. The environmental benefits of the STCP work in the Congo Basin are now widely recognized and not elaborated here.

FOODNET was not conceived as a development activity but as a scientific network/programme to foster NARS and research cooperation. However, it evolved according to the needs of its clients, into a programme with more downstream activities. At this point IITA has officially notified all its network partners such as ASARECA and CORAF that it is ready to pass this and other networks to sub-regional organizations as soon as they decide they are ready.

Disengagement strategy: With respect to the 30 year disengagement strategy, this should be a goal for the whole CGIAR, IF we are successful. Although it is not clearly stated, it is apparent that IITA is taking steps towards this goal, for example through devolvement of networks to the sub-regional organizations, but new challenges seem to arise.

Targeted versus unrestricted core funding: The SC rightly states that "it might not be unreasonable to assume that targeted funding opportunities have significant influence over the defined agenda." IITA faces daunting challenges in its efforts to address the food needs of the continent. One effective tool is to complement and leverage the unrestricted funds, with targeted funds.

IITA has been somewhat successful in attracting targeted funding for augmenting its unrestricted resources to implement activities determined in the IITA strategic plan. IITA has rigorous procedures to ensure that requests to donors are in the line with the needs of our clients, the SRO priorities, the IITA comparative advantage and our long term strategic plan. This is achieved by a process involving the scientists, the clients, the project coordinator and finally, IITA's Research for Development Council. We have found little inconsistency in this approach given the careful selection and good project-design of such projects. For example in the South, IITA's Livelihood's

Project, funded by targeted funds, complements core research activities on legumes, roots and tubers and bananas/plantains and responds to repeated food crises in the region. This is in line with IITA's vision and mission to reduce the recurrent biological risks caused by droughts, and pest and disease epidemics which call for very knowledge intensive systems. The more downstream elements of that project are, contracted out to other development partners.

Project Portfolio - *The SC comment that since the 5th EMPR in 2001, IITA has made large changes to its programmes and gone through considerable staff turn over, including in management, needs to be expounded to prevent misunderstanding. The basic research-for-development programme of IITA did not change, from that of 2002 and 2003. IITA, in 2004, is still operating under the same six MTP projects that have been described. Changes in management and/or administrative personnel were done to improve the productivity and efficiency of the institute. There has been no 'considerable' scientific-staff turn over at IITA. Only a handful of scientists have left since the last MTP. They left due to retirement, schooling problems, and problem of employment in a dual working family. This turn over rate of staff is not uncommon in a CGIAR Centre. On the other side, new scientists have been hired to support the senior staff, and for the longer-haul assist in a good selection process for scientists nearing retirement.*

The reference to 'new' locations needs some clarification. The IITA team in Tanzania is not a separate IITA facility, as all the staff are hosted and housed by the national research system. The location is not new. IITA scientists have been there for several years now. The programme is growing due to major challenges to the region, like the Cassava brown streak virus, the need to move commodities into commercial channels via some post-harvest work, and for strengthening the biotechnology capacity of the national and IITA teams. The IITA team in Tanzania is not working in isolation, they are linked to other IITA stations, the NEPAD Biosciences Centre housed at ILRI, Nairobi and WARDA, which is housed in the same NARS facility.

CCER on Board Governance: The IITA Board has already commissioned the CCER on Market Development: "Market development" should be seen as:

- a) improving existing markets in terms of market efficiency and competition. The theoretical framework for this is market research and institutional economics (transaction costs etc.).*
- b) providing better supply (quantitative and qualitative) of goods for old markets and new markets (e.g. export markets). The theoretical framework is the agri-food-chain approach with consideration of the whole technical and institutional aspects from "plot to plate" or from "stable to table", implying a lot of industrialization techniques but also institutional change (from smallholders to large farmers, outgrowers' schemes, structural policies to foster rural industries (see also below: policies)*
- c) "creating" markets, i.e. new goods for new markets. The genuine problem with this is that it is a very supply driven approach which has been much criticized in past development and R4D agendas. However, the tools for this market creation are to be found in marketing theory (which is something different from the above mentioned set of market theories).*

IITA is in full agreement with the observations of the CCER and SC in developing new benchmarks particularly suited to market development, especially when they involve industrial-type processing of commodities.

On Agricultural Policies: IITA is of the view that policies can be important drivers of the development, adoption, and successful transformation of the rural areas. IITA has long

recognized that it is too small to embark on macro policy research. Yet, IITA, like all the other Centres, must be involved in policy formulation and advocacy at all levels. Our programmes are conducted with many partners. Since most policy matters are essentially local, using local forces has led to the most progress. Where there are technical issues on policy approaches we rely on policy networks in Africa like FANRPAN, ARPAN, ECAPAPA; universities (University of Ibadan, Nigeria; Bunda College, Malawi; University of Zambia; University of Kinshasa, DRC), and policy institutions (eg NISER, Nigeria; ESRF, Tanzania) including other CGIAR Centres (eg IFPRI) and ARIs.

Systemwide Linkages - *The EPHTA programme never found donor support but some of its key concepts were woven into other programmes. For example the work of MTP Project F is implemented in the Northern Guinea Savanna benchmark area, and that of MTP Project E is in the Forest Margin Benchmark of Cameroon and the Degraded Forest in Nigeria. The selection of Pilot Learning Sites of the SSA-CP has been based on the concept of the EPHTA programme.*

The Systemwide IPM programme Steering Committee has requested that the programme be relocated to CIP, where its present Chair resides. The IITA Board has not agreed to this request, and has submitted the matter to the SC for a resolution. So the inclusion of the SP-IPM in CIP's MTP for 2005 is slightly premature.

IITA regrets the wording used in the MTP, in that the ERA was not intended to be presented as an IITA program, but as a reflection of some thinking of Centres mentioned (ICARDA, ICRISAT and CIAT). In light of the ongoing reform efforts via the SC, and the SSA-CP, IITA concurs with the SC advice and will drop this section from its MTP.

Logframe Analysis - *Apart from logframes for each of the six MTP projects there is an overall Centre logframe, which unfortunately was not included in the document.*

2.9 ILRI

ILRI's MTP is based on the theme - Livestock: A pathway out of poverty. ILRI has identified three elements to this pathway through which it intends to improve the contribution of livestock within poor households: Securing the assets of the poor, Improving the productivity of their livestock systems and, Improving their market opportunities (in the face of rapidly changing market opportunities, channels, and demands). The new strategy was implemented in 2003, a new management team is coming into place with the addition of a new Deputy Director General for research, and leaders are selected for each of the five action research Projects (themes). The MTP is framed in the context of a rapidly changing economic environment for small, poor livestock producers.

There are six major interdisciplinary issue-oriented themes (Projects): Targeting research and development opportunities; Enabling innovation; Improving market opportunities; Application of biotechnology to secure assets; People livestock and environment; and CGIAR systemwide livestock programme. Within each of these Projects there are 3-5 operating projects, (small p) defined as a donor-funded or partner-based research activity. This hierarchy is intended to cluster smaller projects within themes, relating each back to major pathways for change.

The SC has some concerns about the comparative advantage of the CGIAR and ILRI to engage in some of the new activities where the IPG nature of the research is not clear. It urges

ILRI to maintain focus on those activities which can provide IPG leaving the more local application to ILRI's many collaborators.

Project Portfolio

One of the new projects is entitled "Enabling Innovation" with a major commitment of over US\$ 5 million per year through 2007. This project seeks to improve the engagement of livestock keepers in an environment that would facilitate adoption and dissemination of promising technologies. For this to be achieved, innovative ways of participatory livestock research and learning processes are proposed, as well as institutionalisation of the outcomes (although they have yet to be discerned). The specific role of ILRI in this research as it relates to the development of IPG is not clear.

There has been a tendency (judged from the list of achievements, and current activities) for ILRI's research to have been very heavily focussed in two of its host countries in East Africa. There are indications that this has been recognised, and lessons are being extended to analyses in other countries and regions. However, continued pursuit of general development assistance programmes to individual countries would seem to fall outside the realm of international public goods.

ILRI had embarked on collaborations with the Institute for Genomics Research to sequence the genome of *Theileria parva*. The genome sequence is near completion. This has been a very positive development as it has also allowed the Centre to set up a bioinformatics platform, which will benefit many collaborators in the region. Instead of a single candidate antigen vaccine which took over 20 year to develop, the Centre will have ten or more such vaccine candidates, which will be developed at less than 1/20th the cost of the first vaccine. This success has provided a foundation and a strategy for vaccine development for animal diseases, which was unimaginable seven years ago.

The genetic characterization work of various animal species, such as with chicken, yaks and others can make a major contribution at modest cost, using advanced genomics, to the maintenance and use of animal germplasm (falling within the pathway of "securing the assets of the poor"). This can be of enormous use to those institutions, national and regional, working either in germplasm maintenance, or researching specific trait improvement. This research produces clear international public goods.

The work with animal production systems with its participatory structure and client-focused outcome for poor producers is highly appropriate. It must be focused on major constraints, and on either biological or socio-political/economic processes that have potential for widespread impact. The mapping of areas of poverty, with overlays of production systems types, such as the correlations with length of growing season and livestock carrying potential is a clear way forward.

New relationships formed for facilities and cost sharing e.g. the new arrangement with NEPAD over the BioSciences facility, are to be welcomed, but the mode of research adopted in other areas increases the load on ILRI's management capacity to maintain the efficacy of numerous sorts of partnership in the longer term.

As the research agenda has become broader, it will be necessary to maintain focus as the Projects progress. For instance, in Project 5, the first result reported is a result published of a

wildlife survey with Maasai groups to conduct the first comprehensive wildlife survey in the Maasai Mara ecosystem, with results to be used in design of new management systems for this pastoral ecosystem. This activity will yield a product in 2007 in form of a first draft of a “high profile book on pastoralism and wildlife in East Africa”. The SC questions the usefulness of this line of research within CGIAR goals. The wildlife and poverty study is an illustration of things being done by the Centres that seem to fall outside CGIAR's mission and priorities unless it is clearly shown that sustainable productivity is dependent on the co-management of wildlife that depend on the same resource base.

For MTP Project 2, Enabling Innovations, one major goal (or indicator for success), changing institutional culture, is entirely internal to ILRI. Whilst some change in institutional culture may be expected after the change in direction that the institute has undergone, this project should focus on (or describe) anticipated outcomes on people or defined livestock systems. In general, the logframe information given fails to convey with any specificity what this process-oriented research will do, or what the desired outcomes will be in different livestock systems: e.g. “Strengthening of knowledge exchange mechanisms for pro-poor livestock research and development: mainstreaming of institutional learning and change processes by network partners and analysis of partnership mechanisms completed by Year 2005; partnership mechanisms strengthened by Year 2007”. To bring the project in line with the targeted reorganisation of the Centre, there is a need for clarity and to indicate the impact of achieving the targets on the welfare of the resource-poor farmers.

Logframe Analysis

The goals and intended outputs are generally well-articulated. The detailed list of accomplishments and outputs for 2003 and 2004 developments are very informative and well presented. In the next MTP it will be important to evaluate achievements against anticipated milestones. One issue in doing this is that whilst many milestones are good, they are almost all at the output level and with little on outcome (which, in contrast, the accomplishments section tries to convey).

Some areas are less well defined and the proposed milestones will be insufficient to monitor progress. Logframes should clearly state what the measurable outcomes are. The hierarchy of ILRI themes, Programmes, and programmes (sub-projects?) within them do not come through clearly in logframe format. The logic seems to be discontinuous! It is often not possible to trace through the 2005 project portfolio descriptions, the subsequent lists of Project outputs with milestones, and then the Goals, Purpose, Outputs and Output indicators. For instance the wildlife survey with the Maasai groups appears as an incidental milestone product in 2007 and there is not mention of this among the outputs or their indicators.

In summary, the logframe presentation contains a wealth of information, but does not yet follow a clear and continuous logic, making it extremely difficult to follow and reducing its utility as a management and research assessment tool. Embedding research within broad, impact-oriented themes requires that the sharp research goals are shown in a transparent and carefully constructed MTP presentation of activities, resource allocation, outputs and milestones that will allow easy monitoring of achievements across the range of work from strategic upstream research to development activities.

Systemwide Linkages

ILRI convenes the CGIAR Systemwide Livestock Programme which seeks to integrate crop and livestock productivity for the benefit of small-scale farmers. The focus on livestock feed systems of the SLP seems a very appropriate area for systemwide research, as it brings in a wealth of crop, system diversity, and management expertise. However, there are unproductive overlaps in several projects, especially those relating to policy research as well as in the People, Livestock and Environment and the SLP.

ILRI is also involved in several other Systemwide Programmes that have a livestock component: Collective Action and Property Rights, Participatory Research and Gender Analysis Programme, Systemwide Genetic Resources Programme, Urban Harvest, Systemwide Initiative on Malaria in Agriculture, and Desert Margins Programme.

Focus on feed as well as livestock diseases could be logical entry points in community development programmes, which would also facilitate the introduction of livestock services and improved varieties into communities. This holistic approach to poverty reduction could be exploited more by encouraging concerted collaborations between CGIAR Centres and NARS.

ILRI Response

ILRI appreciates the detailed review of its 2004-2006 MTP by the SC. This review acknowledges that ILRI has revised its strategy to clearly address poverty, has restructured into issue oriented themes and has streamlined its management. This MTP thus reflects a transition from the past and a gradual alignment of the ongoing activities with the new strategy. The SC also commends specific ILRI research efforts, particularly in vaccine development and animal genetic resource characterisation.

ILRI's strategy and MTP reflect a changing approach to international public good (IPG) research, particularly as it relates to poverty reduction. This approach acknowledges that a simple pipeline of technology transfer from researchers to the poor does not adequately respond to the complexities and dynamic changes faced by poor livestock keepers. These need to be addressed by an array of disciplines and expertise, through mechanisms that recognize and respond to demand and with institutional support for learning and information sharing between partners. This reflects widespread experiences in science and technology management. For example, the European Commission's MEANS evaluation guidelines highlights the limitations of linear "Science-Technology-Production" models and the need to consider more dynamic, interactive and non-linear innovation and learning processes (EC, 1999). Thus, ILRI has adopted a more decentralized network approach, involving a range of expertises and institutions to better engage the evolving research capacity in partner countries, the range of actors required, and the limited resources of the CGIAR vis-a-vis the magnitude of livestock-poverty challenges. ILRI sees its IPG mandate as both producing research outputs as well as facilitating other actors in the research and development process leading to livestock-mediated poverty reduction. We see ILRI's approach as being clearly aligned with the "state-of-the-art" thinking about research policy and management.

The poor track record of linking research outputs to poverty reduction outcomes in the diverse settings that ILRI works has prompted us to establish an Enabling Innovations Project. As reported in the MTP, this Project consists of both innovation systems research and a number of action research projects in smallholder livestock systems, undertaken with partners. The Project also supports research outputs in other ILRI Projects, such as dissemination of fodder

technologies, information exchange and knowledge management to support policy dialogues, investigating institutional innovations for smallholder livestock market arrangements, and in-situ conservation of animal genetic resources. These examples allow ILRI to build broader IPG knowledge outputs from substantive case studies. ILRI recognizes that its Enabling Innovations Project is developing and that greater focus and clarity are required. We agree that ILRI's institutional learning and change are not research outputs per se, but will be crucial, along with other key institutional competencies, in delivering research outputs that have pro-poor outcomes and impacts.

One example of how ILRI supports IPG outputs from an in-depth knowledge of site-specific research is in the area of pro-poor dairy development. From a detailed understanding of smallholder dairy systems in Kenya, lessons have been scaled out and up by others in Kenya and adapted and extended to Uganda, Ghana, India and Sri Lanka. The broader targeting of priority dairy interventions is supported by assessments of the main drivers of change in the global livestock economy, such as urbanization, changing consumption patterns, climate change, and globalization of livestock trade.

The same holds true for NRM research, which was poorly articulated in the MTP. Pastoral areas of East Africa are evolving and there is increasing competition for the resources used by pastoralists, farmers and wildlife conservation. Through a combination of participatory and technical research, the tradeoffs and synergies between competing uses are identified. These research results help communities to better understand and diversify their livelihood options, support policy makers to improve land use and environmental sustainability decisions, and provide key information to help negotiate land and water use conflicts. Such conflicts are common to pastoral systems globally and lessons learned from this East African work are being used in project activities and proposal development in West Africa and South Asia.

Another key contribution that ILRI makes to IPGs is in prototype research projects that develop both relevant research outputs and change the way ILRI and its partners conduct research for greater impact. The SC noted the success of ILRI vaccine development research in providing a "foundation and strategy" for vaccine development that was previously unimaginable. This strategy will allow our NARS and private sector partners in the developing world to formulate their own research in tackling their own vaccine development priorities in a more effective way.

As noted by the SC, ILRI recognizes the concentration of its research activities in East Africa. We are actively engaged in strategically expanding our research into South Asia and other regions of sub-Saharan Africa through appropriate partnerships, frequently working closely with sister CGIAR centres.

Partnerships are central to ILRI's strategy as described above. An example is the Biosciences Eastern and Central Africa. This initiative is establishing a shared facility for advanced bioscience research by partners, building on the infrastructure, equipment and scientific skills of ILRI and other CGIAR centres under the umbrella of NEPAD. While we agree that there are significant management challenges in such innovative partnership arrangements, they are a concrete response to the evolving needs and demands of our partners, the high cost of bioscience infrastructure and the requirements for specialised skills in complex areas of research such as livestock vaccine development and marker assisted plant breeding.

The SC comments on the log-frame analysis presented in the MTP are very helpful. The ILRI Projects (Themes) presented are new, and we recognize the importance of improving the output-

outcome logic and milestones to monitor progress at an early stage. Additional efforts will be made to better define and track the contribution of outputs to outcomes in operating projects and then integrate these more effectively at Theme and institute level.

We agree with the SC that a focus on livestock feed systems for SLP is appropriate, particularly given the limited funding available. The overlap noted by the SC on policy, relates to a now completed project conducted by IFPRI and ILRI in the important area of feed-grain utilisation. This research is now part of the joint ILRI-IFPRI Markets Project.

For the food-feed crop and forage work presented, SLP serves as a facilitation platform, supporting essential joint research between ILRI and crop centres. In this research, the role of the People, Livestock and the Environment Project has been to identify traits that enhance the use of crops, their by-products and forages in more efficient livestock feeding systems. The crop centres contribute their expertise in the breeding of better dual purpose varieties and in seed distribution systems.

As a final comment, we agree on the importance of livestock diseases, but not just at community level. Livestock and zoonotic disease control can make important contributions to better human health and nutrition and to enhancing market access for poor people. In fact, livestock and zoonotic disease control is the focus of ILRI's participation in CAPRI, Urban Harvest and the SIMA systemwide programmes.

2.10 IPGRI

Currently IPGRI's work is conducted through 20 projects distributed across three programmes: the Plant Genetic Resources Programme (Projects 1-15), the International Network for the Improvement of Banana and Plantain (INIBAP; Projects 16-19) and the CGIAR Genetic Resources Support Programme (Project 20). The MTP is still based on IPGRI's strategy from 1999, although the project portfolio was re-adjusted in the beginning of 2003 in anticipation of the strategic planning exercise and it is currently under review as part of completing the strategic evaluation of the institute's work programme in 2004. The major elements of the IPGRI programme will continue through the plan period as agreed by the Board in September, 2004. However, because of the strategic reassessment, the formulation of projects and their details may change, and subsequently the logframe beyond 2005 will be readjusted.

IPGRI performs critical functions (conservation and enhancement of use of genetic resources, and genetic resources policy) in relation to the CGIAR goals of increasing the productivity of resources in agriculture. The MTP states that while IPGRI's core business is firmly in the conservation and use of genetic resources, it is adopting a more people-centred approach to its genetic resources activities, i.e. directing its activities for service of people. This is reflected in increasing the social sciences expertise, conducting studies on genetic resources as assets in a sustainable livelihoods framework, and with an increasing link to human nutrition (the latter not yet evident in the research portfolio). IPGRI's resource allocation to the different CGIAR output categories is projected to remain however, at the same level in 2005 as it was in 2002, with a slight increase in Germplasm collection, Sustainable production and Policy and subsequent decrease in Germplasm improvement and NARS strengthening. IPGRI is projecting a rapid increase in its total budget: in 2005 30% and in 2007 40% higher than the actual budget in 2003 (US\$ 27.9 million).

The focus has been and continues to be on plants. However IPGRI is strengthening its collaboration with partners on livestock genetic resources. The Systemwide Genetic Resources Programme has, together with ICARDA and ILRI made contributions to FAO's work. IWMI has rejoined the SGRP with an interest in water-genetic resources interactions. These developments are consistent with the 5th EPMR's recommendation for IPGRI to explore opportunities to apply the relevant plant genetic resources experience to other genetic resources. This is a commendable expansion without diverting from the Centre's area of core competence.

Project Portfolio

The IPGRI project portfolio is large and the Centre foresees relatively rapid increases in total funding. Whilst the increases are spread across the portfolio (virtually no project is scheduled to reduce in real terms throughout the period), emphasis is to be placed on two projects: Commodity chain research and laws and policies affecting conservation, use and exchange of genetic resources. The overall projected 40% increase in Centre investment is substantial, and has significant implications for the CGIAR system.

The 5th EPMR in 2003 called for a more focused research agenda and identification of some relevant research area related to genetic resources where IPGRI had a clear comparative advantage to excel. It would seem that nutrition is emerging as such an area. Crop diversity (rather than within species diversity) is central to nutritional status of the most vulnerable people and IPGRI's work on underutilised crops is relevant to this theme. In Project 13, "Livelihoods and Institutions: Social, cultural and economic aspects of agrobiodiversity" IPGRI is introducing new emphasis on nutrition and dietary diversity. IPGRI should identify strong research partners to assume responsibility in the research on human dietary practices and preferences, while IPGRI's strength is in the diversity of crops. IPGRI should also collaborate with IFPRI on this theme. IPGRI is a key partner in the Generation CP and development in bioinformatics and modern biology offers an excellent niche for IPGRI to excel.

Using a genetic resources perspective, IPGRI has strategic programmes on *Musa*, coconut, and more recently on cocoa genetic diversity and germplasm improvement. The relative allocation to the four projects on *Musa* is projected to fall from 26% of the portfolio total in 2003 to 21% in 2005. The SC expects that the 5th EPMR's recommendations regarding IPGRI's *Musa* Programme will be addressed in the new strategic plan. Work on other commodities, including some fruit and vegetables, cover areas of research not addressed by other Centres in relation to genetic diversity, conservation, and livelihoods. A notable development is that AVRDC genebank data will be linked to SINGER. The four regional projects (MTP projects 1-4, CWANA remaining the largest) in particular address a wide range of orphan crops, wild relatives and species of regional importance. It is more difficult here to determine the strategic direction for this work, although work involves a collection of potentially important individual studies.

IPGRI follows the mode of operation in its activities of being facilitator, and it is indeed a suitable model for the range of research, network, policy and capacity building activities IPGRI is engaged in. The MTP makes the point that the majority of IPGRI staff are research managers rather than bench or field scientists, although in the longer term, collaboration in scientific issues would be more easily engendered by active programmes of in-house science. IPGRI is encouraged to stimulate research in-house to maintain staff motivation and level of latest knowledge. In this light, the planned Facilitation Unit should be used to help coordinate and develop partnership management thereby leaving more scientists' time for research. The role of this Unit is otherwise not clear.

As pointed out by the EPMR report, it will be important for IPGRI to balance interest in livelihood and market opportunities on one hand (e.g. through the promotion of orphan crops and research on value-added) and other hand maintain its necessary role as an honest broker for international genetic resources conservation. It is hoped that the strategic reassessment currently underway will help define the strategic boundaries to the IPGRI programme, and protect essential functions in the face of possible fluctuations in large amounts of restricted funding support.

The SC wishes to reinforce the 5th EPMR's recommendation that IPGRI should focus on a number of topical research areas where it has a clear comparative advantage. The SC cautions IPGRI in its planned significant expansion of activities in most programmes. Management and staff in every programme must be constantly aware of strategic mission, and not try to be "everything to every one". Calls are being made for services to conservation and use of forest species, horticultural crops, fish and animal species among others. IPGRI must focus on those areas of science that are cross-cutting, and more clearly define what they are. The SC has repeatedly stressed this, and again emphasizes the point. Informatics is one clear area of international public goods services. It would appear that the use of marker and other genetic technologies, to identify and map geographical areas of key diversity within species as an adjunct to phenotypic characterization is another key area. It is critical to more carefully target the diversity to be preserved and to make the search for useful genes more effective, particularly for those species preserved largely *in situ*. IPGRI must clearly define its areas of value-added science across this enormous field of challenge. That is still not clear within the breadth of this MTP.

Logframe Analysis

IPGRI's logframe is commendable for its coherent structure and the vertical logic it provides. Furthermore the very readable project narratives forming a coherent summary of the Centre's overall project portfolio give a good picture of the achievements and near term future focus. Due to the strategic reassessment, the project milestones and the associated means of verification are generally only specific for 2005 (the timeframe is not consistently stated). The milestones for the subsequent years in the next MTP will hopefully clearly reflect the changes in the strategic directions. It is noteworthy that, due to the highly participatory mode of operations where IPGRI often has a catalytic role, achievement of target depends significantly on the willingness and commitment of the partners, which is stated under Risk and Assumptions for majority of the activities. IPGRI's activities on impact assessment seem rather modest for demonstrating the linkage of IPGRI's work from activities to purpose (outcomes) to the goal of improving livelihoods of the target populations, the most vulnerable groups of poor.

Systemwide Linkages

IPGRI plays a substantial part in the Generation CP, both directly and as convener (through the SGRP). IPGRI contributes to Sub-programme 1 on genetic diversity, Sub-programme 2 on comparative genomics for gene discovery (through the Musa programme), Sub-programme 4 on genetic resources, genomic and crop information systems, and in Sub-programme 5 on Capacity Building. IPGRI is participating in the global water assessment phase of the Water and Food CP (with a focus on water use efficiency of genotypes of olive in North Africa). IPGRI has also contributed to the start up phases of the HarvestPlus CP and the SSA CP (the latter in relation to agricultural biodiversity and sustainable production systems).

IPGRI Project 20 encompasses the work of the Systemwide genetic resources programme (SGRP). This has been a particularly effective systemwide programme including major efforts in upgrading CGIAR genebanks, close involvement in getting the Global Crop Diversity Trust established, the genetic resources information network SINGER (currently helping developing links to other information networks), contributions to the meetings of the CBD, development of MTAs for the Future Harvest Centres, and training. These are significant outputs. As with the majority of the IPGRI portfolio, the general future directions and indicators of this SWP are described in the logframe, but it is not currently possible to monitor progress of this SWP in the absence of milestones.

IPGRI Response

IPGRI appreciates the comprehensive reading and analysis of the MTP and the overall positive assessment given. The commentary notes that the new IPGRI strategy will influence the work programme from 2005. With the approval by the IPGRI Board of the new strategy on 23 September 2004, the planning process for the development of the new work programme is firmly on track. The institutional logframe and new project logframes will be developed in the next few months. The approach taken in the logframing will follow that used to date, noting the commentary's remark on the coherent structure and the vertical logic of the current logframes. Further comments on monitoring and evaluation are made below.

IPGRI is responding to the call in the 2003 5th EPMR and reiterated in the commentary for a more focused research agenda and the identification of some research areas where the Institute has a clear comparative advantage to excel, especially those areas of science that are cross-cutting. The commentary notes work on the use of informatics and marker and other genetic technologies to identify and map geographical areas of key diversity within species as one such area. IPGRI's contributions to, for example, the "Generation" Challenge Programme meet this recommendation. The commentary also notes nutrition and dietary diversity as another such opportunity for IPGRI, wherein complementary of IPGRI's expertise on crop diversity to that of partners in human dietary practices and preferences is key. The commentary's suggestion to collaborate with IFPRI on this theme will certainly be explored as part of ongoing collaborations in social science-related areas.

Throughout the IPGRI programme, an appropriate choice of partners is essential, matched by strong facilitation and research management skills, and up-to-date specialist expertise on staff. The implementation of the new strategy will maintain this important balance overall, and include a distribution of duties that will allow scientific staff more time for direct involvement in research. The planned Agricultural Biodiversity Facilitation Unit introduced in the MTP will echo the broad approach of IPGRI's work and, to that extent, will support staff in balancing the attention that they give to management and research tasks. However, the more significant expected impact of this Unit will be in building bridges between different disciplines involved in agrobiodiversity which are well beyond IPGRI's niche; therefore, it will have an important multiplier effect on the outputs of research that is now done more or less within the isolation of separate disciplines.

IPGRI's expected programme growth over the coming period is significant and the majority of the growth is expected to be in restricted-funded activities. However, the growth is not spreading the programme more thinly. On the contrary, the new IPGRI Project Portfolio will have a smaller number of larger, focused projects that incorporate components of the current Project

Portfolio, integrating them within a set of multi-disciplinary thrusts, that bring focus, economy of scale, and opportunities for cross-learning. The commentary's cautions on maintaining a balanced programme and protection of essential functions are reflected in the cautious institutional approach to programme planning and financial management, with proactive resource mobilization for identified research priorities.

Thus, Management and Board are confident that the programme growth is balanced and in line with the institute's strategic vision. There is a concomitant confidence in the definition of the programme boundaries including, for example, a cautious exploration of genetic resources beyond plants as noted in the commentary as "a commendable expansion without diverting from the Centre's area of core competence". Similarly, there is a strong awareness of the need to balance the Institute's established honest broker role for international genetic resources conservation with exploration of livelihood and market opportunities that utilize genetic resources in the fight against poverty.

The achievement of impact and contribution to development-level objectives will certainly require, as the commentary points out, successful operation of the often-complex partnerships that IPGRI has developed over time. One expression of this is, as noted, in the identification of Risks and Assumptions in the IPGRI project logframes. Perhaps more significantly, IPGRI is giving attention to this aspect in impact assessment activities which are represented to a modest extent, again as noted by the commentary, in Project 15 ("Understanding and communicating the value and impact of plant genetic resources") but also more generally throughout the programme, where impact assessment activities are increasingly being built into project plans. Moreover, IPGRI's leadership of the CGIAR Institutional Learning and Change Initiative is providing the opportunity to explore the complexities of a partnership approach, and provide both IPGRI and the Centres as a whole tools and skills to optimise our work.

The effectiveness and achievements of the Systemwide Genetic Resources Programme (SGRP) are noted in the commentary and IPGRI appreciates this recognition. Achieving a satisfactory level of funding for this programme has been a constant concern of IPGRI, which considers the programme to be, inter alia, an important instrument in optimising the public goods dimension of the CGIAR's genetic resources work. The observation in the commentary that "it is not currently possible to monitor progress of this SWP in the absence of milestones" is not understood. The logframe for the programme (represented as Project 20 "Supporting global genetic resources conservation and use through the Systemwide Genetic Resources Programme"), like all other projects in the IPGRI Project Portfolio, includes Activity-level indicators (i.e. milestones in logframing syntax). These are provided on pages 111-113 of Attachment 3 of the MTP document.

2.11 IRRI

IRRI's MTP 2005-2007 is based on the Centre's Strategic Plan from 1996, IRRI Toward 2020, which was updated in 2003. The MTP describes four Programmes and 12 Projects. IRRI is planning to revise its Strategic Plan in 2005 after completing the selection process for a new DG. The new Plan will reflect implementation of the recommendations of the 6th EPMP, which was completed in 2004. Thus IRRI's MTP does not show major programmatic shifts. There is increased emphasis on quality and nutrition with the establishment of the Grain Quality and Nutrition Centre. IRRI is also increasing its presence in Africa. IRRI maintains a high proportion of strategic research on rice genetic that will benefit the stronger NARES in rice research in the region.

Funding is targeted at 33.0 million in 2005 with 17.56 million (53%) as unrestricted/attributed funds. This is an increase from 28.68 actual in 2003 with much of the increase coming from CP projects. Numbers of International staff are projected to go from estimated 80 in 2004 to 97 in 2005, some in response to the 6th EPMP and also presumably associated with the CP- funded areas.

Project Portfolio

The Project portfolio is appropriate pending the changes in response to the EPMP. The 5th EPMP highlighted the need for new support to INGER which is the main mechanism for the exchange of germplasm with NARES. There is a need for more clarity on the present "health" of INGER in the next MTP. The EPMP also recommended that IRRI focus research on those rainfed systems where there was a reasonable probability of impact. The SC reiterates its view that the research in upland ecosystems should be devolved to others with comparative advantage in research and development for these areas.

IRRI foresees that recent advances of molecular biology will increase the probability of success for its mission particularly for the rainfed lowlands ecosystems. IRRI needs to spell out the implications of such research advances in the time frames for the rainfed systems.

IRRI has plans to recruit a Rice Breeder to be placed in Africa. There is a need to describe the role of this position and particularly the linkages to WARDA activities. The SC recommends that IRRI establish clear collaborative relationships and distribution of labour with WARDA before embarking on a research programme for Africa.

IRRI has a project to strengthen the linkage between research and development. It would be useful see how that feed back has influenced the research programmes. For example: what have been the findings on consumer and civil society knowledge and perception of GM rice in Bangladesh and the Philippines and how has it changed the research of Project 3 (Genetic enhancement for yield, grain quality, and stress resistance) and Project 7, (Genetic enhancement for improving productivity and human health in fragile environments)? Similarly how have the findings of the socio-economic studies of hybrid rice influenced the allocation of IRRI research resources to hybrid development?

The SC notes that the project to support the Consortium for the Unfavourable Rice Environments is well funded for the MTP period. However the Consortium for the Irrigated research has reduced funding at a time when the focus is on Integrated Crop Management and sustainability of the system. Since the Consortia are important institutional instruments for

ecosystem-based research with many partners, it is important that IRRI maintains a high level of support for them.

The Rice Knowledge Bank is an effective means of sharing knowledge and information with partners for their use at the local level. Through the RKB, IRRI leads the CGIAR Learning Resource Centre initiative.

Logframe Analysis

The overall goals and outputs are well defined. Milestones are provided for the three years and they are mostly specific in terms of the type of product, but the planned achievement is not quantified. Both intermediate beneficiaries at different levels and end users are identified as appropriate.

Systemwide Linkages

IRRI leads the Crop Water Productivity Improvement Sub-programme of the Water and Food CP. The activities supported by the CP include development of salt tolerant rice varieties and aerobic rice systems, components that were supported previously outside of the CP Water.

IRRI has a focused activity in developing improved nutrient content of rice as part of the HarvestPlus CP and these activities are integrated into the MTP and will be strengthened with the new quality and nutrition laboratory.

IRRI has an extensive involvement in the Generation CP where the activities are well integrated (MTP Programme 1, 2 and 3). IRRI plans to revise the outputs of MTP Project 2 (Rice Functional genomics) when the specific activities of the funded CP are known. An important role for IRRI is the synergy between the different CP, i.e. the development of nutritious (CP Harvest) drought tolerant (Generation CP), high water use efficient (Water and Food CP) rice lines.

IRRI has given notice of the termination of the Ecoregional Initiative for the Humid and Sub-Humid Tropics of Asia. Some activities have been included into the Water and Food CP; others in other MTP projects.

IRRI Response

We thank the SC for a thorough review of our MTP2005-2007, and take note of the points raised, to which we provide our responses and comments below. As we noted in the Introduction to the MTP, the Institute is somewhat in a state of flux with a new Director General expected to be appointed from mid-2005. For that reason we have opted not to revise our Strategic Plan until the new DG is on board, and at that time we will also take into account in the planning process the recommendations of IRRI's 6th EPMR. Some of the issues that the SC has raised in its review of the MTP2005-2007 will be addressed more substantially in the Strategic Planning we expect to carry out in 2005, and from which a new MTP will emanate.

With regard to the "health" of INGER, it is important to point out that since special project funding terminated in the mid 1990s, IRRI has supported the germplasm exchange activities

of INGER from its core budget. While not being able to maintain an INGER of former scope and status – at one time considerable resources were provided for traveling workshops and other activities – the basic and most important function of INGER has been maintained, and continues to provide NARES partners, as it always has done, with access to and exchange of valuable germplasm. The Council on Partnership for Rice Research in Asia (CORRA), made up of NARES leaders, is the Steering Committee for INGER. It is true that level of germplasm exchange did decline in recent years – although now recovering – but this was not due to the funding situation but more to the uncertainty over legal and IP issues in the wake of the Convention on Biological Diversity, and during the negotiations leading up to the International Treaty on Plant Genetic Resources for Food and Agriculture.

IRRI's involvement in the uplands continues to attract attention and comment. Our focus on unfavorable environments in Projects 7, 8, and 9 permits synergies between the scientific disciplines that focus on these environments, and is fully supported by our NARES partners. Some of the poorest and most disadvantaged rice producers and consumers in Asia eke out a livelihood in rice-based upland systems. Through the Consortium on Unfavorable Rice Environments (CURE), IRRI and national partners have defined a common strategy for upland research, and IRRI's involvement in this system (with a range of partners) is supported directly by a few donors. Nevertheless, this will be one of the important issues to address having the strategic planning in 2005.

Research on the molecular basis of submergence tolerance and phosphorus uptake, among others, is providing new insights into adaptation of germplasm to stressed environments. Our continuing work on drought is enhanced by molecular approaches. We will address the particular time horizons in due course, but expect that the impact on these systems will now occur earlier than if we had not used molecular approaches.

IRRI's involvement in Africa has been carefully thought through and endorsed by the Board of Trustees at its recent meeting. For several years we have backstopped WARDA's development of germplasm in Africa through our work on wide-hybridization, molecular breeding, and germplasm enhancement in general. We believe it's now opportune to strengthen collaboration with WARDA and we intend to post a rice breeder at WARDA's headquarter in Ivory Coast from the second half of 2005 (security situation permitting) to bring IRRI's experience and expertise in the application of biotechnology to rice improvement in Africa. The posting of this staff was discussed with the DG and BOT Chair of WARDA from the very beginning of IRRI's initial planning for this position. They fully supported the concept and welcomed this additional support to rice research in Sub-Saharan Africa.

The social sciences research at IRRI feeds back into all aspects of the institute's research agenda, and the staff involved are members of the research teams that focus on ecosystem issues.

In preparing the MTP 2005-2007 we did not comment on the negotiations for a Phase III of the Irrigated Rice Research Consortium (IRRC). We are pleased to announce that these negotiations are close to conclusion, and we confidently expect donor support for a 4-year Phase III of the IRRC from January 2005.

2.12 IWMI

IWMI focuses on the key water and related land management challenges faced by poor rural communities that affect their nutrition, livelihoods and health as well as the integrity of the environmental services. IWMI seeks to address the question “How can we grow more food and sustain rural livelihoods with less water in a manner that is socially acceptable and environmentally sustainable?”

Overall, the MTP is continuing the trend for IWMI to become a more holistically-oriented water and related land management institution, with a stronger focus on policy and institutional issues and a focus on producing international public goods in the water resources field. At the same time, the Centre needs to watch this trend to make sure that it responds to the critical IPG opportunities in the biological sciences that fit within and complement the IWMI overall objectives and programmes and which are not being addressed by others.

The programme directions are being set by a comprehensive review of all programme activities through an institution wide CCER, linked to a Strategic Planning process that is still in progress for the period 2004-2008. IWMI’s overall activities addressing the comprehensive water–food–environment challenges are expressed through four instruments: IWMI’s Projects/Programmes (MTP Projects 1-5), The Dialogue on Water, Food and Environment, The Comprehensive Assessment (SWIM 2/MTP 6), and the CGIAR Water and Food CP. An appropriate Strategic Plan would seem critical in guiding IWMI to an integration of these different instruments.

The IWMI budget for 2005 is US\$ 29.5 million, which includes US\$ 13.0 million for the Water and Food CP of which IWMI is stated to access US\$ 1.5 million.

Project Portfolio

Key aspects of the IWMI’s Programme development described in the MTP for 2005-2007 are as follows:

- There is an expansion into India (with a reduction in Pakistan and Sri Lanka), and to Africa and in the use of the benchmark concept.
- There is an increase in research on water policy (MTP 4 see below).
- MTP Project 5, Water, Health and Environment expands into environmental services.
- MTP Project 2, Small Holder Land and Water management focuses on supplementary water management in rainfed systems to increase productivity and reduce risk, and on catchment management to reduce sedimentation.

In the MTP 2 -Small Holder Land and Water Management -has a large number (10) outputs which are associated the merger of IBSRAM and appear to be similar to outputs from other centres working at the crop level. SC suggests that it would be better for IWMI to focus on catchment and basin effects such as those in MTP outputs 4, 5, 6 and 7 and the “bright spots” to restore degraded lands (outputs 8 and 9).

The MTP Project 3 focuses on protecting the massive welfare gains from the use and private gains of groundwater, and on the “bigger picture” socio-ecology of ground water use. These activities seem relevant for producing international public goods.

MTP Project 6, The Comprehensive Assessment of water management in agriculture (SWIM 2) has a “bridging” role, linking many organisations concerned with different aspects of water management. It has focused on studies “looking back” to better understand impact, and “looking forward” to assess water requirements for agriculture by 2025. SWIM 2 is nearing completion, having provided these assessments.

MTP Project 7, the systemwide Initiative on Malaria and agriculture (SIMA) with a focus on expanding the knowledge base in relation to: a) Impact of agriculture-related environment and livelihood changes on malaria; b) Impact of malaria on agricultural productivity, livelihoods and economic growth; and c) Innovative anti-malaria intervention ideas field-tested and validated for effectiveness and feasibility in clearly defined settings. IWMI has forwarded a proposal based on the SIMA to the Global Challenge (Gates Foundation). The SC cautions that in some of the proposed work on malaria control, IWMI may be moving into areas outside the comparative advantage of the CGIAR, and this should be addressed in IWMI’s strategic review.

Logframe Analysis

While the MTP appears to be well thought through, the logframes for some projects are too vague for future monitoring. Many milestones are monitored by publications and reports. Several projects have large number of outputs (i.e. MTP 2 has ten outputs) where there could be more focus based on milestones for outcomes and appropriate means of verification. It is to be hoped that the current strategic planning exercise at IWMI addresses this and the relationship to CPWF activities and outputs, so that the IWMI programme can be monitored appropriately in the future.

Systemwide Linkages

IWMI leads two system wide initiatives, in addition to the international networking on water described in the introduction, SWIM 2 and SIMA.

The division of labour between IWMI’s core programme and the Water and Food CP requires more clarity particularly as, for example, the goals for work on upper catchments of water basins seem to be closely mirrored in both Centre and CP descriptions. To what extent are complementarities being created between the two and to what extent do the CPWF projects feed into IWMI’s MTP projects? For example fourteen of the 50 CPWF projects are being led by IWMI and the dovetailing between CP and IWMI MTP projects is not entirely clear from the MTP.

IWMI Response

Thank you very much for the very positive and constructive feedback on IWMI’s MTP. We appreciate the SC’s general endorsement of IWMI’s research agenda and the suggestions to help us further clarify our agenda and better express the inter-linkages between IWMI and the programmes it hosts. As requested, we provide below a brief response to the key points raised in the SC memo and a few points of clarification.

Project Portfolio - *The SC questioned the content and large number of outputs under IWMI MTP 2, Smallholder Land and Water Management. These comments are extremely timely. As mentioned in the cover note to the IWMI MTP, we are currently undergoing an internal*

review of IWMI's research themes (MTP projects 1-5) and overall research structure to determine if further revisions are appropriate. As part of this, we will re-examine specifically the outputs of MTP 2, and whether further clarification and/or adjustment is needed to ensure that we complement rather than overlap the work of other Centres.

The SC also raised a concern that some of the proposed work on malaria control through the Systemwide Initiative on Malaria in Agriculture (SIMA) maybe outside the CGIAR's comparative advantage. We in fact believe that the CGIAR is uniquely placed to contribute to malaria control in Africa through its focus on ecosystem approaches that complement traditional malaria prevention programmes. However, we acknowledge the point of the SC and will further explore with the SIMA Management Team and Scientific and Advisory Board if modifications to the programme are needed to ensure that the SIMA programme firmly builds on the knowledge and expertise of the CGIAR system.

Logframe Analysis - We agree with the SC's suggestion that some of the project logframes lacked sufficient clarity for in-depth monitoring. We will work to further strengthen the logframes in the coming year.

International Public Goods - We acknowledge the comment from the SC on the types of International Public Goods generated by the institute. Thus, as we continue to evaluate IWMI's contribution to the development of IPGs, we will endeavour to examine the full range of opportunities including those related to the biological sciences.

Linkages with the Challenge Programme on Water and Food (CPWF) - As IWMI is the lead institute for the CPWF, there are clear synergies between the two research programmes. In fact, all of the CPWF projects led by IWMI firmly fit within the institute's MTP projects. We agree, however, that we did not highlight this clearly enough in our narratives and logframes. While many of the outputs in IWMI's MTP will be generated by IWMI-led CPWF projects, we did not clearly label them as such in the logframes. We will ensure the IWMI-CPWF linkages and complementarities are more clearly reflected in future IWMI reporting.

Points of clarification:

- **Strategic Planning process:** The SC noted that the Strategic Planning process "is still in progress." However, IWMI completed the Strategic Planning process at the end of 2003, and we are currently implemented the new 2004-2008 Strategic Plan, which was approved by the IWMI Board in February 2004.
- **Programme Emphasis:** The SC noted that IWMI has increased its research on water policy and environmental services. While these are indeed two important aspects of our program, the magnitude of emphasis has not significantly changed since the last MTP.

2.13 WARDA

WARDA's research programme presented in the MTP 2005-2007 is focused on finding solutions to the problems rice farmers are currently facing in SSA. WARDA's effort to hybridize African and Asian rice has achieved success in developing improved varieties (NERICA) for rice farmers.

WARDA's operations have been hampered by civil strife in its host country but the Centre plans to return to full-scale operation in Bouaké by the end of 2004. Staff turnover is relatively high. WARDA has a new AD for Research and has developed a new strategic plan 2003-2012 to focus on two new Programmes: Integrated rice production systems and Rice policy and development, encompassing eight MTP projects (there were 13 previously). The bulk of the former MTP portfolio of projects is listed in new Programme 1.

A new priority setting process, which incorporated probability of success and cost effectiveness, was used in 2003 to develop a new MTP. This MTP brings in new projects in policy and in mitigation of the impact of health and environment - areas that are not traditional core strength of WARDA. There are now 16 international staff (and 2 more planned) in 2004 to implement the Programmes. WARDA's MTP gives evidence of the intention to spread geographically and in scope. A major change is the renaming of WARDA as the Africa Rice Centre and an increasing activity outside the traditional West African region. SC encourages WARDA to seek an appropriate balance between available resources and geographical expansion. The small staff numbers limit the extent to which diversification can be beneficial. The SC observes IRRI's interest in having a presence in Africa and recommends that the two Centres outline their collaborative programme.

WARDA has increased funding by 33% between 1998 and 2004 with some 47% unrestricted funding foreseen for this year.

Project Portfolio

The focus on two Programmes is appropriate with the biologically-based programme focusing on the three ecosystems based rice ecosystems, upland, inland valley/ lowland and irrigated systems. However the SC is concerned with WARDA capacity to implement two of the four Projects in the new Programme for Rice Policy and Development. The project on Rice policy for Africa (Project 5) requires the involvement of IFPRI and others with expertise in this area. The project Mitigating Human and Environmental Effects on Rice-Based livelihoods (Project 6) would appear to be outside WARDA's core strengths and the international public goods nature of the work and the rationale to focus only on rice not clear.

The rationale for a separate, new project on drought for all of Africa is not clear given the importance of developing resilient rice varieties for the main rice ecosystems. (Projects 1 and 2). The answer probably lies in the nature of the funding i.e. Generation CP. Clearer integration of the CP with the MTP projects is required.

The SC recommends that WARDA documents what appears to be widespread impact of the NERICA rice technology on low-income people in Africa and possibly elsewhere.

Logframe Analysis

The development of WARDA's MTP involved Board, NARS and NGOs and used a logframe analysis to provide a traceable and accountable planning of the programme. The projects were analyzed in a priority setting framework that is well documented and would appear to have been well implemented. The overall goals and outputs are well defined. However the milestones are for outputs only and the means of verification remain vague (e.g. a verifiable indicator for an IPM output listed as: "at least one IPM option for controlling stem borer available

for testing in at least two countries” and the means of verification: “WARDA programme and project reports and Journal articles”).

In some cases there is a mismatch of the Project goals, outputs and the milestones that are given and there has been little attempt to develop milestones for outcomes and appropriate means of verification.

Systemwide Linkages

WARDA contributes to the HarvestPlus CP under which it screens germplasm for high nutritional value. This activity seems to be well integrated into the main programme of WARDA. The Centre’s contribution to the Generation CP is phenotyping rice lines for drought, as well as an ambitious target of genotyping 3000 lines. There is good collaboration with CIAT in the use of an inter-specific mapping population (between *Oryza glaberrima* x *O. sativa*). However it is not clear why this activity requires a separate project. WARDA is collaborating with the World Fish Centre and IFPRI in the Water and Food CP in an activity “Community Based Fish Culture in Irrigated systems and Seasonal flood Plains”. This activity is not apparent in the main programme/ projects of WARDA and it is not clear how WARDA brings its expertise to this activity.

WARDA has been involved in developing the proposal for a CP for SSA in areas to address: Failure of African markets, Inappropriate policies and natural resource degradation. Of these, only the latter would seem to be in the area of WARDA core strengths. The other two require broad expertise in policy and appear to be the basis for the new projects in the Policy Programme of WARDA. As noted earlier SC recommends that IFPRI be a key partner with WARDA in this endeavour.

WARDA has an appropriate activity on termites in the System wide IPM, yet it is not clear how that contributes to a “systemwide goal” in IPM. WARDA is a member of the Systemwide Initiative on HIV/AIDS. It is not clear how WARDA core strengths are used in this project (apart for geographic location). WARDA has an appropriate activity on the assessment of rice straw as fodder in the System wide Livestock programme and is linked with ILRI, IRRI and ICRISAT in this activity.

WARDA has a useful partnership with AVRDC to diversify the crops in the lowlands/ inland valleys and improve nutrition.

WARDA is a member of an “Online Learning Resource Project” which would appear to be an appropriate activity and linked into Project 8 of the MTP. It is also a member of a Consortium for Spatial Information and these activities appear to be well integrated into the main MTP projects.

WARDA Response

WARDA thanks the SC for the thorough and constructive review of its MTP 2005-2007 and the recognition of WARDA’s achievement in the development of NERICA.

Comment 1. Balance between available resources and geographical expansion - The staff strength of 16 shown in the draft MTP is only for core resources. The Centre benefits from

secondment of staff from collaborative arrangements such as those with JIRCAS and JICA, the Netherlands for APOs and UN volunteers. In addition, post-docs and visiting scientists are supported by non-core resources. This additional expertise effectively doubles WARDA's staff strength. WARDA's mode of operation is strong partnership with NARS through networks and consortia. These include ROCARIZ (West Africa Rice Research Network), the upcoming East and Central Africa Rice Research Network, the African Rice Initiative, and the IVC (Inland Valley Consortium). This expertise and complementary support is worth approximately 50 full-time equivalent scientists.

Comment 2. WARDA's comparative advantage and capacity to implement the projects on: (a) Rice policy and technology impact, and (b) Mitigating human and environmental effects on rice-based livelihoods - WARDA concurs with the desirability of collaborating with IFPRI to implement rice policy research. The content of Project 5 is not new to WARDA's research portfolio, but has now been consolidated and given extra emphasis due to the importance and implications of national and international trade and macroeconomic policies on the adoption of rice-based technologies. WARDA has five core positions in socio-economics, and facilitates a task force of 16 NARS economists. Current project proposals will add at least 3 more staff to the existing core strength during the MTP period. Africa Rice Centre's strategic location in West Africa and its stakeholder ownership permit strong interaction with policymakers in the rice sector. This interaction is critical for policy research to impact on target beneficiaries. Rice policy in Nigeria has already benefited from a policy study by WARDA with USAID support.

Project 6 on mitigating human and environmental effects on rice-based livelihoods will develop strategies that contribute to agricultural reconstruction following conflicts or disasters which inevitably disrupt the uptake of all improved technologies. The focus on rice is justified because it is a staple crop in many post-conflict countries where the loss of improved seed stocks and knowledge of improved technologies has a severe impact on farm family livelihoods. After five years of experience in developing community-based seed systems as an international public good, the Centre has a role in validating the approaches in post-conflict situations. Likewise, based on WARDA's previous engagement with an IDRC supported project on malaria in agriculture, it is known that rice-based agricultural knowledge and labor are lost in rural areas affected by the malaria and HIV/AIDS pandemics.

Comment 3: The rationale for a separate, new project on drought for all of Africa is not clear given the importance of developing resilient rice varieties for the main rice ecosystems - Breeding for drought tolerance is an important objective for the rainfed ecologies for which funding has been provided through a Rockefeller Foundation grant over three years. CIRAD and AATF have also expressed interest in contributing to the project. WARDA, which has a comparative advantage enabling it to focus on rice in Africa, decided that a more visible project on drought should combine breeding with integrated agronomic management options, drought risk mapping and impact of climate change. This will allow the development of new tools for breeders and a package of options for assessment and adoption by resource-poor farmers confronted by the vagaries of climatic variability. The project will elucidate the relevant mechanisms for drought tolerance and response in NERICAs and unimproved cultivars at different crop stages. So far, WARDA has received from the Generation CP only limited funding, mainly destined for drought tolerance screening and preliminary genomic studies. WARDA will continue to work with GCP, complementary to core activities.

Comment 4: on Logframe Analysis, the SC notes specifically that milestones were developed for outputs only and suggests that attempts be made to develop milestones for outcomes and

appropriate means of verification - WARDA appreciates the SC comment that overall goals and outputs were well defined for the projects portfolio, and the Centre notes the ongoing discussions and interaction among CGIAR Centres in defining indicators and associated means of verification. An attempt was made to use the criteria under discussion at the CGIAR, and WARDA plans to update the MTP 2006-2008 using those guidelines. In developing milestones in the current MTP, WARDA focussed on outputs to enhance clarity and reduced the length and bulkiness of the document for ease of reading. Detailed milestones and indicators for specific activities in each project have been developed for use in internal project portfolio monitoring and quality control.

Comment 5: Systemwide Linkages –

(5.1) Africa Rice Centre is a convener for the 10-year-old IVC and the BoT approved a second CCER for completion early October. WARDA notes that the SC did not comment on the new Project 7 developed in response to SC guidelines for preparing MTP 2005-2007 that systemwide programmes become stand-alone MTP projects.

(5.2) Drought as a separate project is addressed above.

(5.3) Community-based Fish Culture: an activity not apparent in program/projects of WARDA and it is not clear how WARDA brings its expertise to this activity

Project 7 has an output on integrated land and water management, which includes rice-fish culture as an alternative enterprise. The project is implemented by the Inland Valley Consortium with several NARS, CGIAR partners and experts in addition to WARDA core staff. WARDA's expertise includes the rice component, GIS, information exchange (online West African Inland Valley Information System), and INRM.

(5.4) WARDA has an activity on termites in the Systemwide IPM, yet it is not clear how this contributes to a 'systemwide goal' in IPM. WARDA is a member of the SP-IPM and of the Thematic Working Group (TWG) on Soil Biota. At the 2001 soil biota consultative workshop, WARDA along with other CGIAR Centres was requested to draft project proposals on soil-borne pests and diseases in production systems of interest to each Centre. Termites are a major production constraint in cereal-based cropping systems. WARDA submitted a project proposal on "Integrated management of termites and aphids in rice-based production systems" with IRRI, CIMMYT, CABI and CIAT as partners. This proposal has been recommended for development as a mega-project proposal.

In conclusion WARDA appreciates the SC's thorough review of its 2005-2007 MTP. WARDA would take these comments on board as the Centre returns to the Headquarters in anticipation of fully implementing the MTP.

2.14 WORLD AGROFORESTRY CENTRE (ICRAF)

ICRAF continues on its path of evolution from a "programme" based Centre to a "theme" based Centre. The new approach appears to be a logical one, given the nature of agroforestry as involving the input of a number of disciplines and approaches and the need for integration across research, development and capacity strengthening activities. The four chosen themes were elaborated in the previous MTP. They are *Land and People* (4 projects in

the MTP): *Trees and Markets* (5 projects in the MTP): *Environmental Services* (4 projects in the MTP): *Strengthening Institutions* (4 projects in the MTP).

The current MTP reflects few modifications over the last one, except as noted below. The Centre continues to be heavily focused in three CGIAR output categories – policy, sustainable production systems and NARS strengthening. Three projects will receive significant expansion of funding: TM.1: Market Analysis and Support to Tree Product Enterprises; ES.1: Pro-poor Strategies to Enhance Watershed Functions; and SI.1: Strengthening Agricultural Research Institutions and Systems. Their logframes have been expanded accordingly. The SC supports these expansions in activity as being associated with priority themes where the CGIAR can produce international public goods.

ICRAF's mode of operation has changed to accommodate the new theme approach and strategy for the organization, and with greater focus on regional programmes. For example, now some three quarters of the staff operate outside the headquarters. It remains to be seen how well the new theme structure will work. For example, the Theme Leaders have no line authority in ICRAF (but rather are the "intellectual advisors" for the theme). Whether this will create management problems remains to be seen.

An EPMP of ICRAF is planned to be started in 2005. ICRAF could consider conducting a CCER around the changed programme emphasis in preparation for the EPMP.

ICRAF has concerns with regard to its funding structure, and ICRAF's financial status appears to be somewhat uncertain. ICRAF's Donor support has been delayed or will stop for some 30 minor projects in 2004. In two cases (project LP3.2 and in the AHI) work seems to have stalled because the necessary staff could not be supported. Also the Systemwide Programme on Alternatives to Slash and Burn (ASB) will be cut in half in 2004. The SC shares these concerns, as ICRAF has one of the highest ratios of restricted to unrestricted funding among the Centres. It also has concerns about its funding base in SE Asia, which is shrinking and in danger of further decline. At the same time, ICRAF is exploring opportunities to expand its work in the drylands, including India, and working with, among others, ICRISAT and ICARDA.

The SC notes and is encouraged that ICRAF is putting increased emphasis on both *ex ante* and *ex post* impact assessment and the use of their results in guiding programme evolution. This is important for maintaining donor confidence.

Project Portfolio

For the *Trees and Markets* theme, the five projects reported in this current MTP combine eight previous projects when ICRAF was managing a programme structure. Moreover, the theme enlarged in scope for the 2005-7 MTP to include a new project on "Enhanced Utilization of Tree Diversity at the Landscape Level," reflecting a perceived need to link agro-biodiversity with tree-related work. The costing will be included in the next MTP as ICRAF does not anticipate incremental cost to the Tree and Markets theme. These are logical changes with which the SC agrees. There will clearly be a need to examine the means to overcome the low economic returns for agroforestry identified by the Centre.

The indicators for *Land and People* theme are more highly aggregated than previously, since ICRAF sensed that this theme had been unnecessarily fragmented.

Secondly, ICRAF's theme on *Land and People* attempted to more fully represent the portfolio of Southeast Asia, where considerable work has been ongoing but not fully incorporated in the MTP. The current MTP is an improvement over previous years in that respect – but the gap is not yet closed, and remains to be corrected in future years.

ICRAF puts a lot of effort into spreading the concept of agroforestry in the “Strengthening Institutions” theme. The capacity building of young professionals is an interesting approach. The projects in this theme cover research, development and education institutions in the different regions and in supervising MSc and PhD's. Provided that the young scientists can continue their research career, this is a very important part of ICRAF's work and worthy of follow up and documentation of impact.

ICRAF has a widening range of partners, including some new, non-conventional ones, including the private sector. ICRAF needs to carefully assess any additional partnerships and collaboration in terms of both opportunity and transactions costs.

Logframe Analysis

There is expanded detail presented in the logframes for the ICRAF projects within the four theme areas. They appear to be well thought through and well laid out, although, as pointed out by ICRAF, there are still some where greater specification of milestones is needed and which will be incorporated next year. ICRAF has added indicators to the MTP log frame for South Asia, a new region in the Centre's structure. For the Sahel, the elements of the MTP have expanded in number and scope to keep pace with the growth of ICRAF's portfolio in that region.

Systemwide Linkages

ICRAF continues its involvement in eleven systemwide programmes, and it is the convening Centre for both the ASB and the African Highlands Initiative (AHI) systemwide programmes (discussed below). ICRAF is involved in the Water and Food CP and in the development of the proposed SSA CP, working with NEPAD, FARA, and ASARECA. ICRAF, CIMMYT, ICRISAT and CIAT/TSBF have formed a consortium for research on soil fertility in Southern Africa. It is suggested that whilst “the partnerships are long-established, the nature of the collaboration is new”, but it is difficult to assess the value-added from raising partnerships to a consortium status in this case.

The ASB has a focus on landscape mosaics where global environmental problems and poverty coincide at the margins of remaining tropical forests. There are more than 50 institutions making up the network and, in the medium term, ASB will continue its focus on technologies, policies and capacity building. The ASB is undergoing a major effort to refresh its strategic plan this year. A SC-commissioned external review of the ASB will begin in 2004.

The AHI is focussed on INRM methodologies and on intensively cultivated highland areas that are poverty pockets in the sub-region. Progress has fallen short of expectations. There have been funding shortfalls in recent years. There are hopes to renew activities including a DFID-funded examination of policy lessons. There will be more emphasis on understanding poverty, livelihood strategies, NRM and collective action, given a new CAPRI

grant. This could also be helpful for learning lessons for the SSA CP which appears to use similar approaches.

Given that AHI is working more in a process and learning mode, all activities and outputs are suggested to continue, but it relevant to ask at what stage the research can be summarised against diminishing returns. It is unclear whether funding for this process research initiative can be sustained at the level apparently required for an active programme through 2007 (approximately US\$1.4 million). The AHI has not been recently reviewed as a specific ecoregional programme. It may be timely for the SC or the Centre to conduct a review of the work and prospects of this ERP.

World Agroforestry Centre Response

We very much appreciate the comments from the SC on our new MTP, and the opportunity to respond to these comments. Overall, we interpret the commentary in a very positive light. We are grateful for the encouragement expressed for the Centre's transformation from a "programme"-based Centre to a "theme"-based Centre. As the comments noted, we are still in the early days of implementing this new organizational approach, but we are pleased with the outcomes so far. We find that it has exhibited substantive improvements, particularly in the strengthening of the integration of efforts across our regions. We will be moving forward vigorously to implement our plan for 2005-2007 in this context. Additionally, we strongly support the work of the SC to further strengthen the MTPs and logframes of the Centres as a basis for performance measurement.

In specific response to the commentary from the SC, we concur with the introductory sections, but would like to make two clarifications. First, our budget does indeed reflect and places strong emphasis on the three CGIAR output categories of policy, sustainable production systems and NARS strengthening. However, we are also doing a large amount of work on germplasm collection and improvement on key agroforestry tree species, primarily through our Trees and Markets theme.

Second, the budget presented for the Systemwide Programme on Alternatives to Slash and Burn (ASB) does show a decline from 2003. However, this is mainly a reflection of changes in the level of restricted grants that are passed through the global coordination office to partners, and restricted grants for global syntheses. The ASB global coordination office is a relatively small part of the entire ASB activities. The ASB budget presented in the Medium-Term and Financing Plans comprises ASB global governance, coordination, synthesis, some grants to partners, and "pass through" activities. It does not include the bulk of ASB project money that goes directly to partner institutions. Depending on the year (and the global coordination budget level, which does fluctuate), our estimate is that the leverage ratio is approximately 1:5; i.e., for every dollar in the ASB global budget there are 5 dollars in ASB projects with our various partners.

We appreciate the suggestion that we consider conducting a CCER around the changed programme emphasis in preparation for the EPMR. We will be discussing this suggestion with our Board. Currently, we are implementing a series of CCERs and internal analyses in preparation for the EPMR. Some of these deal with important aspects of this issue.

We take note of the review's comments on the overall funding situation for Centre. It is true that ICRAF has one of the highest ratios of restricted to unrestricted funding among the Centres. This we regard as a reflection of the commendable efforts and success of our scientists to capture

restricted funding. This has enabled the Centre to pursue its agenda vigorously in light of the limitations that the Centre has always faced with regard to unrestricted funding. Currently, our financial circumstances are becoming increasingly stable. Both unrestricted and restricted income has increased during the past three years, and are both currently projected to increase again in 2005.

Project Portfolio - We interpret the comments on our new articulation of the Trees and Markets theme as an endorsement of the revised project structure. In relation to the comment - "There will clearly be a need to examine the means to overcome the low economic returns for agroforestry identified by the Centre." - we would like to highlight the fact that overall returns to agricultural production are low in many areas, not only in agroforestry systems. We are directly addressing this issue through our Trees and Markets theme, with an emphasis on high-value trees, improving markets and appropriate value addition. ICRAF works with agroforestry systems that offer differing economic returns, some being very high (for example, grafted fruit production). The 'lower' return agroforestry systems are mainly aimed at the very poor households who have been unable to earn any kind of return from other interventions that are beyond their means. These systems include the fertilizer tree systems that increase maize yields, and are now being widely adopted by farmers throughout eastern and southern Africa.

We believe that the comments on the Land and People provide us with justification for moving forward with the reformulation of the theme. We are currently engaged in a process to further refine the thematic structure.

We appreciate the comments from the SC on our Strengthening Institutions theme. Graduate students contribute considerably to the scientific outputs of ICRAF, in addition to building institutional capacity at the national level, and serving as links and partners in the future. ICRAF has developed and is testing a tool for following up and monitoring agroforestry graduates that benefit from our support. Preliminary results show that most graduates remain within the agriculture and natural resources sectors, and a number have risen through the academic and administrative ranks. We are strongly interested in their contributions to institutional capacity and in the development of agroforestry programmes in NARIs and universities.

In relation to the comment - "ICRAF has a widening range of partners, including some new, non-conventional ones, including the private sector. ICRAF needs to carefully assess any additional partnerships and collaboration in terms of both opportunity and transactions costs."-- we are implementing a CCER that will be completed in 2005 to look at our scaling-up work in Africa. This will include an analysis of partnerships. This will build on our previous work in Southern Africa in this area and complement an internal assessment, led by our Director of Strategic Initiatives, that is examining our partnerships and collaboration from a global perspective.

Logframe Analysis - We appreciate the review's assessment that our logframes appear to be well thought through and well laid out. We are continuing to work toward ensure a more thorough specification of milestones. We have been doing analysis of milestone accomplishments, and further harmonizing them with our regional workplans. We will be modifying out internal calendar for completing our next MTP in order to do this more effectively.

Systemwide Linkages - "ICRAF, CIMMYT, ICRISAT and CIAT/TSBF have formed a consortium for research on soil fertility in Southern Africa. It is suggested that whilst "the partnerships are

long-established, the nature of the collaboration is new”, but it is difficult to assess the value-added from raising partnerships to a consortium status in this case.”

We would like to highlight that this is not only a CGIAR consortium. It is one that has strong leadership and support from NARS and universities in the region, and includes the private sector. National capacity in soils research in the region is very limited. We discovered that many projects from the Centres were linking with the same small set of national expertise. Hence, much of the momentum for the consortium has been from the national partners themselves, who have welcomed a much more coherent approach. The different Centres have complementary skills in soils science, agronomy, pest and disease management, economics, policy and GIS. Thus, they are putting these skills together to bring forth better products. All partners share the same broad objectives in soils research, so that partnership at the programme level is envisioned to lead to a much more efficient use of resources. The consortium approach also enables us to make use of the range of sites managed by the IARCs and the NARs partners. We believe that one of the international public goods from the consortium is to generate regionally relevant information on soil problems and principles for addressing these problems. It is expected that the consortium will be an excellent platform for implementing the work of the Sub Saharan Africa Challenge Programme in the southern Africa region.

In relation to the comments on the African Highlands Ecoregional Programme (AHI) - AHI has enthusiastically set forward an ambitious programme that is bearing much fruit, but which depends upon institutional change, uptake and support for doing research differently. Such institutional changes are challenging to achieve. It requires more time than was originally forecast (in the current 3 year proposal) to accomplish INRM method development and institutionalization. There are good cases on the ground and products produced. However, AHI recognizes the need to put more effort into writing up and disseminating the methods, lessons, and research findings to date and is taking steps to do so. AHI is planning to expand its NARS strengthening work; however, it currently has insufficient staff to address the multiple requests from national programme partners for increased support.

The last review of AHI was carried out in 2000. The outcomes of this excellent review were deployed to forge stakeholder agreement on its current strategy, upon which it has concentrated from 2001 to date. AHI recognizes the value of a further evaluation, and feels that one might be undertaken in early 2006 so as to allow for the INRM approach in watersheds and the work on institutionalization to have reached a more advanced stage.

We look forward to further dialog with the SC that will help guide our path toward ever-greater effectiveness in applying agroforestry science for the benefit of the rural poor.

2.15 WORLD FISH CENTRE

WorldFish Centre’s MTP presents a portfolio of research and research related activities within six distinct programme areas (six MTP projects). These projects (and the previous 13 MTP projects) emerged after a systematic priority setting process² to identify where and how WorldFish Centre can maximize its impact among poor communities. WorldFish Centre presents a clear narrative describing the operational strategy for the period 2005-2007 (including the overall development context, a description of Centre’s technical expertise and comparative

² ICLARM Strategic Plan 2000-2020

advantage, and its systematically derived research priorities), A reassessment of priorities is currently being undertaken based on the foregoing framework. A report detailing the results of the analysis is due for completion by late 2004.

Project Portfolio

There has been a significant change in the structure of the current MTP as compared to the one presented last year, although not in the research content. Thus, in the 2004-2006 MTP, a series of 13 Research Thrusts (CGIAR MTP Projects) and 29 Outputs were used to group the Centre's planned activities. In the 2005-2007 MTP, thrusts from the previous MTP have been grouped into the six new programmes that constitute the Centre's six new MTP projects. Thus, earlier projects that dealt with various aspects of biodiversity and germplasm improvement have been combined in a biodiversity project; projects that dealt coastal fisheries and integration of coastal fisheries into broader coastal land and water use have been combined in a coastal fisheries project; projects that dealt with freshwater fisheries have been combined in a freshwater project; and the projects that focused on policy and impact assessment have been combined in a policy project. International relations and information and communication remain as projects similar to the ones presented in the previous MTP.

WorldFish Centre made this change primarily because it feels that the six projects more clearly communicate the key thrusts of the Centre's research plan. However, it should be stressed that the planned activities in this MTP represent an evolution of the work programme as anticipated under previous MTPs rather than a significant departure in new directions. Thus, the current plan is largely an annual update of the earlier rolling plan of 2004-2006, with no significant difference in overall goals, activities and planned outcomes. The resource allocation to CGIAR activities and outputs for the planned period will not deviate substantially from the allocations in 2003 and 2004. Three quarters of the resources go to the activities of protecting the environment and improving policies. The SC concurs with the logic of the consolidation and streamlining of the WorldFish Centre programme.

WorldFish Centre has developed extensive expertise in areas ranging from governance of aquatic resources, socioeconomic analyses of the fisheries sectors, stock assessment, development of improved fish strains for aquatic culture to the development and evaluation of technologies for smallholders. Although more effort is required, the proposed increases in activities in SSA is very timely in a region with enormous potential in its aquatic resources, but where overexploitation of such resources is increasing at an alarming rate. The development of smallholder farms is likely to have the highest impact in improving livelihoods. For this to occur, changes in traditional practices and diets and the introduction of modern aquaculture methods and better access to markets will be essential.

To maximize impact of WorldFish Centre in developing countries and stimulate demand for its research products, the Centre is giving increasing emphasis to effective communication and dissemination of research results. WorldFish Centre received the CGIAR Science Award for Outstanding Communication in 2003 for "Fish for All", a global science and policy dialogue on fish-related issues targeted at senior policy-makers, opinion leaders and research at various levels.

WorldFish Centre has a formal Evaluation Policy which describes the internal responsibilities for evaluations and how they will be conducted and measured to assess performance. The SC commends the Centre for being proactive in establishing centre performance indicators and adopting self assessments for monitoring performance.

Logframe Analysis

WorldFish Centre has provided in the logframe, in addition to a basic description of each project, the goal, outcome, objectives, outputs, impacts, achievements (2003-2004), planned activities (2005-2007), future milestones, users, partners CGIAR linkages, and investors for each of its six projects. Assumptions and Indicators of Assumptions are, however, not provided. These are relatively easy to follow. Overall, the description is very complete and the achievements and future milestones specific enough as a basis for future performance assessment. There is no overall Centre logframe in the MTP.

The impact pathway could be sharpened by making the linkages between milestone – output – outcome (objective achieved) – impact more transparent. At a minimum, milestones should be related to specific research outputs and outcomes. In several of the achievements listed for 2003-2004, the linkage between desirable outcomes in the field, e.g., poor fishers gaining control over 115 water bodies in Bangladesh, 3,200 Bangladeshi's trained by 13 NGOs, and the Centre's contribution is not clear. The role the Centre plays and the science and technology underpinning success stories should be made more explicit.

Systemwide Linkages

WorldFish Centre participates in the Systemwide Initiative on Water Management – Phase 2 (SWIM-2) which is under the overall management of IWMI. Within this SWP, WorldFish Centre is responsible for the project, “Increasing water productivity by managing the land-water interface: effective water control for solving conflicts among agriculture-fisheries-aquaculture in coastal zones.” IRRI is the main collaborating CGIAR Centre on this project. It is not clear where this is housed in the overall WorldFish Centre MTP portfolio.

WorldFish Centre is involved in the Water and Food CP. The Centre contributes to all five CP themes. It is the coordinator for Theme 3, Aquatic Ecosystems and Fisheries, for which it has developed a wide range of partnerships with emphasis being given to three-way collaboration between NARES, ARIs and CGIAR Centres (IWMI, CIAT, IFPRI and IRRI). While the main focus of WorldFish Centre in this CP is described adequately, more could be said about how the Centre's involvement in these research partnerships are integrated into its overall programme.

WorldFish Centre presently has ongoing collaboration with some 320 institutions from developing and developed countries. The SC believes that the Centre needs to monitor closely the opportunity costs and transactions costs involved in establishing any new collaborative arrangements.

WorldFish Centre Response

SC Comment - World Fish Centre has provided in the logframe, in addition to a basic description of each project, the goal, outcome, objectives, outputs, impacts, achievements (2003-2004), planned activities (2005-2007), future milestones, users, partners CGIAR linkages, and investors for each of its six projects. Assumptions and Indicators of Assumptions are, however, not provided. [No comment]

These are relatively easy to follow. Overall, the description is very complete and the achievements and future milestones specific enough as a basis for future performance assessment. There is no overall Centre logframe in the MTP." The new logframe for the Centre will be included in the 2005-2008 MTP.

WorldFish Response - The Centre developed a forma llogframe in 2001, which (with minor updates) has been used as the basis for the last 3 MTPs. We propose to develop a new logframe in 2005 once the current review of the Centre's plans and organizational structure have been completed. This will include all logframe components, including assumptions and indicators, and will be used as the basis for the next MTP.

SC Comment - The impact pathway could be sharpened by making the linkages between milestone -output -outcome (objective achieved) -impact more transparent. At a minimum, milestones should be related to specific research outputs and outcomes.

WorldFish Response - Agreed, specific reference to which outputs relate to which outcomes, and which milestones relate to which outputs are now included in the revised plan.

SC Comment - In several of the achievements listed for 2003-2004, the linkage between desirable outcomes in the field, e.g., poor fishers gaining control over 115 water bodies in Bangladesh, 3,200 Bangladeshi's trained by 13 NGOs, and the Centre's contribution is not clear. The role the Centre plays and the science and technology underpinning success stories should be made more explicit.

WorldFish Response - Agreed. More specific linkages are described in the highlights of outcomes for 2003-2004, and included in the revised document.

SC Comment - World Fish Centre participates in the Systemwide Initiative on Water Management -Phase 2 (SWIM-2) which is under the overall management of IWMI. Within this SWP, WorldFish Centre is responsible for the project, "Increasing water productivity by managing the land-water interface: effective water control for solving conflicts among agriculture-fisheries-aquaculture in coastal zones." IRRI is the main collaborating CGIAR Centre on this project. It is not clear where this is housed in the overall World Fish Centre MTP portfolio.

WorldFish Response - Agreed. This has been clarified in the revised document.

SC Comment - World Fish Centre is involved in the Water and Food CP. The Centre contributes to all five CP themes. It is the coordinator for Theme 3, Aquatic Ecosystems and Fisheries, for which it has developed a wide range of partnerships with emphasis being given to three-way collaboration between NARES, ARIs and CGIAR Centres (IWMI, CIAT, IFPRI and IRRI). While the main focus of WorldFish Centre in this CP is described adequately, more could be said about how the Centre's involvement in these research partnerships are integrated into its overall programme.

World Fish Response - Agreed. Additional information has been added to the revised document.

SC Comment - World Fish Centre presently has ongoing collaboration with some 320 institutions from developing and developed countries. The SC believes that the Centre needs to monitor

closely the opportunity costs and transactions costs involved in establishing any new collaborative arrangements.

World Fish Response - Agreed. In preparing the MTP for next year the Centre will carefully review its list of collaborators with a view to identifying those who are strategically the most important in achieving the Centre's goals and outputs.

3 COMMENTS TO CHALLENGE PROGRAMMES MTPs

These comments are based on an analysis of the 2005-2007 MTPs for the Water and Food, HarvestPlus and Generation CPs and earlier progress reports provided to the SC.

A Challenge Programme (CP) is defined as “*A time-bound, independently-governed programme of high impact research, that targets the CGIAR goals in relation to complex issues of overwhelming global and/or regional significance (and with global impact), and requires partnerships among a wide range of institutions in order to deliver its products*”³

The Purpose of SC commentary is:

1. To use the MTPs and other supporting material to evaluate the progress of the CP towards meeting the stated objectives of the CP with a focus on the scientific content (relevance and quality) including aspects of partnerships.
2. To assess the overall completeness of the CP MTP as an instrument to guide and monitor the relevance and quality of the research agenda of the CP.

3.1 Water and Food Challenge Programme (CPWF)

Progress

The CPWF was initiated in October 2002. The CPWF is a very ambitious research, extension and capacity building programme as conceived. The CPWF has now established a set of partners to conduct research on five themes, and with application in nine river basins:

- MTP Project 1: Crop-water productivity improvement
- MTP Project 2: Water and people in catchments
- MTP Project 3: Aquatic ecosystems and fisheries
- MTP Project 4: Integrated basin water management systems
- MTP Project 5: The global and national food and water system

A research/development programme is emerging. Projects have been identified on a competitive basis. They are led mainly by the CGIAR Centres with NARS as partners. The priority areas of Theme 1 and 2 and 3 are well covered in the initial projects while there are large gaps in Themes 4 and 5. There are plans to commission projects to fill many of these gaps. Much of this work seems localized and mere continuations of pre-existing Centre and NARS research,

³ *Designing and Implementing Challenge Programmes*. Report to the CGIAR Interim Executive Council by the Challenge Programmes Task Force, Aug. 30, 2001.

rather than the sort of de novo partnering to seize emerging research opportunities of global importance. The meagre share of resources flowing to non-traditional ARI and NGO partners underscores this. At 9% of total CPWF resources, it is hard to see how much truly new and important research is getting done through this new mechanism without more substantive links to upstream ARI research and downstream NGO development initiatives.

The CPWF places high value on the processes and partnership that are being established. The SC acknowledges the hard work, time and costs involved in the process to develop partnerships. Interdisciplinary-multi institutional ventures that attempt truly new, high-impact science – i.e., that do more than just apply tried-and-true methods - have heavy up-front costs. However the SC considers that partnerships are of instrumental importance for CPs; they gain intrinsic value unto themselves only as they deliver outputs leading to outcomes consistent with the CP mission. That value will hopefully last through research and development contributions beyond the lifespan of the CP. The time-bound, high-impact ventures of the CP demand a need to develop partnerships only in so far as they can be deployed in the short-to-medium run to generate tangible, high impact scientific advances.

Relevance and Quality of Science to Deliver the Expected Outputs

The CPWF addresses a very important topic to the CGIAR goals of overwhelming global and regional significance. It will require new partnerships in order to obtain the added value of ongoing work at the sector, commodity and crop system level and to have impact at a higher level such as a basin or watershed. However it is not clear that the CPWF focuses solely on those activities that can bring about the “added value” benefits from the leverage of the partnership; instead it manages an all-encompassing agenda and, in so doing, loses focus.

The current planning and management of the CPWF does not provide time bound milestones by which the progress can be measured. Indeed the CPWF appears to argue that such ‘planning’ is contrary to the “open ended” nature of the endeavour. The CPWF MTP places as much credence in the process of developing partnerships as in the conduct of the science to bring about impact. It argues that the partnerships themselves reveal new paradigms and even new science of relevance. The SC clearly accepts that in the research planning needed for the CPWF, room can be left for innovations that arises from the partnership processes.⁴ However, without a clear scientific direction, it is difficult to understand how priorities are translated into action plans worthy of the new funding.

The MTP provides a description of the five themes of the CPWF (namely *Crop-water productivity*, *Water and people in catchments*, *Aquatic ecosystems and fisheries*, *Integrated basin water management systems*, and *The global and national food and water system*) but does not provide a means for monitoring the outcomes of the high priority research areas particularly those of global public goods. There needs to be greater effort at undertaking explicit comparative analysis within thematic areas, and particularly across basins so as to derive more generalisable

⁴ There is also a suggestion that the SC had an “open ended” approach to the analysis of the relevance and quality of the CP research because of the request for MTP was given in March 2004 for the MTP by July 2004. From the outset this misunderstanding by the CPWF management needs to be clarified. The routine process in the CGIAR has been the submission of MTP for SC comment on an annual basis. The MTP of the CPWF was presented as part of the IWMI MTP portfolio last year. The only change in MTP guidance by the SC in 2005 was to request a separation of the CPWF MTP from that of the IWMI. The SC does, of course, see the MTP as an important instrument in the planning and monitoring of the relevance and quality of science.

findings about, for example, aquatic ecosystems, trans-boundary water governance, etc. Much of the work seems localized and mere continuations of pre-existing Centre and NARS research, rather than the sort of de novo partnering to seize emerging research opportunities of global importance.

Thus while the themes in general are relevant, the science-based and impact-oriented outcomes of the CPWF are not clear from the large number of activities that are described in the MTP log frames. This is particularly true at the basin level where the dissimilar projects do not form a coherent programme and the gaps in the research are not identified.

The focus of the planning should more specifically address problem-oriented applied research issues, with clearly specified priorities and the milestones must be more focused and concrete. We emphasise the need for better tools/milestones for assessing/judging the quality of science in the CPWF.

The SC detects confusion in priority setting. The CPWF argues that a relatively broad set of priorities may be useful in establishing broad participation in the first call of competitive proposals with refinement and focusing as the process matures. The SC disagrees. Issuing a competition for proposals without having clearly specified detailed guidelines about what research is needed, and for what purpose, is likely to result in proposals that do not add up to the research input needed to achieve a particular goal. It appears that this is what has happened on review of the “initial portfolio of projects”. They do not seem to add up to a cohesive, problem-focused research programme. With priorities being set by the competitive proposals that have been submitted, some of the partners’ basic research ambitions may be left open-ended. In contrast, a problem-oriented, applied research system such as the CGIAR should have clearly specified priorities.

Another reason for a broad set of projects seems to be related to appeal to donors – by providing a larger menu from which they can select their support. This approach reduces focus. Moving forward on so many broad fronts can be slow and dilute progress on any one.

Logframe Analysis

A logframe for the CP as a whole clearly spells out the major scientific outputs for each of the Themes. The goals and purposes contained in the Programme log frame are derived from the objectives of the CP as given in the full proposal.

The MTP is built around the Themes (5) and it describes a large number of activities in each Theme. However it is not clear how the long lists of activities shown for each project add up to the goals of the Themes. Most of the indicators listed for outputs and outcomes are open-ended, with a few exceptions such as 100 competitive projects (that, of course, refers to inputs not outputs). As noted above, virtually all expected achievements for 2004 relate to process. Achievements in research seem to be absent. The SC recommends that the formulation of milestones and outputs be more concrete and science-based in order to for the MTP to work as tool for monitoring the relevance of the science.

As noted by the CPWF management, the presentation of the MTP by Themes partially distorts the inter-theme interactions which are a very important part of programme activities. It also appears to downplay the role of the benchmark basins that are the geographical focus of the CP. In the concept of logical framework hierarchies, the logframes of each CPWF project can

therefore be amalgamated to form the CP log frame either via theme logframes or via basin logframes. The SC recommends that benchmark basin logframes also be developed to capture the interaction among theme activities and outputs at the basin level. The CPWF is currently testing the best methods to use the logframe approach to represent the matrix structure of the Programme (themes x basins x research projects/synthesis). The SC plans to work with the CPs to help develop appropriate MTP logframes for these complex programmes.

Collaborative Arrangements and Unique Benefits

The CPWF emphasizes innovations in research management and governance (referred to as “strategic approaches to management and undertaking science”). It is developing a very complex and costly management and governance structure, which includes thematic advisory groups, kick-off workshops, management team processes, communities of practice, theme leaders, a 16-member management team, CPWF basins teams, monitoring and evaluation systems, and perhaps others.

However, as far as building partnerships is concerned, the CPWF makes a point about the need to spend time on process and team building. CPWF argues that interdisciplinary-multi institutional ventures that attempt truly new, high-impact science – i.e., that do more than just apply tried-and-true methods – have heavy up-front costs. These can yield discrete advances in relevant science, but it takes a year or two of intense interaction between team members to get vocabularies, methods and divisions of labour sufficiently straight to make real progress. As a consequence, transactions costs in the CPWF have been high in the initial year or two but are projected to fall quickly, approaching a level of 9% as the CP matures in the next three or more years. It should be noted that these transaction costs are in addition to normal overhead costs by the implementing institutions.

The focus on partnership should result in a broad participation. However the allocation of project funds to partners (48% to NARS, 43% to IARC, 7% to ARI and 2% to NGO) indicates few new NGO and ARI partners have joined the CPWF. However the CP appears to have good NARS participation. Of the 50 granted projects, 39 are led by CGIAR Centres or programmes (14 of these from various country offices of IWMI) and eleven are led by institutes outside the CGIAR.

What is not clear is how the transaction costs have led to synergies from the interaction of the different components, and to the definition of “value added” strategic targets for the research programme. A lot of the activities for 2004 are in component-type outputs (Theme 1 and some of Theme 3) that are being conducted by the commodity / crop/ fish systems anyway. It seems that a very complex research system is being used without the focus on the added value opportunity and involvement of new partners, which should result from it.

This imbalance needs to be addressed. The development relevance of CPs implies a need for CP proposals to demonstrate a credible mechanism for delivering research findings to farmers and other relevant practitioners. However, the CP needs to maintain a tight focus on rigorous, time-bound, high-impact research; in other words, early focus should be on the science rather than on the delivery of scientific findings. Reconciling the relevance and rigor requirements of the CPs necessitates leveraging pre-existing extension and outreach networks provided through SROs, ROs, NARS and some NGOs. CP proposals must identify these networks explicitly and provide an expression of interest from the relevant network managers to participate actively in the CP. Such interest should encompass both dissemination of research results and the provision to

the research scientists of feedback from the field. In addition the CPs should heavily leverage upstream, basic scientific capacity in which the ARIs hold comparative advantage.

General Comments

The overarching research question of the CPWF is “how to produce more food and sustain rural livelihoods with less water in a manner that is socially acceptable and environmentally sustainable”. Two key elements set the research agenda for the CPWF:

Conduct research on the “food” related part of the challenge by integration of biology, physical science and policy

Conduct effective regional and global resource management research with the concepts of (i) finding suitable indicators of systems change, (ii) a holistic approach to NRM but focused on key entry points, (iii) scaling up and, (iv) shared data among partners.

The first of these elements builds on core strength of the CGIAR, which has activities on water efficiencies of the component parts. What the CGAIR has lacked has been the ability to “add value” from the research on the component parts to impact on water productivity at a basin level. The CPWF has a unique opportunity to focus on this added value at the basin level. We suggest that the CP focus at the basin level where the gaps for the added value and synergies can be identified. Logframes for each basin research programme would give more concrete description of the process and investment in generating and monitoring the synergies or added value, as the unique outcomes of the CPWF.

In the current MTP most of the indicators listed for output and outcomes are open-ended. It would be virtually impossible to judge whether acceptable progress was achieved at the end of the year on the basis of such open-ended milestones. The new MTP, at the basin level would focus on measurable milestones of relevance to the goals of the CP. (This would be in contrast to the expected achievements for 2004 which were nearly all about institutional process.)

The theme on *Integrated Basin water management systems* focuses on tools and knowledge needed to answer the question “how can basin water resources be conserved, developed, allocated and used efficiently to produce desired agriculture outcomes and maintain environmental security”. The key research is on assembling technology that can enhance water productivity at one level, assessing costs and benefits at other levels; developing the effective institutional arrangements to serve all stakeholders in the use of water, and provide decision support tools and knowledge. More effort is needed in this area. The current allocation of projects is to favour the development of technology and management strategies (i.e.: develop innovative technologies for enhancing water and nutrient use efficiencies, develop mitigation strategies for drought, etc.). In addition to new research, the SC recommends evaluation of currently available management strategies to improve water use at the basin level particularly when assessed across basin transects that provide information on the “global” application.

The SC understands the gains made in the development and interconnecting of partner organizations (CGIAR, NARS/NARES, ARIs, donor institutions, NGOs, international organizations, etc). The CPWF demonstrates that organizations of diverse size, structure, mandates, track record, but with shared interests, could interact for the common good. Despite the complexity of the CPWF (themes, basin, institutional arrangements), the CPWF could provide an

effective model for inter-organizational collaboration and enhancing impact of research for development.

The SC also recognises the initial challenge of the CPWF was to create an environment for programme and research action, tapping the available resources (human and other resources) of the partner organizations. The need to strike a balance between simplifying processes, beginning activities and addressing the complexity of the CP is also recognized. The regular interactions among member organizations could lead to increased understanding of water-based and food issues in particular and integrated natural resource management in general. The resulting collaboration could lead to new roles and capacities among member institutions, effective approaches and institutional frameworks for research and extension, and lessons about broad-based partnerships.

However the CPWF needs to quickly clarify the focus of its ongoing activities by theme and basin and clearly identify those that will provide the global goods required to address the Global challenge. There is an urgent need for greater effort to undertake explicit comparative analysis across basins so as to derive more generalisable findings.

In conclusion, this CPWF addresses a very important topic. It should clearly be a system priority and the CP can be a useful mechanism to undertake the high priority research. However, the SC regards that the current implementation of this CPWF needs more focus in order to produce the kind of international public-goods required by the CGIAR (and of any programme of global significance).

CPWF Response

The CGIAR Challenge Programme on Water and Food (CPWF) appreciates the commentary received from the SC on the CPWF MTP. In September 2002, at the time the CPWF proposal was reviewed by TAC/iSC, the CPWF had requested an ongoing dialogue, possibly through an SC standing panel, to monitor the science proposed by the CPWF. Such a dialogue has not taken place over the last two years, but has now been initiated through the SC commentary. We hope it will be pursued as we fully intend to benefit from, and follow up, the SC recommendations.

We accept the primary criticism voiced by the SC, that the CPWF research agenda lacks focus and that the programme has not yet clearly demonstrated how it will “add value” from the research on the component parts to impact on water productivity at a basin level. We indicate in this note how we intend to respond to this point of crucial importance.

Some other points made by the SC are, we believe, partly based on a lack of communication over the last two years, compounded by our inability to fully capture what is indeed a very ambitious and complex undertaking into the format of the first CPWF MTP. We appreciate that the SC intends to work with the CPs to develop logframes that better capture these complex programmes; indeed we agree that basin logframes should be developed. Some of the issues raised by the SC have, it seems, more to do with the governance and organization than with the science. The CGIAR Secretariat is undertaking an evaluation of these issues that has not yet been made available to us and that may provide a useful addition evaluation of some of these same points.

Agreement: focus on a paradigm shift towards water productivity at basin level

We agree with the SC that the CPWF addresses a very important topic to the CGIAR goals of overwhelming global and regional significance. This was underscored by the broad stakeholder consultation undertaken by the SC that ranked “water management” as the first priority in a list of 32. We appreciate the SC conclusion that the subject matter of the CPWF clearly should be a system priority and that the CP can be a useful mechanism to undertake this high priority research.

More importantly, we agree with the SC that the focus of the CPWF should be “adding value at the basin level”. We wholeheartedly agree with the SC that: “What the CGIAR has lacked has been the ability to “add value” from the research on the component parts to impact on water productivity at a basin level. The CPWF has a unique opportunity to focus on this added value at the basin level. We suggest that the CP focus at the basin level where the gaps for the added value and synergies can be identified.”

We acknowledge that the implementation of the CPWF needs more focus to bring about this change in research, policy and development that amounts to a paradigm shift in the work on water and agriculture: improving water productivity at basin level.

Disagreement: partnerships, continuation of existing work and competitive funds

While we lack space to properly address all issues raised in the SC commentary that we think need further discussion, we briefly highlight three key issues and our response.

On partnerships: The SC does not appear to appreciate that the CPWF quite fundamentally alters (and in our view improves) the relationships between CGIAR Centres and the NARES. Not only is there, probably a first in a CGIAR program, an “equitable” sharing of resources (with 50% going to the NARES), there is also a fundamental power sharing in governance and implementation between CGIAR Centres and NARES. While it is true that the majority of projects is led by CGIAR Centres, about 20% of the projects are led by organisations from outside the CGIAR – which we believe changes the system.

Mere continuation of pre-existing Centre and NARES work: The SC suggests that the CPWF focuses too much on application of tried-and-tested methods of localised importance and should shift to adding value at basin level. While we understand this point, and accept it to a degree, bringing together the field and basin work of Centres and NARES in the context of the benchmark basins and through a basin level framework of analysis will contribute to bringing out the added value by linking different scales.

Role of the competitive process: In the first competitive call, not all pre-determined priorities were addressed due to a lack of suitable proposals; we do not think we used the competitive process to set priorities. Its key strength is that it brings in new partners and forces opening-up of hitherto closed systems; it has served the CPWF well in this respect. The competitive process has weaknesses that we recognise and will correct.

Actions to address SC commentary:

Several CPWF actions that address key points in the SC commentary are underway:

1. *The CPWF developed linkages with the water-related global change research community (the Global Water System Project; UNESCO's HELP program; GECAFS) to jointly prioritise global public goods research; this led to a joint workshop on basin level indicators, and CPWF participation in several workshops.*
2. *Actions have been initiated to increase work with CPWF linkages with ARIs – and to a lesser degree NGOs – address their too-limited participation.*
3. *To increase the CPWF focus, the management team has undertaken a “gap analysis”, as well as a “concordance analysis” of thematic and basin priorities – this work has produced a sharper focus on research priorities as we seek new research .*

In direct response to the SC Commentary we will now take the following actions:

1. *Not to proceed, for now, with the second call for proposals for about 18 million US\$ that we had prepared and were in the process of finalizing and publishing.*
2. *Establish a process of dialogue with the SC to ensure that we fully understand and can address its concerns – possibly with a role for the external advisory panel of eminent water scientists established by the CPWF.*
3. *Work with the CGIAR systemwide Comprehensive Assessment of Water Management for Agriculture to establish GPG priorities for the CPWF.*
4. *Develop a clear focus for the CPWF on the added value of the programme at basin level.*

3.2 HarvestPlus Challenge Programme: Breeding Crops for Better Nutrition

Progress

The programme elements of this CP are well advanced in planning and organization, and are spelled out clearly in the MTP narrative and logframe presentation. There is a reasonable balance between research in the fields of plant genetics, human nutrition, policy and behavioural science, coordinated in the pursuit of improving human nutrition and food security through bio-fortification. Attention has been given to achieving both short term results that are based on previous and ongoing research that can demonstrate the validity of the approach and generate support from stakeholders and donors, and long term results with much larger impacts. The primary focus on six Phase I crops is very prudent, optimizing potential for early gains and impact. At the same time, modest effort is going into laying the groundwork for a larger array of Phase II crops and the supportive research to both assess the potential for their impact on the poor, and to generate data on the location of poor people who depend on them. The programme in both Phase I and II has obvious direct relevance to the needs of those most vulnerable to malnutrition leading to morbidity and death.

The activities include germplasm screening, genotype and environmental interactions, functional gene discovery, breeding and identification of elite clones employing both classical and genomic-based approaches with marker-assisted selection, ex-ante impact assessments and policy analyses. There is now a core amount of funds that permit the testing of the value of biofortification. It is crucial that at the end of the medium term there be not only improved varieties, but reasonable knowledge about actual nutritional value. The plan seems reasonable, but ambitious.

It is felt that this CP is a good example of application of relevant science towards achieving a discrete, time-bound development objective. Its organization is proceeding nicely. Funding is exceeding expectations. The SC notes that more than half of the funding is from non-traditional sources, a laudable accomplishment. With some of the conditions outlined below, it is providing a model for how a CP should be organized around a System priority area.

This CP is improving local cultivars using gene based markers for assistance to conventional breeding and in some cases genetic modification (GM) with traits for improving nutritional value. Great care and transparency is needed in clearly identifying those outputs involving what are, in public parlance, seen to be genetically modified materials, regardless of any perceived human or environmental risk. The SC requests that the CP develops “business plans” for these products early in this process and involve the NARS for which compliance with the appropriate local regulatory and biosafety guidelines will be necessary for field release.

There was no information on the composition of the Programme Advisory Committee. This group must have wide expertise to guide this complex and ambitious programme.

Relevance and Quality of Science to Deliver the Expected Outputs

This early review of the research themes and the science that is being employed confirms that nutritional theory and plant science supports the hypotheses that enhancing iron, zinc and vitamin A levels in varieties of crops consumed by the poor can, ultimately, improve diets and thereby addresses many of the nutritional problems in persons at risk, and in particular expectant mothers and children. Because of the research work carried out between 1995 and 2002 under the Micronutrient Initiative of the CGIAR which was also supported by WHO and UNICEF, HarvestPlus already has several micronutrient-fortified staples on the ground, which include high iron-rice for Asia, high-iron maize and beans and high beta-carotene sweet potatoes for Africa. This provides empirical justification and support for further investments in the CP.

Partnerships for programme elements are extremely broad, but include assignment of leading international institutions known for excellence in science in their fields. Their selection and the key elements assigned to them are appropriate for the CP. Work in each of the areas appears to be specific and highly relevant to goals. The clear and transparent presentation of the scope and role of genomics work is commendable, and should remain so in the more public exposure of web site materials.

The programme of work is correct to emphasize demonstrations on nutrition content, bioavailability, development of indicators and efficacy demonstrations. In the time frame and with the resources allocated to these activities, it will be difficult to show effectiveness. It is also important that the conditions under which foods are cooked and consumed are being taken into account. Foods are consumed in combination and it is also important to test for efficacy using national diets that may incorporate more than one improved crop.

Micronutrient malnutrition has strong micro-regional determinants and influences. It may be useful to add a territorial approach to the analysis of malnutrition, taking into account the variety of households in the region and the diversity of their activities.

The research plan for the genetic and breeding side of the programme is complex, but reasonably straightforward. It seems appropriately organized. The nutrition and policy research is less clear and infinitely more complicated. The SC urges the partners to carefully focus nutrition

and policy studies on those populations and food systems where early-to-medium-term impact should be the greatest. Would it be advantageous to achieve focus and early success by carrying out the nutrition and policy work in phases rather than leaving it open-ended?

Logframe Analysis

A logframe for each of the 15 individual CP projects following the standard format is provided as annex to the MTP narrative. Logframe outputs and milestones are specified in sufficient detail for most projects and should provide a good basis for tracking progress and performance. Indicators and milestones for achievement for the *Technical Assistance + Regional Collaboration + Coordination* project and for the *Reaching End-Users* projects, however, are insufficient (too few) relative to the level of investment (\$US 5.5 and 5.6 million, respectively for 2004-2007). Target dates are provided for most milestones in all but two projects (*Biotech and Nutritional Genomics; Reaching and Engaging End-Users*). Dates need to be specified for monitoring of programme performance, particularly for a time-bound CP.

The level of detail provided for milestones and outputs varies across the projects, with nutritional and social studies generally being less specific. Components of some projects need further definition. The purpose, scope and outputs that specifically relate to policy analysis in the *Impact and Policy Analysis* project are not adequately elaborated. *Ex ante* impact assessment activities and milestones are described but there does not seem to be any *ex-post* impact assessments planned for the 2005-2007 period, even on a pilot scale.

It would be useful to present a CP-level logframe, i.e., a set of aggregated milestones and outputs for the CP as a whole to clearly show major output areas.

Collaborative Arrangement

The arrangement of DGs and one Board member from each lead Centre on the Programme Advisory Committee should ensure accountability to each of the Centre boards while providing a measure of independent governance focused on the outcomes of the programme and not of the component members per se.

The regional distribution of effort of 45% in Africa, moving over time to 40%, with an eventual 30% in Asia and in Latin America respectively seems appropriate. New initiatives in China should continue to be developed.

The training and human resource development required in collaborating countries should be explicitly spelled out in the outputs.

Specific Comments

It appears that a trial has been undertaken of oral rehydration (low and high zinc rice) therapy in children hospitalized with acute diarrhoea. Given that zinc supplementation has been shown to an efficacious, recommended element of the treatment of diarrhoea in hospitalized settings, the failure to administer it may be viewed as a human subjects' concern. Was zinc supplementation not recommended in the setting of the study?

The trial with iron fortified rice in the Philippines is an important contribution because it addresses iron nutriture, a tougher problem than vitamin A (for which efficacy will be easier to demonstrate).

Micronutrient enhancement in maize should go beyond improvements only in terms of its beta carotene content.

No variety should be launched to the public without a reasonable expectation of gain, either nutritional or agronomic. The nutritional impact of Quality protein maize, to this day, is unknown.

The idea of breeding for anti-nutrients is novel. However, one must be sure that breeding out structural elements such as phytate does not compromise the plant. The area of genomics is also worth pursuing.

Additional Comments

The complexity of integral solutions to malnutrition in most regions includes complementary interventions linked to health, water quality, sources of income, and diversity and mix of diet. The CP will have to sort out which of these are critical in a region and how to address them. As the programme evolves, complex issues will need to be addressed while maintaining a clear focus on identified, specific outputs.

The programme should resist the temptation to oversell its potential (e.g. in its efforts to target the agriculture and nutrition audiences in the first year). It does not have to. The development of improved varieties is expected to help adults and older children. Children less than two may be helped by their mothers' improved prenatal nutrition (which may increase micronutrient stores accumulated before birth), by improved milk content (vitamin A) and by improved dietary consumption through complementary feeding. However, because food consumption is low in this age group, the potential impact on nutrient intakes may be low, even with reasonable bioavailability. HarvestPlus should not claim to be *the* solution for this age group, where other kinds of interventions may be needed. For example, biofortified food alone is unlikely to equal the dramatic impact of zinc supplementation on diarrhoea and pneumonia, although some effect would be expected. The programme should point out how biofortification can complement other strategies. In older children and adults from poor countries, many of whom are deficient, the impact is expected to be significant, and this alone would justify the programme.

Competitive bidding appears to have been targeted to well-defined areas of research need, which appears to be its most effective use. Care should be taken, particularly as the CP moves into nutritional studies and the more complex environmental interactions, that competitive bidding is not used as a substitute for good planning and for priority-setting. It is not clear whether funding for efficacy trials will be open to bidding. Strategically, it would be good to involve persons and groups that have been sceptical in this research.

HarvestPlus CP Response

We very much thank the SC for their careful analysis and their useful comments for improving future HarvestPlus' MTPs. The following text provides HarvestPlus' response to the review of the document.

Progress - HarvestPlus' work on transgenics is upstream in nature, taking place in laboratories and at research stations (please see the Biofortification Challenge Programme proposal -- Box 6).

We note the SC's call for "great care and transparency" regarding genetically modified materials. Presently, there are no plans to undertake activities that would facilitate release of transgenic varieties. For example, it may be that discoveries made by the nutritional genomics team will lead eventually to breakthroughs in the levels of betacarotene expressed in the endosperm of improved lines of Golden Rice. HarvestPlus is in close collaboration with programmes and institutions in biosafety testing. We recognize that there would be many steps involved in eventually moving varieties to farmers and consumers. The SC request for "business plans" for such products will be taken into account.

Relevance and Quality of Science to Deliver the Expected Outputs - The CGIAR Micronutrients Project was supported by DANIDA and USAID, but not WHO and UNICEF. There are agronomically superior high beta-carotene sweet potato varieties already released and high iron bean varieties ready for release.

There are not currently high-iron rice and high-iron maize varieties ready for release. The development of high beta-carotene sweet potatoes was undertaken by CIP independently of the CGIAR Micronutrients Project.

HarvestPlus agrees with the comments made regarding food consumption. The efficacy trial and stable isotope study diets will be community-based and usual diets will be consumed, except in the intervention group that will receive the biofortified crop. Intake levels will be the same as those typically eaten. With respect to micro-regional dimensions, data collection involving mapping of micronutrient deficiency prevalences, food consumption, and crop production patterns (among other variables) is being initiated – but analysis will be limited by degree of disaggregation of existing databases.

The Phase 1 crops vary in their level of development, in opportunities for "fast-tracking" their release. Currently the best prospects are for sweet potatoes and beans in Africa. The plans are to invest more significant resources for the End-User activities for these two crops – which includes a range of interventions such as participatory varietal selection, seed systems development, market promotion, and nutrition education.

Investments in nutrition analysis and ex ante impact studies are relatively evenly distributed across the Phase 1 crops; nutrition analyses and impact/policy studies are not seen as constraints to "fast-tracking." See also our comments below.

Logframe Analysis

Reaching and Engaging Endusers - Reaching end-users was not included in the Biofortification Challenge Programme proposal. In consultations with stakeholders, the PAC, and HarvestPlus collaborators, this was identified as a key area that needed to be developed and funded. A process is underway to develop end-user proposals for each of the Phase 1 crops that when complete by the end of 2004 will provide more detailed information on milestones and dates for each of the crops.

Regional Collaboration - HarvestPlus will provide more specific information on milestones and dates in the 2006-08 MTP.

Biotech and Nutritional Genomics - HarvestPlus will work with the Nutritional Genomics team to develop indicative dates for the next MTP. Given that this is upstream research, however, it is more difficult to fix specific dates for particular milestones.

Impact and Policy Analysis - HarvestPlus plans to undertake some ex-post impact assessment for the high betacarotene sweet potatoes in 2006-2007. More elaboration will be provided on the purpose, scope, and outputs of policy analysis.

CP-level logframe - HarvestPlus will develop a CP-level logframe for the 2006-08 MTP with aggregated milestones and outputs.

Collaborative Arrangements - HarvestPlus will work with its collaborating organizations to determine the training and human resource development required in collaborative countries.

Specific Comments - The oral rehydration (low and high zinc rice) therapy was cleared by the Women and Children's Hospital human subjects board (Adelaide, Australia). Effective in 2004, HarvestPlus has procedures in place that include getting copies of the Internal Review Board (IRB) approval(s) from all the implementing institutions that undertake activities involving human subjects, and submitting these IRBs to the IFPRI IRB for their approval.

Going beyond improvements of beta carotene content of maize will depend on finding sufficient variation in iron and zinc content in the germplasm, which is currently under investigation. Failing this, transgenic options may be feasible.

Breeding for anti-nutrients was identified as a key issue at the Breeding Objectives planning workshop. Private industry will be approached to share what data they have on the effect low seed phytate levels on agronomic performance. It may be necessary to conduct experiments in low-nutrient soils of developing countries.

Additional Comments - HarvestPlus agrees that biofortification will be more effective in reducing micronutrient malnutrition if complementary programmes such as those mentioned by the SC, are initiated in tandem. However, these additional interventions are presently outside of the scope of funded activities.

HarvestPlus agrees that children under two will require other types of interventions to reduce micronutrient malnutrition.

Competitive bidding for the efficacy trials is the preferred mode to avoid criticism of preferential selection of developed country institutes. For example, the upcoming HarvestPlus-IAEA funded community-based trial will be eligible to any country that is a member of the IAEA, although developing countries selected must have in-country capacity to do work involving stable isotopes.

3.3 Generation Challenge Programme: Cultivating Plant Diversity for the Resource Poor

Progress

The CP started in 2003 and was approved for the inception phase to September 2004. The first year work plan was assembled in August 2003. Work began in early in 2004.

First year plans were to establish the institutional structure, assemble essential genetic information on the CGIAR crops and establish the technical and scientific foundation for future activities.

There is clear progress in all these areas. The Steering Committee has appointed a Director, five sub-programme Leaders and paved the way for the Scientific Advisory Panel. Commissioned work in 2004 has been designed to assure that the basic technical platforms are in place, mainly in Sub-programmes 1 (Genetic Resources Characterisation) and 4 (Bioinformatics).

There is already evidence of increased collaboration between Centres and in the engagement of ARI and NARS. A US\$ 4.5 million call for competitive grants went out in April 2004. The competitive grants programme has apparently brought interest from 130 non-consortium institutions (although it is not clear how many of these are NARS and ARIs). Around half of the 25 consortia invited to provide full proposals will be successful in the call. These will be known in October. Further developments are on hold pending full approval of GCP by ExCo following the SC recommendation in SC2.

The SC notes that GCP ‘cast the net wide’ in the first competitive call. We caution on using the competitive grants process to set the priorities for the CP. Otherwise the CP will lose its focus on the application of the genomic platform and gene mining on drought tolerance. This would be extremely unfortunate. The pressure to broaden the CP through application of the platform to other abiotic and biotic stresses (some of which may suggest more easily-reached solutions) should be carefully managed through purposeful priority-setting. Drought-induced stress, while a difficult challenge, has been identified as the number one global stress hindering crop productivity, food security and human well-being.

The SC notes that while the GCP objectives clearly overlap with the core programmes of some involved Centres, the GCP activities in germplasm characterisation and bioinformatics aspects go far beyond any single Centre initiatives already ongoing. The CPG adds value through the collective programme. However some of the more specific stress related genomics and phenotyping work may be more difficult to disentangle from on going pre-CPG core. The GCP should use where ever possible these existing facilities and networks.

The main outputs of this CP will be enabling technologies to improve cultivars using new gene based marker assistance to conventional breeding. However to make full use of the new knowledge, new varieties, probably including transgenic cultivars, will be developed through the purposeful transfer of drought genes. The SC requests that the CP develops “business plans” for these latter products early in this process and involve the NARS for which compliance with the appropriate local regulatory and biosafety guidelines will be necessary for field release.

The SC considers overall that the CP has made good progress in establishing the instrumental structures and in establishing the technical and scientific basis for the next phase. The SC therefore recommends the continuation of the GCP.

Relevance and Quality of Science to Deliver Expected Outputs

Relevance of Outputs - The outputs from the GCP will most certainly enhance the objectives sought by the CGIAR. Particularly the in the enhancement of the value of the CGIAR plant genetic resources (PGR) collections by massively extending their genetic and phenotypic characterisation and by addressing a vital problem, drought, which is common across crops and across the System, and in seeking proof of concept of the comparative paradigm, which has massive potential application, not only for drought, but also across other target breeding traits in the future and across crop species and Centres.

The comparative approach also allows a realistic route by which results will flow to minor 'orphan' crop, several of which are among the CGIAR crops. Among the cereals, pearl millet is arguably the crop most grown on marginal (drought-prone) land in Africa and India and one that already has a limited genomics platform. SC was surprised that *Pennisetum* was not given a higher priority in the CP study.

Research Hypotheses - The research hypotheses are excellent for the molecular work on Sub-programme 1 (Genetic Diversity on Global Genetic Resources). The hypotheses and organisation of comparative work on drought across crops is good (Sub-programme 2, Comparative Genomics for Gene Discovery). The breeding framework (Sub-programme 3) is more tentative as can be expected for this sub-programme as it depends to some extent on outputs from the other sub programmes and for which the budget begins in 2006. The breeding work will be undertaken by a broad array of NARS partners, making it more diffuse. Bioinformatics (Sub-programme 4) has made good progress in a very complex area spread over most of the other sub-programmes. The NARS capacity building (Sub-programme 5) is not clear, mainly because the majority of NARS partners have yet to be identified through the competitive bidding process. There is an impression that the stronger NARS (those already considering the use of MAS in their breeding programmes) may get involved first. The role and capacity building of other (than the stronger ones) NARS will need careful monitoring after the start up from the competitive projects.

One area that is not clear is the level of focus on the target of drought stress genes for both proof of concept and for application. There will be important decisions to make between the interests of the ARI experts that the CP wishes to attract on proof-of-concept using traits other than drought (that may be less complex and therefore more scientifically appealing for proof of concept) and on the application of the technology for the major constraint of drought. The CP needs to choose carefully between these two objectives and ensure that there is not an overall loss of focus on the main target drought while advancing rapidly the major goal of the application of the concept of synteny across crops and centres and partners.

Research Methodology - The methodology used in this CP is rapidly moving. The GCP has maintained a high profile in several major scientific meetings and, through its ARI partners is able to use advances methodology. There is also a good level of relevant policy built into the GCP. However a clear philosophy on what level of capacity should be built into NARS programmes would be helpful. It seems impossible that all NARS or even ARI laboratories will have state-of-the-art high throughput marker analysis systems, for the practical application of

marker-aided selection. Will there be a trend to contract such services to dedicated labs for the routine marker analyses leaving the geneticists to focus on the application of the results with practical plant breeders? This question is fundamental to the application of the gene technology in a routine manner and needs to be addressed by the GCP.

The core parties involved in this CP are globally well qualified. The leading Centres are involved, while the five ARIs are world leaders in molecular marker and genomics fields. The two NARS included, Brazil and China, are exceptionally advanced. A voice for the smaller NARS at the Steering Committee table would be useful.

As this is a very long-term project (yet with time bound outcomes) it is yet to be seen whether the fundamental science will “reach through” to application to produce high impact outcomes. Earliest impact will be through new varieties. The process involves first the ‘proof of concept’ gene pyramiding work, then drought tolerant lines, then breeding products facilitated by the increased characterisation of the CGIAR germplasm. Similarly enhanced germplasm from capacity-strengthened NARS facilities will follow even later.

Free and frequent international germplasm exchange is an essential component of the project. In recent years, following CBD and COP/MOP, these exchanges have been curtailed in some regions. Activity 1.1.5 (development of protocols to allow germplasm exchange and proper access and benefit sharing from the derivatives of the programme) deals specifically with this and aims in 2005 to have the appropriate clauses in an amended consortium agreement. This should be monitored to ensure that it is not a major limiting factor.

The relative balance between commissioned (foreseen) work and projects arising from a competitive grants programme (where new ideas should emerge) will be key to the progress towards application of the results. The CPG envisages the commissioned component to increase. SC should monitor this to ensure that creativity and involvement of external experts is not compromised while maintaining a focus on the major target.

Communications - The logframe provides a communication plan and elements of it can be found among the indicators and milestones. Even before any publications arise from GCP, the CP itself intends to do a good job of self-publicity, thereby informing the relevant scientific community of CGIAR science.

The use of major international crop science meetings, e.g. Brisbane and PAG at San Diego, to hold project meetings is very helpful in increasing awareness. However, this may not be achieving the same success with NARS scientists, particularly those from less advanced countries. Moreover the same scientists are most likely to be overlooked by ARIs assembling consortia for competitive bids. One hopes that the inclusion of GFAR as a partner and access to their networks will help correct this potential gap. SC should also monitor the traffic through the GCP ‘Helpdesk’ and the proposed establishment of regional centres of excellence where scientists from weaker NARS can go to conduct parts of their research.

It is extremely important that the CP maintains transparency both in substance and appearance to the public, and to the many constituencies that concern themselves both with ownership of genetic materials and with the new molecular technologies. The web site is an extremely important venue for this. The SC commends the CP for its planning and use, and wishes to underline its importance.

Collaborative Arrangements and Unique Benefits

It is hard to see how a project of this size and nature (exploiting the use of common genetic information across crops), over so many crops, bringing the best expertise in the world on gene analysis to bear on a vital trait for the CGIAR, drought tolerance, and linking to an enormous well established network for phenotyping could have been achieved any other way than through a CP-type effort.

The GCP also is producing time bound outputs that can be used by a larger group of practitioners to address the difficult problem of drought.

The CP is very likely to produce interactive outcomes. Already there is evidence of increased collaboration between Centres and there is the engagement of ARI. The SC will need to monitor carefully the effect of the competitive grants in broadening the partnership in ARI and particularly NARS. The evidence of sustained interest and collaboration not linked to funds will not be available for some years.

A clear desired component is the involvement of researchers over many disciplines. Clearly, and appropriately, the major emphasis is at present on genetics. Future monitoring should ensure the involvement of physiologists and agronomists and plant breeders actively engaged in the phenotyping and use of the traits in routine breeding programmes.

The CP needs to use the resources that are currently available through its partners before building new and different ones. For example the CPG plans to establish a network for phenotyping for drought tolerant rice lines in the rainfed rice systems. Such networks currently exist and are operated by the partners of the CPG. Thus the CPG should, where ever possible, use such resources, and maintain a careful boundary between the “added value” of the CP and the on going pre CPG activities of the members.

The CP currently purposefully involves an appropriate number of Centres. The exclusion of some key Centres, such as CIAT, CIP and ICRISAT, at the outset was probably necessary to get the GCP off the ground in a timely manner. This has been rectified, and more Steering Committee members including WARDA are still being recruited. It is particularly appropriate that ILRI is included as the host of BECA.

Logframe Analysis

The balance between sub-programmes in terms of outputs, goals and resources over the 4-year projection is reasonable. Germplasm characterisation falls away while gene discovery and breeding build up. Capacity building is appropriately flat over the period. Much depends on increased funding over the period.

Many of the milestones for 2005 are well written, i.e. precise, quantified and time-bound. However many appear extremely ambitious, particularly where completion depends on success by several partners, even with the significant funds to be applied over the next 12 months. Examples are the analysis and publication of diversity studies involving large numbers of makers over very large varietal panels in multiple crops, and the development of complete comparative maps and consensus QTL models.

In the capacity building sub-programme the milestones are silent about the identity of the NARS being targeted. At this stage where regions, rather than individual countries, are being considered this is not unreasonable. However SC would expect more specificity in this area for 2006 and beyond

The indicators for time-bound and clearly defined outputs appear extensive and appropriate at the moment. However the scientific objectives must change over the duration of the CP to accommodate new lines of research introduced by successful bids into the competitive programme and to accommodate advances in technology and our understanding of the underlying biology.

Future milestones will clearly be achieved more readily with entirely commissioned work, which will then lose much of the advantage of a competitive programme, which will incorporate new ideas and new partners. A mixed system of soliciting work seems appropriate so some flexibility in CP indicators must be allowed. This need not affect the next reporting year and so should not affect the reviewing process.

General Comments

This CP has already shown good evidence of new synergies across the System, particularly with portable skills, such as bioinformatics, which can be deployed anywhere virtually.

Opportunities arising from CGIAR scientists joining pre-existing independent international initiatives, as has happened with the CGIAR bioinformatics group, will leverage large amounts of relevant in-kind work those programmes into GCP and then the System as a whole.

The standardisation of procedures, e.g. for marker and phenotyping protocols, and data handling, will also produce savings (in addition to putting the CGIAR in the international spotlight for setting the standards). These could probably only emerge from a CP-like structure involving internationally leading laboratories. Similar opportunities could be sought in new CPs.

Another area where GCP is putting substantial effort is in linking with, and obtaining funding from industry. As yet private sector science has impinged little on the CGIAR, in terms of added knowledge.

It probably is clear that the CPs do offer opportunities for bringing new funding to bear on CGIAR problems. It is also clear that at least some of these funds, e.g. those from industry and charitable foundations, are new money. It is equally clear that other funds will result from reallocation.

The in-kind contributions from ARIs (and possibly NARS) to this CP are very significant and the point that capital costs, e.g. for specialised equipment, are often excluded (at the moment) is well made. A further advantage, not stated in the MTP, is that some researchers from ARIs and NARS will be diverted in their interests to work on CGIAR problems (and with CGIAR partners) in the longer term and with funding independent of the CP. It would be valuable to monitor such developments, which could provide strong arguments for the CP approach.

It is not yet apparent how broadly the genetic platform concept will affect change in how the CGIAR develops priorities and organizational strategies in one of its core, “heartland” research areas. This CP will, in several ways, provide a “proof-of-concept” test for one alternative.

Generation CP Response

We were pleased with the assessment of the Generation Challenge Programme (GCP) by the SC of the CGIAR. Here we clarify some areas of possible mis-understanding. The GCP work plan was developed between August and October 2003, was reviewed externally in October and approved by the World Bank and EC in December, 2003.

Re. the risk of distorting or otherwise damaging our programmatic focus by conducting a competitive grants programme: While we did in a sense “cast the net wide” (i.e. we did not solicit bids for a narrowly defined set of specific projects), the call for proposals was specific in that the nature of the proposals solicited was quite in line with the GCP priorities (e.g. drought was specifically mentioned, as was capacity building). We do not believe that the competitive grants process as we executed it risked distorting the GCP agenda. We sought novel contributions on the “how” of research, not the “what”.

With respect to the pressures to expand our agenda and thereby risk losing focus: The pressure come more from the individual crop species advocates. There is more of a “pull” from traits that appear to be rather readily addressed. The pull is in the form of opportunity to have a rapid impact and to reassure donors that the approach is valid.

“The GCP should use where ever possible these existing facilities and networks.” That is certainly our intention.

“The SC requests that the CP develops “business plans” ... early and involve the NARS for which compliance with the appropriate local regulatory and biosafety guidelines will be necessary for field release.” This is an excellent suggestion. Indeed, 2004 funds for SP3 are already being allocated to develop product delivery plans. We have also considered accumulating some financial resources that can be used in the process of bringing our products to market. These will be discussed in our upcoming Programme Steering Committee.

Re. apparent non-inclusion of pearl millet in the GCP programme: While Pennisetum is not a major target species for drought improvement (for the obvious reasons highlighted by the SC), it actually figures rather prominently in a number of the cereals comparative genomics activities. It is frequently grouped with rice, wheat, maize, sorghum, and/or Musa for the reasons the SC states. Furthermore, we are already investing in cow pea as the most drought tolerant legume. Our plans are to continue investing in these two species for these reasons.

Re. emerging Capacity Building approach: We are conducting needs assessment meetings with NARS and are awaiting inputs form the Stakeholders’ Committee. Based on this feedback we will put more precision in our capacity building strategies over the next 12 months. We have earmarked funds and are seeking additional funds for supporting NARS biotechnology/breeding networks and specific research activities (e.g. pedigree association mapping).

We agree that the role and capacity building of other (than the stronger ones) NARS will need careful monitoring after the start up from the competitive projects.

We agree that ARI agendas should not distort GCP research agenda.

With respect to possibly outsourcing some activities: We expect that contracting work for MAS and similar high throughput activities will have two forms. One will be the support of within-consortium institutions that are willing and able to assume these tasks. The second will be direct contracts to commercial entities specializing in this type of work. However, there will be some capacity building value in having some of our institutions involved in the early application of MAS.

Re. assuring that smaller NARS needs are met and voices are heard: We will be using our consultation processes to assure that smaller NARS do have a voice and a role.

Regarding addressing the complexities of whole plant physiology and reaching end-users: We are actively recruiting physiologists and modelers to participate in the GCP. Likewise we are beginning to develop a “reaching the end-users” strategy in collaboration with Harvest Plus, that has a much more immediate demand for this activity.

Re. the importance of taking advantage of exiting networks: We agree fully with this observation. For example, we are working with RF to jointly support a rainfed lowland breeding network for eastern India. This builds upon existing and previous investments made by IRRI and others for this region. And, this network will focus on drought tolerance for the main crop in one of the world’s largest concentrations of poverty.

Re. inclusion of ILRI in GCP consortium: Possible membership of ILRI will be raised in the upcoming PSC meeting.

Re. care in setting realistic outputs for a few activities: We appreciate this counsel and will examine our projected outputs in light of this observation.

Re. Private sector partnerships: Since the writing of this MTP real and potential collaborations with the private sector have progressed rapidly. Pioneer has confirmed that it will support a Fellowship programme and will support our MAS training course later this year. Syngenta has approached the GCP to play an important role in its humanitarian effort to make rice sequence data and comparative genomics tools available to African sorghum and millet breeding programmes. Monsanto has also approached the GCP to help explore how it can make its significant drought tolerance genomics/genetics results in several plant species available for use in developing country breeding programmes.