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THE CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
TECHNICAL ADVISORY COMMITTEE

REPORT OF THE
FORTY-EIGHTH MEETING OF THE TECHNICAL ADVISORY COMMITTEE

TAC SECRETARIAT
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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TABLE OF CONTENTS

	<u>Para</u>	<u>Page</u>
A. <u>SUMMARY</u>		v
1. <u>Main Highlights and Recommendations</u>		v
1.1. ICRISAT's Medium-Term Programme Proposal		v
1.2. WARDA's Medium-Term Programme Proposal		v
1.3. Completion of the External Programme Review of IRRI		v
1.4. Inter-Centre Cooperation on Rice Research in sub-Saharan Africa		v
2. <u>Progress on Other Items</u>		vi
2.1. IRRI's Strategic Plan and Preliminary Medium-Term Proposal		vi
2.2. ICARDA's Strategic Plan and Draft Medium-Term Proposal		vi
2.3. CIMMYT's Medium-Term Programme Proposal		vi
2.4. Report of the Standing Committee for Resource Allocation		vii
2.5. Relations with Non-Associated Centres		vii
2.6. Terms of Reference and Guidelines for External Reviews		viii
2.7. Future Reviews		viii
2.8. Future Meetings		viii
3. <u>Information on Other Matters of Interest to TAC</u>		viii
3.1. Report on Bellagio II: Tropical Forestry Research		viii
3.2. Meeting Reports		ix

	<u>Para</u>	<u>Page</u>
B. <u>RECORD OF THE PROCEEDINGS</u>		1
Opening Session	4 - 9	1
(a) Opening Remarks	4 - 6	1
(b) Adoption of TAC 47 Report	7	1
(c) Matters Arising from TAC 47	8	2
(d) Adoption of the Agenda	9	2
Strategic Plans and Resource Allocation	10 - 129	2
(a) ICRISAT	10 - 15	2
(b) WARDA	16 - 35	3
(c) IRRI	36 - 66	6
(d) ICARDA	67 - 98	11
(e) CIMMYT	99 - 116	16
(f) Report of the Standing Committee for Resource Allocation	117 - 129	19
Completion of the External Programme Review of IRRI	130 - 131	20
Inter-Centre Cooperation on Rice Research in Africa	132 - 134	21
Relations with Non-Associated Centres	135 - 153	22
(a) A Possible Expansion of the CGIAR: Approaches for TAC and the CGIAR - Part I	135 - 149	22
(b) Report of the Standing Committee for Priorities and Strategies	150 - 153	24
Report on Bellagio II: Tropical Forestry Research	154 - 160	25
Terms of Reference and Guidelines for External Programme Reviews	161 - 169	26
(a) CGIAR Centres	161 - 168	26
(b) Non-Associated Centres (Preliminary Assessment)	169	28
Future Reviews	170 - 186	28
(a) CIP	170 - 175	28
(b) CIAT	176 - 180	29
(c) IITA, ICRISAT and IFPRI	181 - 182	29
(d) Report of the Standing Committee for External Reviews	183 - 186	30

	<u>Para</u>	<u>Page</u>
Other Business	187 - 218	30
(a) CGIAR Committee on Sustainability	187 - 192	30
(b) Management of Donor Funds by ILCA	193 - 196	31
(c) TAC/Centre Directors Group on Plant Genetic Resources	197 - 201	32
(d) Inter-Centre Working Group on Plant Genetic Resources	202 - 205	33
(e) CIP/IITA Agreement on Sweet Potatoes	206	33
(f) ad hoc Donors Meeting in Paris	207 - 213	34
(g) CASAFA	214 - 215	35
(h) ICRISAT Sahelian Centre - Opening Ceremony	216	35
(i) Popular Version of the Sustainability Paper	217	35
(j) IITA Capital Budget	218	36
Future Meetings	219 - 220	36
Chairman's Closing Remarks	221	36

ANNEXES

Annex I	- List of Participants
Annex II	- Agenda
Annex III	- List of Documents
Annex IV	- Draft Terms of Reference for External Programme Reviews
Annex V	- Draft Guidelines for External Programme Review Panels
Annex VI	- Terms of Reference for the TAC Mission to the Non-Associated Centres

FORTY-EIGHTH MEETING OF THE TECHNICAL ADVISORY COMMITTEE
TO THE
CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
(El Batan, Mexico, 13 - 20 March 1989)

REPORT OF THE MEETING

A. SUMMARY

1. Main Highlights and Recommendations

1.1. ICRISAT's Medium-Term Programme Proposal

The Committee discussed the revised medium-term plan of ICRISAT and was pleased to note that the issues and concerns raised during TAC 47 had been adequately dealt with. The Centre had incorporated a section on strategic planning at ICRISAT, made more explicit the deployment of resources between India and sub-Saharan Africa, and had significantly reduced the proposed scale of activities. TAC considered the revised medium-term plan to be objective, transparent and well-balanced, and endorsed it for transmittal to the CGIAR.

1.2. WARDA's Medium-Term Programme Proposal

The Committee discussed WARDA's revised medium-term plan and was satisfied that the suggestions it had made at TAC 47 had been adequately taken into account. TAC also considered the additional resource requirements made by WARDA and agreed that in order to achieve a critical mass of scientists, one position could be added to each of the Centre's three major research programmes. The Committee requested WARDA to make further revisions to its proposal and present a budget request based on a maximum of 36 essential SSY and of capital needs other than those requested for the development of the Main Research Centre and Headquarters. Subject to those modifications, TAC considered WARDA's medium-term plan to be well-reasoned and balanced, and approved it for transmittal to the CGIAR.

1.3. Completion of the External Programme Review of IRRI

At TAC 43, the Committee had considered the reports of the Third EPR and first EMR of IRRI, but had not been able to complete the discussion in the absence of a Board-approved strategic plan. TAC therefore issued an interim commentary on the External Review reports.

Having endorsed IRRI's strategic plan at TAC 48, the Committee reconsidered the conclusions and recommendations of the 1987 report of the External Review Panels. It concluded that there was no need to revise the interim commentary, and decided to formally transmit the commentary to the CGIAR.

1.4. Inter-Centre Cooperation on Rice Research in sub-Saharan Africa

During the External Programme Review of IRRI in 1987, the Panel had recommended that IRRI should continue to focus its research in Asia and work in other regions only at the explicit request of other CGIAR Centres involved in rice research in those rice growing environments. However, it had observed that IITA was in the process of transferring its responsibility for rice improvement to WARDA. This left a potential gap with respect to rice research in Central and Eastern Africa, as these areas were not in the geographical mandate covered by WARDA.

At the request of TAC, a tripartite agreement had been developed by IITA, IRRI and WARDA on their collaboration on rice research in sub-Saharan Africa, and had been presented to TAC for information and comment. TAC considered the proposed arrangements to be logical and acceptable, and encouraged the Centres to proceed with the implementation of the agreement.

2. Progress on Other Items

2.1. IRRI's Strategic Plan and Preliminary Medium-Term Proposal

TAC discussed the strategic plan of IRRI, previous versions of which had been presented to the Committee at TAC 46 and 47. In general, TAC agreed with the content and direction of the plan. The Committee therefore endorsed IRRI's strategic plan for transmittal to the CGIAR.

The Committee also considered IRRI's draft medium-term plan. The proposals were not yet complete, and TAC made a number of suggestions for improvements. IRRI was requested to submit a revised and completed medium-term plan for consideration at TAC 49.

2.2. ICARDA's Strategic Plan and Draft Medium-Term Proposal

TAC evaluated ICARDA's strategic plan, as well as the draft medium-term proposal of the Centre, which were submitted together with a compendium of background documents.

The Committee endorsed the general directions of the strategic plan, but requested ICARDA to make a greater effort to characterize its target agro-ecological zones, and to give greater consideration to the dynamics of its farming systems over time. With respect to the medium-term plan, TAC requested that ICARDA consolidate the key materials from the proposal and the background documents into a single medium-term plan document. It also requested some clarification and asked ICARDA to prepare a revised proposal for consideration at TAC 49.

2.3. CIMMYT's Medium-Term Programme Proposal

TAC reviewed the draft medium-term plan of CIMMYT and an addendum to its draft strategic plan. The Committee was pleased to note that the Centre had incorporated into its strategic plan many of the suggestions and comments made during the discussion of the EPR/EMR reports at TAC 47. These suggestions had also been reflected in the medium-term plan.

TAC considered the medium-term plan to be objective, analytical, and well balanced. TAC was pleased with the innovative approach used by the Centre in its definition of essential and desirable activities. The Committee endorsed the essence of the programme proposals and resource allocation under the no-growth scenario, but requested the Centre to elaborate on and justify the proposed growth scenario for further consideration at TAC 49.

TAC commended the meticulous analytical approach and the high degree of transparency demonstrated by the CIMMYT medium-term plan. It concluded that the no-growth scenario represented a careful reassessment of CIMMYT's total resource needs. In the event of a shortfall in funding across the System, positive recognition for the Centre's rigorous analysis should be granted.

The Committee observed that there had been a major revision of the Centre's mission statement, which it supported and suggested should be elaborated to make explicit the Centre's global mandate for maize and wheat germplasm conservation.

2.4. Report of the Standing Committee for Resource Allocation

Dr. Raoul Dudal reported on the progress made in the Standing Committee with regard to reaching a better understanding of how Centres allocate their resources; the definition of essential and desirable activities; the issue of scale; and how to handle shortfalls in resources across the System. A lot of information on Centre budgets had been collected by the CGIAR Secretariat, and some preliminary analysis had been done. Further analyses of the data were proposed. The scale

issue and the terminologies used to characterize activities were considered to be areas that deserved further review and discussion in the Standing Committee.

2.5. Relations with Non-Associated Centres

(a) A Possible Expansion of the CGIAR: Approaches for TAC and the CGIAR - Part I

In joint session with the Board Chairmen, TAC discussed a draft of Chapters II, III, and IV of a paper of which the outline had been prepared by the Chairman and approved by the Committee at TAC 47. The paper discussed the background against which the CGIAR operates. Board Chairmen stressed that any envisaged expansion of the CGIAR should be assessed on the basis of clear guiding principles. A revised and more concise version of the paper will be discussed at TAC 49.

(b) Report from the Standing Committee for Priorities and Strategies

Dr. Gustavo Nores reported on the progress made in the Standing Committee with regard to an analytical procedure for priority setting. In the short term such a procedure would be required to assess a possible expansion of the CGIAR, while in the longer term it would be necessary to carry out a major review of CGIAR priorities and strategies, which is to be completed by 1991.

2.6. Terms of Reference and Guidelines for External Reviews

Revised draft terms of reference and guidelines for external reviews were considered by TAC. Suggestions for improving the draft terms of reference and the associated list of questions were made and the Standing Committee agreed to incorporate them. It was agreed that the terms of reference and guidelines would be discussed further with Centre Directors before transmittal to the CGIAR. Draft terms of reference for the preliminary assessment of the non-associated centres were also discussed and approved.

2.7. Future Reviews

The Committee discussed progress reports with respect to the ongoing External Programme Review of CIP, and the anticipated reviews of CIAT, IITA, ICRISAT and IFPRI. Dr. Arnold, Chairman of the Standing Committee for External Reviews, also gave a short briefing on its activities.

2.8. Future Meetings

TAC confirmed the venue and dates of the following meetings:

- TAC 49: 19-24 June 1989, FAO, Rome, Italy
- TAC 50: 23-28 October 1989, IFPRI, Washington, D.C.
- TAC 51: 12-17 March 1990, FAO, Rome, Italy

TAC decided to hold a special meeting in Rome from 4-6 September 1989 to finalize stage one of the assessment of the non-associated centres.

3. Information on Other Matters of Interest to TAC

3.1. Report on Bellagio II: Tropical Forestry Research

TAC received reports on tropical forestry research from the Chairman of the Bellagio I Task Force, Dr. George D. Holmes of the United Kingdom. Five priority research areas had been identified by the Task Force for international support, namely: agro-forestry; natural forest resources management and conservation; forest products utilization and market research; tree breeding and tree improvement; and socio-economics and policy research. The Task Force had also examined various institutional options for strengthening forestry research in the tropics.

Bellagio II had put forward one option which would require an expansion of the CGIAR to include forestry. With respect to the issue of the technical advisory function for forestry research, three possible options had been suggested by the Bellagio II Conference: a single CGIAR/TAC with a separate forestry technical panel; a separate TAC for forestry (FORTAC); or the creation of a FORTAC, some of the members of which would be interchangeable with members of TAC, and a common Chairman for both TAC and FORTAC. The relationships between TAC and FORTAC would be considered at ICW '89 after a decision on forestry has been made at the CGIAR Mid-Term Meeting.

3.2. Meeting Reports

TAC received reports on the outcome of the following meetings:

- (i) CGIAR Committee on Sustainability, February 1989, Winrock International, USA
- (ii) TAC/Centre Directors Group on Plant Genetic Resources, October 1988, Washington DC, USA
- (iii) ad hoc Donors Meeting in Paris, March 1989, Paris, France

- (iv) Annual Meeting of the Commission for the Application of Science to Agriculture, Forestry and Aquaculture (CASAFA), December 1988, Cairo, Egypt
- (v) Inter-Centre Working Group on Plant Genetic Resources, February 1989, IRRI, Los Baños, Philippines
- (vi) Opening Ceremony of the ICRISAT Sahelian Centre (ISC), March 1989, Niamey, Niger.

B. RECORD OF THE PROCEEDINGS

1. The Forty-Eighth Meeting of the Technical Advisory Committee (TAC) to the Consultative Group on International Agricultural Research (CGIAR), was held from 13-20 March at CIMMYT Headquarters, El Batan, Mexico. Dr. Alex F. McCalla was in the chair.
2. The meeting was attended by 12 TAC Members, by members of the CGIAR and TAC Secretariats, and observers representing members of the CGIAR. A number of other participants attended open sessions of the meeting (Annex I).
3. A joint session was held with the Board Chairpersons, who were meeting concurrently, to have an exchange of views on three of the items on TAC's agenda. The Committee was given a special presentation on CIMMYT's activities, which included visits to the laboratories and field research facilities at El Batan, Tlaltizapan and Ciudad Obregon.

Opening Session - (Agenda Item 1)

(a) Opening Remarks

4. Dr. McCalla declared the 48th Meeting of TAC open. He then welcomed TAC Members, and Dr. Don Winkelmann, Director General of CIMMYT, who, in addition to being the host, was representing the group of Centre Directors on behalf of Dr. L. Stifel, of IITA, current Chairman of the Group of Centre Directors. The Chairman thanked Dr. Winkelmann for having agreed to host the TAC meeting at such short notice. Security and logistical problems had forced the management of CIP to request that their invitation to TAC and the Committee of Board Chairpersons to hold their spring meetings at CIP be deferred until a later date. Dr. McCalla commended CIMMYT for the excellent arrangements and facilities for the meeting.
5. Turning to the new TAC Members, the Chairman introduced Dr. Doris Howes Calloway (USA), a nutritionist, Dr. Kamla Chowdhry (India), a psychologist specializing in management and organizational issues. He also formally welcomed again Dr. Ken-Ichi Hayashi (Japan), a geneticist/plant breeder. Dr. Hayashi had participated at TAC 47. The Chairman remarked that Drs. Calloway and Chowdhry brought new fields of expertise to TAC and that they were the first women to serve on the Committee.
6. Finally, Dr. McCalla welcomed the observers and invited them to participate actively in all the open sessions of TAC and its working groups. The list of participants is shown in Annex I.

(b) Adoption of TAC 47 Report

7. The report of TAC 47 was adopted after the following amendment: the first sentence of paragraph 28 was changed to read "A TAC Member questioned the extent of CIMMYT's investment in hybrid maize breeding,

especially if the breeding of inbred lines meant a corresponding reduction in recurrent selection."

(c) Matters Arising from TAC 47

8. The Chairman pointed out that, according to the minutes of TAC 47, the 48th meeting of TAC should have been held at CIP. As stated in his opening remarks, the venue had had to be changed at short notice.

(d) Adoption of the Agenda

9. The agenda was adopted without any amendments (Annex II). The Chairman then proposed a number of items to be discussed under "Other Business" (Item 9), and invited TAC Members to convey to the Secretariat any other topics they wished to be included.

Strategic Plans and Resource Allocation - (Agenda Item 2)

(a) ICRISAT

10. ICRISAT's revised medium-term plan was introduced by Dr. W.T. Mashler, Chairman of the Centre's Board of Trustees. He stated that the plan laid the foundation for ICRISAT's proposed 10-year strategic and long-term plan, which was under preparation. Dr. L.D. Swindale, Director General of ICRISAT, explained how the Centre had incorporated the comments and suggestions made by TAC at its 47th meeting. A section on strategic planning at ICRISAT had been added. Further, ICRISAT had responded to the concern expressed by TAC regarding the rapid rate of increase in the level of the budget over the five-year period, by reducing their budget request significantly. The Director General informed the Committee that the classification of activities into essential and desirable categories was basically a scientific decision based on ICRISAT's view of what they ought to be doing, a long list of programmatic and funding criteria against which to judge the activities, and an appropriate spread of activities between continents relative to the Centre's mandate.

11. In the ensuing discussion led by Dr. Raoul Dudal, questions were raised regarding: ICRISAT's role in germplasm collection and conservation in the light of the CGIAR policy on plant genetic resources; whether the Centre kept track of varieties named by national programmes arising from ICRISAT's germplasm; the relative importance of the various food legumes; the definition of essential and desirable activities, and future work on Ascochyta blight.

12. The Committee was pleased with the changes made by the Centre to incorporate TAC's suggestions. It was satisfied that its concerns had been adequately met, and expressed appreciation to the Centre for the clarity and transparency displayed in the revised document.

13. The Committee welcomed in particular the inclusion of a chapter on the Centre's strategy which had been lacking in the previous drafts,

and the clear indication of resource deployment between India and Africa. TAC supported the Centre's decision to reduce substantially the budget level shown in the earlier drafts by cutting down on some capital items and on additional senior staff.

14. The Committee was generally satisfied with the answers provided by the Centre to additional issues raised by Members during the discussion. It suggested that these issues should be elaborated further in the new strategic and long-term plan which ICRISAT was undertaking in preparation for its External Programme and Management Reviews in 1990.

15. While fully recognizing the magnitude of the proposed budgetary increases, TAC considered the ICRISAT medium-term plan to be a well-reasoned assessment of how the Institute might appropriately address its operational mandate over the next five years. The proposals were consistent with ICRISAT's own priorities, as well as with those of the CGIAR. This judgement was based on consideration of the proposed programme, and in no respect involved an effort on the part of TAC to anticipate or predict the level of financial resources which might be available to the institute during the period. Consequently, TAC endorsed ICRISAT's medium-term plan for transmittal to the CGIAR.

(b) WARDA

16. In opening the discussion on WARDA's revised medium-term plan, Dr. H.D. Weltzien, Chairman of the Board of Trustees, introduced Dr. Eugene Terry, Director General of WARDA, and other senior management staff. He informed the Committee that the proposals made in the plan had been approved at a special meeting of the Board of Trustees. The Centre was making substantial efforts to develop "the new WARDA", and in setting its priorities as a function of its mandate. Although the structure of the Board of Trustees would be kept simple, there appeared to be a need to increase the size of its membership to enable participation by a greater number of individuals.

17. Dr. Terry then presented WARDA's revised medium-term plan. He informed the Committee that four separate documents had been circulated to members. These were: the medium-term plan itself; the proposed budget for 1990; a set of supplementary budget tables prepared in response to a request of the CGIAR Secretariat, and an overview of the revisions made to the proposals in the light of comments made at TAC 47 and by the WARDA Board of Trustees.

18. Within the essential resource requirements WARDA had made two alternative requests prepared in current dollars. Under the Priority 1 proposal, WARDA would grow from a budget of US\$ 12.2 million and 34 SSY in 1990 to one of US\$ 19.3 million and 40 SSY by 1994. Under the priority 2 proposal, the Centre would grow from a budget of US\$ 11.8 million and 33 SSY during 1990 to one of US\$ 18.4 million and 38 SSY by 1994.

19. Dr. Peter Matlon, Director of Research, briefed the Committee on how WARDA intended to obtain a critical mass in each of its major research programmes, thereby responding to comments made at TAC 47. The Centre had already increased the scientific staffing of each of its

research programmes, and it was intended that scientists at the Main Research Centre and Headquarters would provide technical backstopping to those programmes. WARDA was also intending to make use of post-doctoral scientists, and welcomed posting of scientists from other institutions in collaborative research projects. Further, WARDA was proposing the establishment of a professional support staff category for nonscientific staff. Dr. G. MacNeil, Director of Administration and Finance, explained the cost assumptions on which the budget had been based. Finally, Dr. Terry referred to the background document that had been circulated to Committee members for additional information on how WARDA had responded to other comments made at TAC 47.

20. The discussion was opened by Dr. Abdoulaye Sawadogo, who requested a clarification of the distinction in categorization between the priority 1 and 2 proposals and how this differed from the distinction between essential and desirable. He also stressed the importance of cooperation with centres like IIMI and IBSRAM in order to ensure an adequate coverage of sustainability aspects of rice research. He stressed the importance of health hazards in the inland swamp part of the continuum and asked how WARDA intended to deal with them. Various TAC Members referred to the importance of health hazards in rice eco-systems and stressed the need for international cooperation to address these effectively.

21. Some TAC Members requested clarification on WARDA's cooperation with IRRI, and especially with the latter's International Rice Testing Programme (IRTP). Questions were also raised as to whether all positions requested were really essential, and if the Centre could not label some of the research positions as desirable. There appeared to be some overlap with IITA, for example in the responsibilities for cropping systems research in the continuum. WARDA's definition of essential and desirable appeared different from that of other Centres as it only referred to manpower needs, not to programme classification.

22. In his reply, Dr. Terry explained that both priority 1 and 2 proposals fell into the essential category. Those activities labelled as desirable were not addressing a primary constraint and would only be undertaken under optimal conditions when infrastructure was available.

23. Dr. Matlon confirmed that WARDA intended to work with both IBSRAM and IIMI. He also informed the Committee that WARDA would seek the services of a consultant to review the state of knowledge relating to rice development and human health risks and to develop a research plan integrating the health dimension into WARDA's set of research activities.

24. With regard to the availability of improved germplasm, Dr. Matlon recalled that rice research in West Africa had started in the 1930s. Therefore WARDA had access to improved materials developed prior to the Centre's establishment. WARDA also benefited from good cooperation with IRRI with respect to improved germplasm, which would continue. There was also effective collaboration with IRRI in the training area, and WARDA intended to adapt IRRI's training materials to West African conditions. Some of IRRI's improved germplasm had performed well, but, for example, in the Sahel there was a problem with consumer acceptability. WARDA also intended to cooperate closely with IRTP.

25. Dr. Matlon stressed that WARDA's proposed staffing was the minimum critical mass needed to address effectively the complex environments in which the Centre had to operate. Varietal improvement was not the only way to increase rice production, and substantial efforts were also needed in crop and resource management.

26. Several TAC Members discussed the allocation of CGIAR resources to rice research in West Africa, compared to other commodities and other rice growing regions. They questioned whether such a high level of CGIAR investment for rice in West Africa could be justified.

27. One TAC Member referred to the need for WARDA to diversify its activities because the Centre would not be able to justify its existence on the basis of the 2 million ha of rice grown annually in West Africa. Dr. Matlon stressed, however, that there were substantial advantages in being a single-crop research institute, in terms of maintaining a sharp focus. He also pointed to the rapidly growing demand for rice in West Africa, currently met largely from imports, and stressed that the area contained some of the poorest countries of the world. Dr. Matlon also referred to the weakness of NARS in the region, particularly in rice research, and to the large potential for an expansion of production.

28. The Chairman reiterated that at TAC 47, TAC had made the following statement regarding WARDA's medium-term plan:

"TAC recognized that the level of CGIAR resources allocated to rice research in West Africa would be well above the level that could be justified by congruence analysis. However, the CGIAR had decided to proceed with the development of an initiative for rice research in the West Africa Region, and TAC's deliberations were made in light of this decision. Nevertheless, the Committee acknowledged that such a high level of resource allocation could be justified for an effective research programme, in view of the rapidly increasing demand for rice in West Africa and the substantial payoffs of any research breakthroughs".

TAC's deliberations at TAC 48 on WARDA's revised medium-term proposal were to be made in the light of this statement.

29. After further discussion, TAC concluded that it was satisfied with WARDA's revised medium-term plan and that the concerns it had voiced at TAC 47 had been adequately met.

30. The Committee considered the additional resource requests made by WARDA in the revised plan as compared to the plans that had been discussed at TAC 47. TAC agreed that in order to achieve a critical mass of scientists, one position could be added to each of the three rice eco-systems. In the upland/inland swamp continuum programme, a position of breeder was approved in the essential category. TAC considered that the proposed positions of agricultural anthropologist and of post-harvest technologist in the continuum should be considered as desirable. In the mangrove swamp programme, one position for an entomologist was also approved in the essential category.

31.. In reviewing essential positions, TAC was concerned that WARDA had not taken into account sufficiently the complementarity between the

agronomic work of IITA and of WARDA in the inland swamp part of the continuum. After further consideration, the Committee recommended that WARDA consider merging the positions of Director for International Cooperation, and of Director for Communications and Training.

32. TAC asked WARDA to make further revisions to its proposal and present only one request (resource requirements and funding requirements) based on 36 essential SSY, 3 desirable SSY, and on capital needs other than those requested for the development of the Main Research Centre and Headquarters. WARDA should show the latter requirements separately. The Committee also recommended that these requirements be considered essential, but hoped that they could be met from other funding sources.

33. TAC requested WARDA to incorporate in its cost assumptions section the definition of a senior staff person, the average cost and composition of a senior scientist year, and the assumptions with regard to future price changes. In the revision of the plan, WARDA should also incorporate an additional table showing operational expenditures according to the TAC/CGIAR list of activities.

34. Subject to these modifications, TAC approved WARDA's medium-term plan as well-reasoned and balanced, and ready for transmittal to the CGIAR.

35. Finally, the Committee noted the overwhelming importance of health hazards in the rice-growing eco-systems of sub-Saharan Africa, and recognized that overcoming these was a necessary condition for sustained increases in rice production on the continent. TAC agreed to draw the attention of the CGIAR to this matter, and expressed the hope that efforts would be made at the highest level of the international community to help overcome this important problem in agricultural development.

(c) IRRI

(i) Strategic Plan

36. In introducing Dr. Walter Falcon, Chairman of the Board of Trustees of IRRI, the Chairman recalled that at TAC 46 and 47 IRRI had respectively outlined the process it had followed and the contents of its draft strategic plan. But the document had not arrived in time for TAC 47 and Members therefore had not been able to discuss it.

37. Dr. Falcon indicated that IRRI's Board had been closely involved in the planning process, and that it gave its full support to the Centre's strategic and medium-term plans. The strategic planning process had been very important to the new management in gaining an in-depth understanding of the institution.

38. Dr. Klaus Lampe, Director General of IRRI, presented the strategic plan and elaborated on the strategic choices that had been made with regard to the goals and objectives of IRRI, the regional focus

of its activities, the balance between efficiency and equity, cooperation with other centres and institutes, the levels of research, partnership with national programmes, and the target rice ecosystems. These choices had led to a strategy for the next decade. With respect to research organization and management, IRRI intended to institute a matrix structure consisting of research programme thrusts and discipline-based divisions. IRRI would also adopt a project management system and give greater attention to human resource development.

39. The discussion was led by Dr. Charan Chantalakhana, who congratulated IRRI on a successful undertaking. He pointed to the low returns Asian farmers received from rice production and stressed the need for crop diversification. He then enquired whether IRRI had taken this need into account when formulating its strategic plan. Dr. Chantalakhana also argued that rainfed ecosystems should receive higher priority because of the equity issue.

40. TAC was pleased to receive the strategic plan of IRRI. In general, the Committee agreed with the content and direction of the strategy.

41. To meet the growing need for rice, IRRI proposed to direct its research towards two major concerns: (1) to secure past gains in production by making rice more resistant to pests and diseases and more tolerant to environmental stresses, while also improving the production environment for the crop; and (2) to increase the yield potential of rice in general, but in particular to increase the yield potential of irrigated rice to 15 t/ha per crop.

42. In organizing its research, IRRI proposed to work in four major rice ecosystems, irrigated, rainfed lowland, upland, and deepwater/tidal wetlands. These four rice ecosystems, plus a cross-ecosystem (trans-ecosystem) category, would comprise the five major research programmes of the Institute. TAC agreed in general with this organization of programmes and with the relative emphasis given to them. It suggested that, in organizing its programmes, IRRI might find it useful to stratify further the four ecosystems according to latitude, soil characters and the like.

43. Questions were raised as to IRRI's activities in water use efficiency, direct seeding of rice, and irrigation water management. Members also wanted clarification as to how sustainability issues had been incorporated in the research proposals, and in this regard, whether IRRI was conducting research on shrubs and trees. Comments were made stressing the importance of physiological studies and whether a multi-disciplinary approach would be feasible in all programmes. One TAC Member expressed concern about the possibility of overlap with WARDA's responsibilities in regard to research on upland rice.

44. IRRI's strategic plan called for increased investment in research on upland rice, but still at a modest level. TAC noted that upland rice production was severely constrained by difficult, even intractable, problems, and that yields were low. TAC suggested that IRRI should re-assess the scope and nature of its involvement in upland rice research in the light of other IARC mandates and regional coverage,

and in the light of the relative impact of potential gains in areas other than West Africa and Latin America.

45. In his reply, Dr. Lampe stressed that IRRI could not do everything that was important in rice research, but that it would cooperate with other institutes when needed. IRRI had a clear sustainability perspective in all of its research activities, and research on shrubs and trees was being undertaken. With regard to equity and policy issues, IRRI's social scientists had undertaken a substantial amount of work on the economics of rice production. IRRI had already given greater priority in resource allocation to rainfed and upland ecosystems and would give special attention to less favoured areas.

46. Overlaps with WARDA would be avoided because of the recently negotiated agreement between IRRI, IITA and WARDA on responsibilities for rice research in sub-Saharan Africa. Dr. Lampe noted, however, that research on upland rice was often location specific.

47. TAC noted a trend towards diversification of crop patterns in irrigated lands formerly devoted entirely to rice production. It could be argued that IRRI might, therefore, place less emphasis on the irrigated ecosystem. However, irrigated rice, comprising 67 million hectares of rice land and accounting for 71% of the world's production, was a major factor in food security for billions of people. TAC therefore agreed that sustaining past yield gains and increasing the yield potential for irrigated rice were principal tasks for IRRI. Rainfed lowland rice also had a major potential for improved productivity, such that increased research attention to it was also fully justified.

48. TAC noted that IRRI intended to continue to move upstream in research, in order to attack difficult problems of disease and insect resistance and tolerance to environmental stresses. Major efforts would be made to increase yield potential across all ecosystems - but particularly in irrigated rice - and improve the sustainability of rice farming systems.

49. TAC also supported IRRI's plan to carry out its work within a matrix organizational structure. Research would be carried out in multidisciplinary projects, which would serve as the financial control system. TAC agreed with this approach, fully understanding that there were often problems in implementing such a matrix management system.

50. IRRI planned to work collaboratively in peer relationships with many of its national programme partners. IRRI also intended to develop relationships with advanced research institutions to improve the Institute's strategic research. TAC supported these initiatives and congratulated IRRI for the efforts made in its planning process. It then endorsed IRRI's strategic plan for transmittal to the CGIAR.

(ii) IRRI Medium-Term Plan

51. Dr. Lampe stated that the development of the medium-term plan had started in November 1988, through a series of project planning workshops, and the use of working groups on IRRI's reorganization. This

process had involved all senior staff. He expressed his hope that IRRI would retain the dynamism, vigour and strength which the Centre had shown since its inception in 1960. Then he asked Dr. Hubert Zandstra, Deputy Director General, to present the medium-term plan.

52. Dr. Zandstra gave an overview of IRRI's research and international support programmes. Research was organized in five major programme areas, of which four were targeted at a particular rice ecosystem (irrigated, rainfed lowland, upland, and deepwater and tidal wetland), while one was targeted at cross-ecosystem research. Each of these programmes was further subdivided, making a total of 16 interdisciplinary sub-programmes. In implementing its strategies, IRRI would focus on sustainability, equity, strengthening of national research capacity, and use of advanced research techniques. The research programme would be supported by research services which were either organized as formal central service units, or integrated with research divisions.

53. The international support activities consisted of five programmes: germplasm conservation and dissemination, information and knowledge exchange, networks, training, and technical support.

54. Research programmes would be allocated 52% of the 1989 budget base, international support programmes 22%, and research support 8%. IRRI would require 8 additional senior positions: 4 for research, 2 for international support, 1 for the Director General's office, and 1 in finance.

55. Dr. E. Sayegh, Director of Finance, gave some further information on the proposals for resource allocation that had been prepared in a separate document from the medium-term plan. IRRI projected an overall annual real growth of 2%. The direct cost per senior staff member was estimated at US\$ 252,000 per year, and the average cost for visiting scientists at US\$ 145,000 per year. IRRI was requesting a base budget of 79 essential and 18 desirable SSY, and funds totalling US\$ 38.3 million in the essential category and US\$ 9.9 million in the desirable category.

56. The 1989 IRRI budget approved in 1988 had been used as the basis for resource allocations for 1990-1994. As IRRI had operated in 1988 and 1989 at the previous year's budget level without real growth because of external reviews and the fact that it operated under the old system of annual budget requests, it had now incorporated a 4% increase into the budget base to allow for annual growth.

57. The discussion on IRRI's medium-term plan was led by Dr. Charan Chantalakhana, who asked for a clarification of the classification of activities as essential and desirable. Questions were raised as to the status of the intended bio-fertilizer centre, why participatory research was not included in the cross-ecosystem research programme, and whether IRRI could not reduce the scale of its activities.

58. Dr. Lampe commented that the terms essential and desirable were difficult to define in operational terms, as donors gave a very low priority to desirable programmes. He noted that only 32% of IRRI's budget to date had been labelled as unrestricted core. With regard to

the biofertilizer centre, Dr. Lampe hoped more progress would be made in the near future. Participatory research had been confined to the upland rice programme.

59. Dr. Lampe stressed that IRRI was currently facing far more complicated research issues than had existed 25 years ago. These issues took more time to resolve, and required sophisticated instruments and highly qualified staff. That was why it had not been possible to reduce the scale of IRRI.

60. TAC agreed with IRRI's plan to reorganize its research around five programmes, fully understanding that implementing such a matrix management system was not easy. It noted that IRRI intended to continue to move upstream in research, and therefore required some adjustments in staff, including retraining.

61. A major need at IRRI was to renovate or replace ageing facilities and equipment. Also, certain new research facilities were required to meet increased strategic research needs. A capital budget amounting to more than US\$ 14 million over the period 1990-1994 was therefore requested to meet such needs. TAC agreed that IRRI must undergo renovation of some of its facilities, and generally endorsed the five-year effort being planned, but stated it would appreciate receiving a more detailed capital improvements plan. TAC suggested that IRRI separate the normal and continuing capital requests from special capital improvement needs.

62. As to staff needs over the five-year period, IRRI had not increased its internationally recruited positions since 1987. IRRI had also frozen all nationally recruited positions since March 1988. Thus some positions, as they became vacant through retirement or other attrition, would either not be filled or would be re-assigned to meet new programme needs. In the meantime, however, IRRI was asking for eight new positions to be created so that new research requirements could be met, while retirement and the changes in old positions were proceeding. Over the five years, the net gain in positions would be three senior staff. Positions requested to meet changing programme and management needs were: molecular biologist, biochemist, Deputy Director-General Administration, physiologist, assistant finance manager, economist, geneticist, and agronomist. TAC suggested that where possible the positions being deleted over time be identified.

63. TAC noted that in presenting its budget IRRI had increased the base budget figures for 1989 by 4%; however, IRRI had not requested an augmentation of funds for 1989. The adjustment to the budget base was justified by IRRI as representing the level that would have been allocated if the budget had not been frozen for two years. TAC considered this to be an inappropriate way to redefine the budget base. The total augmentation of the budget should be justified.

64. TAC requested IRRI to make more explicit in its revised medium-term plan the relationship between programmes and manpower needs, and to include the complete organizational matrix which would replace the past disciplinary departments. TAC considered that research activities described by IRRI as "participatory research methods" could well be included in the cross-ecosystem programme.

65. The revised proposal should contain an indication and justification of IRRI's position on issues such as crop diversification, farming systems, irrigation water management, stratification of rice environments, and bio-fertilizers. TAC also requested IRRI to explain the rationale for designating activities as essential or desirable.

66. After further consideration, TAC expressed its general satisfaction with the way IRRI's medium-term plan entitled "Implementing the Strategy", which had been based on the Institute's recently completed strategic plan, "IRRI Toward 2000 and Beyond" was being developed. TAC looked forward to discussing the revised and completed medium-term plan of IRRI at TAC 49.

(d) ICARDA

67. The Chairman introduced the discussion on ICARDA's strategic plan and medium-term plan by referring to the three documents that ICARDA had circulated among Committee members for this purpose: a paper entitled "Sustainable Agriculture for the Drylands - ICARDA's Strategy"; a second document entitled: "Medium-Term Plan 1990-94 - An Overview"; and a third, also entitled "Medium-Term Plan 1990-94", subtitled "Background Documents".

68. Dr. McCalla introduced Dr. José Cubero, Chairman of ICARDA's Board of Trustees, Dr. Nasrat Fadda, Director General, and Dr. Art van Schoonhoven, Deputy Director General for Research. Dr. Cubero indicated that this would be his last public appearance as ICARDA Chairman, and thanked TAC for the good cooperation he had with the Committee during his years as Chairman. He outlined the process followed in preparing ICARDA's strategic plan, the development of which had started in May 1987, before the conduct of ICARDA's External Reviews. The Board, management and staff had cooperated closely in its preparation, and a special meeting had been held in Viterbo (Italy) to discuss many of the issues involved with national programme leaders. Dr. van Schoonhoven had been the focal point in the efforts to develop a strategic plan, although the Director General had also provided many inputs.

69. Dr. Fadda, in presenting the strategic plan, referred to the origins of ICARDA, which had been conceived as a multi-centre entity with stations in Lebanon, Iran and Syria. Because of political events, the principal and to date the Centre's only station, had been built in Syria. ICARDA's strategic plan consisted of three parts: the challenge, the first decade, and the strategy options. ICARDA's mandate region of West Asia and North Africa (WANA) covered some 24 countries, with a total area of 17 million km², and had a rapidly growing population which had been estimated to amount to 622 million by the year 2000. WANA had become the largest food-importing region in the developing world. Agricultural imports in the WANA region accounted for more than 40% of food imports by all developing countries.

70. Although the region would not be able to achieve food self-sufficiency within this century, it was possible to enhance self-reliance in food through a combination of new technology, better farm practices, more favourable government policies, and a more rational land-use pattern. This was the challenge ICARDA was called upon to meet

through research, training and the dissemination of information in a mature relationship with NARS.

71. After discussing ICARDA's mandate, mission, target groups and stakeholders, Dr. Fadda presented the Centre's new organizational structure designed to reflect its research and research support needs. ICARDA's research was to be organized around three multi-disciplinary commodity programmes - cereals, food legumes, and pasture, forage and livestock - and a farm resource management programme which addressed issues of wider concern, such as socio-economic aspects of farming systems, agro-ecological characterization and sustainability of the resource base. Since farming systems were functions of ecosystems, ICARDA had developed its work in the context of the prevailing agricultural environments of its region. These could be classified in five major zones: deserts; steppes and native pastures; barley/livestock production systems; wheat-based farming; and highland zones.

72. As irrigated agriculture was excluded from ICARDA's mandate, the Centre would not work in the driest areas. It would also, in future, give less attention to the high-rainfall high-potential zone which was well served by research carried out by other institutes. ICARDA would concentrate on the intermediate ecosystems with a rainfall of between 300 and 450 mm. These included the wetter end of the barley/livestock zone and the wheat-based farming zone.

73. ICARDA had conceived its future strategy in the context of a three-dimensional structure: the agro-ecological dimension, the commodity thrusts, and the activity level, which introduced a matrix/project-based approach. No immediate changes were proposed in the list of commodities specified by ICARDA's mandate: wheat, barley, chickpea, lentil, faba bean and pasture and forage crops. There would nevertheless be a shifting of emphasis in the relative importance attached to these commodities, primarily a phasing out of crop improvement work on faba beans and a strengthening of work on livestock.

74. In the organizational structure, a new post of Deputy Director General for Operations would be created to oversee the Finance and Administration Departments. An Internal Auditor reporting directly to the Director General would also be appointed.

75. Dr. Fadda then briefed the Committee on the allocation of resources in the medium-term plan. ICARDA had requested 66 essential senior staff positions during 1989, growing at an average annual rate of 1.8% to 72 positions by 1994. Of these human resources, during 1989 26% would be allocated to farm resource management, 32% to cereals, 24% to food legumes and 18% to pasture, forage and livestock. Growth would subsequently occur primarily in the farm resource management and the pasture, forage and livestock programmes. The plan called for a base budget in constant US\$ of 27.4 million in 1989, growing at 2.1% per annum to US\$ 30.4 million by 1994 for essential activities. According to Dr. Fadda, these projected increases in the essential category were to be considered modest.

76. The discussion was opened by Dr. C.T. de Wit, who had attended ICARDA's most recent Programme Committee meeting. He described ICARDA's strategy as being characterized by a greater attention to the higher and

drier regions, more upstream activities, and farming systems oriented research. He expressed concern that ICARDA's description of its target farming systems was too much Syria-inspired, and failed to encompass their diversity. Opportunities for impact in the "high and dry" areas and the less favourable zones were limited, and there was a lack of quantitative evidence of the progress the Centre hoped to achieve.

77. Dr. de Wit also pointed to the limited attention given in ICARDA's strategy to the impact of government policies on agricultural productivity and to a discussion of ICARDA's outreach programmes. Finally, he asked why, in the base budget, ICARDA had labelled all present positions as essential, although some of them were funded through special projects. This gave the inaccurate impression that ICARDA was proposing only modest growth.

78. In considering ICARDA's strategic plan, TAC identified a preoccupation with the agro-ecological conditions of the Syrian heartland, which were not considered to be representative of the entire WANA region. There was ambivalence in defining the WANA region as 24 countries (ICARDA Strategy p.1) on the one hand, and, on the other, persisting with the idea of the winter-rainfall Mediterranean climate represented by the agro-ecological zones adjacent to the ICARDA station at Tel Hadya in Syria. Some part of the region was characterized by summer rainfall. ICARDA's farming systems based mandate required explicit recognition that varying population densities, market opportunities and farm wealth levels created different farming systems, even within the same agro-ecological zone. The differences between systems widened the range of research opportunities within WANA.

79. TAC recommended that the Centre make a greater effort to identify agro-ecological zones and their constituent farming systems across the WANA region as a framework for planning research, outreach and training. The Committee recognized the planning potential in the development and linkage of agro-climatological characterization, crop and whole farm modelling. Nevertheless, a less sophisticated, region-wide planning framework would be valuable to ICARDA in the interim, not least in raising awareness of the diversity of conditions in the region, and by ranking the importance of farming systems by relating them to population and production information.

80. Better coverage of the geographical dimension could usefully be achieved by considering the dynamics of farming systems over time. Projections of rapidly increasing demand for meat and feed grain due to higher incomes, and of rapid urbanization suggested significant changes in farming structure, but this was not reflected in the strategic plan. Insights into possible developments, perhaps using whole farm models already available at ICARDA, would give better perceptions of future research needs.

81. The discussion of the strategic plan was lively. TAC Members were generally complimentary of ICARDA's efforts in developing the plan and expressed gratitude for the openness of ICARDA's management. Various speakers stressed the need, however, for a better characterization of the agro-ecological zones.

82. Questions were raised with regard to the economics of smallholder pasture production, and the opportunities for introducing

livestock feedlots using feed grains. Clarification was also requested concerning ICARDA's activities in impact assessment, which should be carried out not only on an ex-post basis but also ex-ante. Some Members expressed concern about the inadequate justification of the proposed activities in biotechnology and about the perceived lack of critical mass in upstream research.

83. Dr. Fadda and Dr. van Schoonhoven argued that all the major agro-ecological zones of the WANA region were well represented in Syria. Work done in Syria would be broadly applicable to other countries with similar agro-ecological zones. Dr. Fadda agreed that the characterization of agro-ecological zones could be improved, and that ICARDA should make an effort to spread its activities to more countries. The basis of livestock nutrition in the area was barley straw and pasture production, and on the basis of equity considerations ICARDA saw little justification for work on feedlots based on feedgrains.

84. With regard to molecular biology, ICARDA would continue to cooperate closely with specialized institutes, and the justification for biotechnology activities would be strengthened in the revised plans.

85. In response to a question on the effectiveness of the ICARDA-CIMMYT agreement on wheat research, Dr. van Schoonhoven said that there was harmonious cooperation between the two Centres. With respect to the initiation of a project management system at ICARDA, he intended to study the progress made by CIP and ILCA to learn from their experiences.

86. The discussion of the medium-term plan was also lively. TAC Members complimented ICARDA for the clarity of the document. One TAC Member asked how ICARDA would respond to a reduction in budgetary resources, and clarification was sought as to why ICARDA did not make more use of consultants, rather than increasing its staff resources.

87. Dr. van Schoonhoven indicated that, in a situation of budgetary restraints, cutbacks would be made in those positions which were presently funded through special projects. ICARDA already made use of consultants for many activities, but they could not always substitute for staff. He also pointed to the temporary shortage of social scientists at ICARDA, which explained why some of the policy, marketing, and impact assessment aspects of the research activities had not been sufficiently addressed in the proposals.

(i) Strategic Issues

88. TAC endorsed the shift in ICARDA strategy to the drier and higher areas of the region, and the increased attention both to livestock and to sustainability. The Committee was attracted to the idea of sustainability as a dimension of all ICARDA's research activities, provided that this be made sufficiently explicit.

89. TAC also endorsed the planned changes to management structure, and was generally pleased with the progress being made in implementing the recommendations of the external reviews. ICARDA's assurance that the implementation of its agreement with CIMMYT proceeded without problems was welcomed by the Committee.

90. The Committee was aware of the current limited social science capacity at ICARDA, and the load that these planning tasks would impose. It would appreciate ICARDA addressing these suggestions in the strategy document before its completion. If ICARDA agreed, the Committee would welcome the inclusion of a greater social science capacity in future programming for the Farm Resource Management Programme.

91. The justification given for the move into the higher and drier areas was the large number of poor people living there, and the significant contribution to food production even a small increment in productivity would bring. TAC would like to see quantitative estimates to support this perception, and expression of the need for sustainable production systems for these areas incorporated into the strategy document.

92. TAC requested a more precise and substantive description of the scale and eventual applications of the evolving upstream research thrusts in crop and whole farm modelling, whole plant physiology, and biotechnology.

93. Finally, TAC requested a more substantive presentation of the programme aspects of outreach. This should highlight the applicability of research at Tel Hadya to the WANA region as a whole, and the interactions between research at headquarters with research and other activities at outreach centres. The presentation of outreach as a subheading under training and networking in the Medium-Term Plan Overview document understated its importance. TAC requested that outreach be featured in its own right. Part of this feature could usefully be the presentation of the programmatic aspects requested above.

(ii) Budget Issues

94. TAC appreciated the efforts made by ICARDA to reconcile its programmes with the TAC activities list in quantitative terms (p. 84 Medium-Term Plan - Background Documents).

95. The main request from the Committee to ICARDA on the budget was that the Centre consolidate the key materials from the overview and the background documents into a single medium-term plan document. TAC understood the dilemma of the Centre in currently operating programme-based budgeting, and its intention to move to matrix management and project-based budgets. The attempt to reconcile the existing and the intended led to a compromise in presentation. The compromise made aspects of the budget difficult to follow.

96. The main feature of the ICARDA budget was a heavy front end-loading at the beginning of the five-year period. This was partly caused by the reinforcement of the senior management structure, as recommended by the External Reviews. The External Reviews had recommended two extra senior positions, bringing the authorized total to 56 core positions.

97. In the Overview document, the number of senior professionals for 1989 in the essential category was assumed to be 66 essential positions, an addition of 10 scientists out of special project funds. The Committee asked ICARDA to justify this initial addition of 10

positions in programmatic terms, regardless of funding sources. Subsequently, TAC would evaluate the increase from the currently approved 56 core positions to the 72 essential and 17 desirable positions requested for 1994.

98. TAC requested ICARDA to revise its budget presentation on a programme basis and to elaborate on the intention to move to project-based budgets and matrix organization. TAC also asked that the revision and consolidation of the medium-term plan document include notes on the cost assumptions and on the assumptions underlying the projection of capital requirements. The revised document should also include a single final table showing the total programme requirements, both capital and operating, essential and desirable, for the benefit of donors. The Committee would consider ICARDA's revised medium-term plan at TAC 49.

(e) CIMMYT

99. TAC had at its disposal the draft medium-term plan of CIMMYT and an addendum to CIMMYT's strategic plan. The Chairman of the CIMMYT Board of Trustees introduced the Director-General and other senior management staff. Dr. Winkelmann revisited the presentation he had made at TAC 47 with respect to CIMMYT's draft strategic plan, focussing on the comments and suggestions made by the Committee on the plan and the External Programme and Management Reviews. He explained the process used to develop the strategic plan and emphasized that CIMMYT considered national research programmes as its main clients.

100. With respect to the environment shaping the strategic plan, Dr. Winkelmann stated that poverty, efficiency criteria, sustainability, the issue of marginal lands, the need for more upstream research at CIMMYT, and the balance between maize and wheat were used as the main criteria. The relative strengths of national programmes, and alternative sources of supply for CIMMYT's products, were also taken into account in determining CIMMYT's comparative advantage. A total of eleven criteria with different weights were being used to determine what enterprises, projects and activities CIMMYT should undertake during the plan period, and for developing CIMMYT's medium-term plan.

101. The main conclusions arising from the strategic plan, as well as the operational plan, were that there should be: greater allocation of resources to maize, relative to wheat; a shift in emphasis towards more research at headquarters, with a relative reduction in training and regional programmes; and an increase in strategic research. The resource implications of the plan were outlined.

102. Also arising from the strategic plan and the recommendations of the EPR/EMR, changes were proposed in the organization and structure of CIMMYT. These would include institute-wide research coordination, the appointment of liaison scientists in outreach, and the creation of sub-programmes within the major programmes.

103. In the ensuing discussion led by Dr. Gustavo Nores, the Committee commended CIMMYT for presenting a brief, candid and explicit document summarising the criteria used for priority setting and resource allocation. TAC noted that the Centre had incorporated in its strategic

plan many of the suggestions made during the discussion of the External Review reports at TAC 47.

104. The Committee noted that there had been a major revision of the Mission Statement, which it found to be in accordance with the new strategy of the Centre. In view of the high priority which the System has accorded to genetic resources, TAC suggested that the Mission Statement, or its elaboration, should make explicit CIMMYT's global mandate for wheat and maize germplasm conservation.

105. The priority given to maize relative to wheat research was considered to be in agreement with TAC and CGIAR recommendations on these commodities. In this regard TAC observed that the relative share of resources allocated to wheat research by the System had declined along the lines that it had recommended in 1985 and that the CGIAR had endorsed in 1986.

106. There was general support for the proposed strengthening of research at headquarters, and the planned increase in upstream research through relative reductions in training and consultation activities. However, TAC wished to see how the Centre planned to work itself out of the job in those training activities it planned to phase down. In this regard TAC would welcome an amplification of the alternative arrangements the Centre would be using to ensure the continuation of valuable training activities by other institutions.

107. In the light of CIMMYT's germplasm improvement, crop management, economic analysis, and training activities, TAC considered that CIMMYT had under-estimated its involvement in research with a sustainability perspective. TAC suggested that CIMMYT should make more explicit its involvement in research with a sustainability perspective.

108. In response to a suggestion that in future cimmyt should only distribute germplasm with the gene for Quality Protein Maize (QPM), TAC was informed that there were problems due to the low demand for QPM, the higher cost of production for QPM, and the slow rate of progress with the genetic modifiers being used. Further, the quality of maize could be improved through biotechnology without going through the lengthy breeding process. TAC recalled the observation of the EPR Panel that when grown with normal maize they hybridize, thus lowering the nutritional quality of the resulting crop. Further, it was difficult to ascertain which farmers were growing QPM varieties since these could only be identified through chemical analysis. Given the slow pace of adoption of QPM by farmers, and the lack of adequate infrastructure at the national level for seed production and distribution, TAC endorsed CIMMYT's plan to re-assess its work on QPM during the 1990s.

109. With regard to winter and facultative wheat, TAC would welcome an explanation of the research opportunities in these two types of wheat, the rationale for considering this work as essential, and an indication of the expected outputs and beneficiaries.

110. The proposed changes in the structure and organization of CIMMYT through the establishment of the post of Deputy Director General of Research, restructuring of the major programmes, and the appointment of liaison officers in outreach locations, were highly commended by TAC.

111. Regarding disciplinary research, the Committee stressed that a strong disciplinary research capacity at CIMMYT was necessary for the Centre to carry out its mission effectively. Therefore, TAC asked the Centre and the Board of Trustees to institute appropriate mechanisms for promoting and strengthening disciplinary research.

112. With regard to the medium-term plan, the Committee considered that there was congruence between the resource allocation criteria and the proposed programmes. TAC endorsed the programme of work as reflected in the no-growth scenario. It considered the programme to be appropriate for implementing CIMMYT's strategy during the first five years. However, since the Centre wanted TAC to assess a 2% growth budget, the Committee requested CIMMYT to justify the additional positions (both essential and desirable) requested in terms of output and potential beneficiaries.

113. Further, TAC requested that the following additional information be incorporated in CIMMYT's revised medium-term plan:

- a table showing a breakdown of international staff at headquarters, in the regions and in bilateral programmes; with regard to bilateral programmes, there should be a short description of the programme in which staff would be involved and the international nature of their activities;
- a description of the expected output of the proposed programme;
- a definition of staff categories, staffing structure and average cost per international scientist.

114. Subject to these modifications and clarifications, TAC agreed with the essence of CIMMYT's medium-term plan under the no-growth scenario. The Committee would look forward to a revised version and justifications for the proposed growth scenario to be discussed at TAC 49.

115. The Committee found CIMMYT's medium-term plan to be excellent with respect to content and clarity. The criteria used for decision-making were sound and convincing. While fully recognizing the limitations imposed by the weighting criteria used by CIMMYT, the Committee was pleased with the Centre's approach to resource allocation and encouraged CIMMYT to continue to refine the process.

116. The Committee commended CIMMYT for its innovative definitions of essential and desirable activities and the reflection of these definitions in the budget. It also congratulated CIMMYT for the clarity and rigour of the documentation, the analytical approach and consultative spirit, especially with its clients. TAC was pleased with the objectivity and transparency shown by the Centre in the strategic and medium-term plans. It concluded that the budget request under the no-growth scenario represented a careful re-assessment of CIMMYT's total resource needs. In the event of a shortfall in funding across the System, positive recognition should be given to CIMMYT's rigorous analysis.

(f) Report of the Standing Committee for Resource Allocation

117. Dr. Raoul Dudal presented the progress report of the Standing Committee for Resource Allocation (SCRA). The SCRA discussions had been based on its terms of reference, and on the outcome of its deliberations during TAC 47.

118. Regarding the question whether the monitoring of annual budget requests of Centres was a responsibility of the SCRA or of TAC as a whole, the TAC Chairman stated that the SCRA was expected to do it on behalf of TAC. He reminded the Committee that donors had insisted that TAC should review the annual budget requests of Centres before their submission to the CGIAR. The SCRA was expected to play an important role.

119. The Chairman explained that the SCRA would review the annual budget requests to determine whether there were any major programme changes to be brought to the attention of TAC. If there were none, the requests would not need to be considered by the whole TAC. However, they would be deemed to have had TAC's endorsement.

120. The SCRA had further reviewed its experience with the new resource allocation process. It saw several positive elements in the new process as compared with the old one. These included: its programme-driven and forward-looking nature; and the fact that it allowed TAC to have a more complete knowledge of Centres' programmes, and to identify complementarities and possible overlaps between Centres.

121. Among the weaknesses identified were: inadequate information to relate programme proposals to budget requests; limited transparency in certain medium-term plans; lack of a mechanism for reviewing medium-term plans in the light of changing priorities; absence of clear indications of redeployment of resources in the course of programme implementation. The SCRA considered some of these weaknesses to be related to cost analysis, rather than to the resource allocation process. The SCRA recognized that TAC's responsibility was mainly on programmatic, rather than on financial issues.

122. The SCRA indicated that issues requiring further attention, included: scale; minimum critical mass; the role and responsibility of Boards of Trustees in resource allocation, and their relationship with TAC; and the definition and cost of a senior scientist year/senior scientist. The SCRA noted that some Centres used Senior Scientist Years (SSY) while others used Senior Scientists (SS) in their medium-term plans, which made comparisons between Centres difficult.

123. The SCRA also noted that each SSY/SS was supported by a component of a research package. Therefore, the SCRA concluded that each SSY/SS should be looked at in terms of the structure and form of the programme, rather than by cost comparisons, since these were likely to differ greatly between Centres and even among programmes within a Centre. Further, local factors and management styles would cause variations in the average costs of a SSY/SS.

124. Regarding the need for additional information on Centres budgets, the SCRA was satisfied that adequate information had been provided to the CGIAR Secretariat by the Centres. In this connection

Dr. Dudal cited the document "Trends in CGIAR Operating Expenditures: 1983-1988". The SCRA had requested the CGIAR Secretariat to analyze the data to determine for each Centre what constituted a SSY and how it was budgeted. This information should come to the Committee at TAC 50. In this connection, TAC cautioned that while it was legitimate and desirable for TAC to have better understanding of how Centres used their resources, it was not TAC's role to be a financial auditor of the Centres.

125. The SCRA made the following suggestions on how to increase the comparability and transparency of Centres' programmes and budgets:

- (i) budgeting by object of expenditure;
- (ii) programme budgeting;
- (iii) use senior scientist years and associated costs per activity;
- (iv) ask Centres to price each activity in future.

126. There was general support in TAC for (ii), (iii) and (iv) and some reservations on (i). These approaches should facilitate an analysis of activities across Centres.

127. With respect to definitions of the terminology used in the new resource allocation process, the SCRA suggested that the Centres should be encouraged to drop the terms "core", "restricted core", and "special projects", and to stick to the terms "essential" and "desirable". TAC agreed to stick to these terms until the end of the current cycle of medium-term plans. However, some TAC Members considered that a refinement of the definitions of the terminology used would be necessary. Some members found the CIMMYT definitions of "essential" and "desirable" activities attractive and innovative. The CGIAR and TAC Secretariats were requested to provide a table showing how different Centres define "essential" and "desirable" activities.

128. Dr. Dudal informed TAC that during a joint session held with the Standing Committee for External Reviews, mechanisms for relating EPRs and commodity/activity reviews more closely with resource allocation and priority setting in the CGIAR were discussed. The two Standing Committees agreed that each external review panel should look at the resource implications of its recommendations, and ensure consistency and adequacy of resource allocation.

129. In this regard, TAC observed that external review panels stay at a Centre for 2-3 weeks. They could therefore be expected to be in a good position to make recommendations on the effective use of resources. TAC also considered that external review panels were well-equipped to deal with the critical minimum mass question. The TAC Secretariat was asked to ensure that in future reviews, panels are adequately briefed to include these issues in their mandate.

Completion of the External Programme Review of IRRI - (Agenda Item 3)

130. TAC had considered the Report of the Third External Programme Review and the First External Management Review of IRRI at its 43rd

meeting in June 1987. During the discussion of the EPR and EMR reports, TAC had noted that a draft strategic plan developed by IRRI staff had been made available to the Review Panel. However, the plan did not have the endorsement of the IRRI Board. The Committee considered that it could not comment meaningfully on the recommendations of the EPR Panel without a Board-approved strategic plan, and it decided to issue an interim commentary only. It agreed to retain the item on its agenda to allow IRRI adequate time to revise its strategic plan and have it endorsed by the Board.

131. At the 48th meeting of TAC, IRRI presented its revised strategic plan ^{1/}, which had been approved by the Board. Having fully discussed and generally endorsed the strategic plan, TAC reconsidered the conclusions and recommendations of the 1987 report of the External Review Panel. The Committee concluded that there was nothing in the Board-approved strategic plan that would cause it to revise its interim commentary, either with respect to the technical issues or with respect to the management issues. Accordingly, TAC decided to endorse the report of the EPR for transmission to the CGIAR.

Inter-Centre Cooperation on Rice Research in Africa - (Agenda Item 4)

132. During IRRI's 3rd EPR in 1987, the Review Panel had observed that TAC and the CGIAR had not yet reached decisions on rice research in Africa and Latin America. Consequently the Review Panel suggested that until a conclusion was reached on the global allocation of responsibilities for rice research, IRRI should work in Africa and Latin America only, in collaboration with, and at the specific invitation of, the other CGIAR Centres involved in rice research in those regions. IRRI had ongoing activities in North Africa, East Africa and Southern Africa, while IITA was working mainly in West and Central Africa, and WARDA exclusively in West Africa.

133. When WARDA was restructured in 1987, it was given primary responsibility for rice research in West Africa. In its strategic planning exercise completed in 1987, IITA had decided to phase out rice improvement research in favour of WARDA. IITA's Board of Trustees had approved, with the endorsement of TAC and the CGIAR, the transfer of IITA's operational mandate for rice to WARDA.

134. The above developments had left Central and Eastern Africa without an international centre working on rice. This had led TAC to ask IITA, IRRI and WARDA to develop a proposal on how they planned to cooperate on rice research in Africa, and particularly in Central and Eastern Africa. The Centres had complied, and their proposal was now before TAC for consideration and comment. The Committee found the proposed arrangements to be logical and practical. It noted that the agreement would be reviewed after five years.

^{1/} IRRI Toward 2000 and Beyond

Relations with Non-Associated Centres - (Agenda Item 5)

(a) A Possible Expansion of the CGIAR: Approaches for TAC and the CGIAR - Part I

135. The Chairman recalled that TAC had been asked by the CGIAR to evaluate ten of the so-called "non-associated centres" for possible incorporation into the CGIAR. At TAC 47, the Committee had agreed on the way in which it would approach this task by endorsing the broad outline of a paper prepared by the Chairman entitled "The Possible Expansion of the CGIAR: A Draft Outline of Possible Approaches for TAC and the CGIAR". Part I of this paper described the background against which the CGIAR operates. Part II explained how TAC would proceed with the evaluation of the activities of the non-associated centres.

136. As to the latter, the Executive Secretary informed Members of the Committee that two panels had been appointed, one of which would review the resource-oriented centres, and one the commodity-oriented centres. Each panel had been divided into sub-groups, each of which consisted of two or more TAC Members, one or more expert(s) for each subject matter area, and Secretariat resource person(s).

137. Each sub-group would be visiting one or more of the non-associated centres dealing with their particular subject area during April or May. The objectives and terms of reference for these visits were discussed under agenda item 7 (b).

138. The Chairman recalled that, with regard to Part I of the paper, the Standing Committee had been requested to oversee the development of Chapters II, III and IV. A draft had been prepared by staff of the two Secretariats and had been reviewed by the Standing Committee prior to TAC 48. The paper served two purposes. In the short run it provided the background material needed to assess the possible expansion of the CGIAR, while in the longer run it would also serve as an introductory chapter to the revision of the CGIAR priorities and strategies paper which would be due by 1992. The Chairman asked Drs. Guido Gryseels and Michael Collinson to introduce the contents of the paper.

139. Dr. Gryseels made a brief overview of Chapter II, which discussed agriculture in a changing global context. The current situation and potential future directions were described, both in developed and in developing countries. Some emerging global trends and the likely food scenario in 2025 were discussed. Particularly important factors that would have a major influence were population and income growth, urbanization, environmental challenges and resource degradation, possible climatic change, changing patterns of trade and the need for employment- and income-generating strategies in agricultural development. Some of these factors would lead to rapidly increasing demand for food in developing countries, and especially for livestock products.

140. Dr. Gryseels then outlined potential sources of increased food supplies. There were few opportunities for expanding the land area under cultivation, so future increases in food production would have to result largely from an intensification of production, i.e. from increased yields per unit of land. This highlighted the need to continue research to develop improved technologies. Major gains in food

production could also be made by expanding and improving the use of fertilizers and other external inputs. Policy reforms would also be necessary. The major challenges facing the global agricultural research system until 2025 were summarized as continued rapid population growth, increasing poverty and malnutrition, deterioration of the natural resource base, and imbalance between the demand and supply of food.

141. Finally, Dr. Gryseels argued that, in the past, research priorities had generally focussed on the role of agriculture in food supply. Agriculture had, however, many other contributions to make, which needed to be considered in setting priorities for the future. Dr. Gryseels therefore ended his presentation with a brief overview of the role of agriculture in economic development.

142. Dr. Michael Collinson, of the CGIAR Secretariat, presented Chapter III, consisting of an overview of the organization of agricultural research for development. Government-based national research and extension systems played a central role in the development and diffusion of agricultural technology, but other bodies such as universities and non-governmental organizations also participated. International efforts had special advantages in a number of research areas, and in several activities supporting and servicing research. Two types of activity were distinguished: activities with a continuing comparative advantage at the international level, and activities justified over the medium term by the current lack of capacity in developing countries. Institutional approaches to the organization of international agricultural research were then discussed.

143. Three sets of factors affected international research priorities: changing food demands, changes in science and its organization, and the evolution of scientific capacity in developing countries.

144. Dr. Collinson went on to present Chapter IV of the paper, which was a brief analysis of the past and current roles of the CGIAR, its strategies and modes of operation, the changes in the environment in which it operates, the changes in CGIAR priorities to date, the likely future priorities, and some reflections on the future of the CGIAR as it approached the 21st century. Dr. Collinson also briefly summarized the impact of the CGIAR to date.

145. Finally, he discussed the suggestion made by the Chairman that the CGIAR goal of increasing food production be modified to incorporate the concept of achieving food self-reliance in the developing world.

146. Dr. L. Wilson, Chairman of the Committee of Board Chairpersons, opened the discussion with a statement prepared by the Board Chairpersons reflecting their position with respect to an expansion of the CGIAR.

147. First, although it contained a wealth of useful and interesting information, the draft paper prepared on the basis of the Chairman's outline was too detailed, and much of the information was not critical to an evaluation of a possible expansion of the CGIAR. The paper was to be shortened and made more concise. Secondly, the assessment of an expansion of the CGIAR should be guided by a set of clear, underlying

principles, such as the need to alleviate poverty and malnutrition. On the basis of such guiding principles, the identification of key commodities and of key factors to improve food supplies would become easier. Thirdly, on the basis of these guiding principles, a decision could be made not only on the selective inclusion of non-associated centres in the CGIAR, but also on the need for consolidation of the operations of these centres with those of the CGIAR Centres. The roles of their Boards of Trustees would also have to be considered.

148. In the lively discussion which followed, TAC Members and Board Chairmen were generally complimentary of the paper, which was comprehensive and provided much of the necessary background material both for assessing an expansion of the CGIAR and for a revision of CGIAR priorities and strategies by 1992. Speakers agreed with Dr. Wilson's comments that any assessment of a possible expansion of the CGIAR should be guided by clear, underlying principles. Various speakers asked for greater attention to the role of NARS in the overall CGIAR framework, and stressed that strengthening the capacity of NARS was one of the fundamental CGIAR objectives. Questions were also raised on whether the international centre concept was really always the optimal approach, and on the role and contributions of existing regional research organizations. One TAC Member pointed out that the paper should also specify the objectives of international agricultural research, and why it generally achieved a high quality. Another TAC Member stressed that the paper needed to focus also on the problem of empowering poor people in degraded areas, and how to deal with poverty alleviation and income generation. A Committee Member recalled that research was only one actor on the scene of agricultural development, and that politics had an important role also. It was noted that the paper did not discuss non-conventional sources of food and the opportunities to introduce new crops in tropical areas.

149. The Chairman concluded the discussion by referring to his concept of food self-reliance as distinct from food self-sufficiency. He acknowledged that there was a range of opinions on the proposal to incorporate the concept of self-reliance into the CGIAR goal. He thanked Dr. Gryseels and Dr. Collinson for their contributions and asked TAC members to provide the Secretariat with written comments on the paper before May 1, 1989. A revised version would be discussed by the Committee at TAC 49, during which particular attention would be given to the concepts of food self-reliance and self-sufficiency.

(b) Report of the Standing Committee for Priorities and Strategies

150. Dr. Gustavo Nores, Chairman of the Standing Committee for Priorities and Strategies, reported on the progress made since the last meeting. The members of the Standing Committee had reviewed the draft paper prepared by the TAC and CGIAR Secretariats, and had provided a number of comments for incorporation into a revised version. The Standing Committee had also discussed alternative analytical procedures for CGIAR priority setting. In the short term such procedures would be required to assess the possible expansion of the CGIAR, while in the longer term they would be necessary for the major review of CGIAR priorities and strategies.

151. It was decided that, by June 1989, a background paper would be prepared by the Secretariat on constraints to increased sustainable production to meet demand for food at the global, continental/regional, and sub-regional levels. The paper would be based on essays prepared by both Secretariats and members of the Standing Committee, for each of the major regions: sub-Saharan Africa, West Asia Northern Africa, Asia and the Pacific, and Latin America and the Caribbean. At TAC 49, each of these essays would be reviewed by a "reactor panel" that would consist of TAC Members with expertise in that particular region.

152. Depending on progress made and staff resources available, during July and August an attempt would be made by the Secretariats, with the help of Committee Members and outside experts, to use more formal methods to assess the relative importance of constraints and research activities, with particular emphasis on the activities and commodities of the non-associated centres. A weighting scheme had been developed and the approach would be complemented by congruence analysis to assess the importance of different commodities. Results would be available for the special TAC meeting in September 1989.

153. For longer-term priority setting, this top-down constraint analysis would have to be complemented by a bottom-up approach. One member of the Standing Committee had developed an approach to such an analysis based on the Geographic Information System of FAO. At the end of 1989, a pilot study would be undertaken to evaluate this approach. Dr. Nores also reiterated that the Standing Committee would continue to keep a watching brief on the development by outside experts of more sophisticated models for assessing international agricultural research priorities.

Report on Bellagio II: Tropical Forestry Research - (Agenda Item 6)

154. Tropical forestry research was discussed during a joint session with the Centre Board Chairpersons. Dr. George D. Holmes, Chairman of a Task Force on Tropical Forestry Research convened at the request of the Bellagio I Conference in July 1987, presented to TAC the main highlights and recommendations in the Task Force report to the Bellagio II Conference held at Wiston House, UK, on 30 November and 1 December 1988.

155. The report identified five priority research areas for tropical forestry, namely: agro-forestry; natural forest conservation and management; tree breeding and improvement; forest products utilization and market research; and policy/socio-economic research. Further, the report suggested five possible mechanisms for implementing an international effort on tropical forestry research, and recommended one which envisaged the establishment of an International Council on Tropical Forestry Research with its own advisory body and secretariat.

156. TAC noted that the Wiston House meeting had involved representatives of bilateral and multilateral donors, development banks, non-governmental organizations and specialists from developed and developing countries. The conference had decided to adopt a mechanism which would put forestry within the ambit of the CGIAR. It had suggested that the CGIAR should consider expanding its scope of activities to include forestry. A proposal to incorporate forestry into

the CGIAR would be considered at the CGIAR Mid-Term meeting in Canberra, Australia, in May/June 1989. If the Canberra meeting were to decide to accept forestry research as a new CGIAR venture, then there were three possible options for the technical advisory function for forestry research:

- (a) a single CGIAR/TAC with a separate forestry technical panel;
- (b) expansion of the CGIAR's responsibilities but with a new and separate FORTAC for forestry research (with its own chairperson);
- (c) creation of a FORTAC, some of the members of which would be interchangeable with members of TAC (with a common chairperson for both TAC and FORTAC).

157. TAC was informed that the forestry community would have strong reservations about the first option. The Committee was also informed that the question of TAC and FORTAC in an expanded CGIAR System had also been discussed by an ad hoc committee of donors meeting in Paris on 13 and 14 March. At this meeting it had been suggested that, depending on the decisions taken in Canberra, the TAC Chairman should be requested to review the matter and make recommendations to the Group at ICW '89.

158. The discussion in TAC focussed on the organization of the technical advisory function for forestry research and the priority research areas suggested by the Task Force. Many TAC Members would prefer a fourth option, suggested by the TAC Chairman, namely to have a small strategic TAC of 8-9 members, supplemented by a number of expert panels responsible for specific subject matter areas, such as forestry, livestock research, crop research, etc.

159. The Chairman recalled that TAC had deliberately decided to exclude forestry from the ongoing exercise on the non-associated centres pending the outcome of the Bellagio II meeting. He stressed that the issue of forestry could no longer be kept aside. The Committee was asked to consider how to approach the matter, particularly with regard to the International Union of Forest Research Organization's Special Programme for Developing Countries (SPDC).

160. TAC agreed that a separate panel consisting of foresters should be constituted to develop a background paper on the major researchable constraints in tropical forestry and to review SPDC activities as part of the ongoing exercise on the non-associated centres. The panel would be constituted by the Chairman in consultation with the CGIAR Chairman and the Co-Sponsors of Bellagio II.

Terms of Reference and Guidelines for External Programme Reviews - (Agenda Item 7)

(a) CGIAR Centres

161. The Standing Committee for External Reviews presented for TAC's consideration revised terms of reference and guidelines for external programme reviews. These were meant to replace the interim terms of reference that had been in use since 1987.

162. The object of the revision was twofold. First, to see what needed to be done to the old terms of reference and guidelines to bring them into line with all the thinking that was crystalized in the document "Review Processes in the CGIAR." Secondly, to make the review process more efficient with respect to: the impact or effect of reviews on the centres; how to do the reviews in less time; how to make them more cost-effective; and how to reduce the total amount of resources spent on reviews.

163. TAC agreed that the terms of reference and guidelines were intended for the review panels, not for TAC, nor for the TAC Secretariat, nor for donors. Therefore, anything that could be construed as advice to the secretary of the panel was to be removed from the revised terms of reference and guidelines. The Secretariat was expected to prepare an aide memoire, or code of practice, with all the details of what members of the Secretariat ought to be thinking about, and things that the Centres would have to do in preparation for the review.

(i) Terms of Reference

164. Only one substantive change was made in the terms of reference: the addition of a second sentence under "strategy" to assess how the Centre had implemented its current strategy. There were no changes in the list of questions. However, the questions were split up under the subheadings relating to the terms of reference in order to make them more digestible.

(ii) Guidelines

165. The guidelines had been completely revised. Emphasis was placed on the process, the principles, and the philosophy, rather than on the operational details. The guidelines highlighted the need for a collaborative approach to avoid the review being seen as an inspection mission, or a confrontation with the Centre.

166. Changes were made in the number of countries to be visited by the review panel. In future, fewer but more carefully selected countries would be visited in order to cut down the length of time spent on reviews. The country visits would be supplemented with a questionnaire to be sent to a representative sample of countries.

167. The literature to be provided to the review panel by Centres had also been considered, with a view to reducing the amount of documentation sent to panel members.

168. In the ensuing discussion, TAC Members suggested some changes to the terms of reference and list of questions. Since the EPR panel was also expected to deal with research organization and management issues in collaboration with the EMR panel, it was agreed to incorporate a section on these issues in the terms of reference, together with appropriate questions. The revised terms of reference and guidelines are shown in Annexes IV and V respectively.

(b) Non-Associated Centres (Preliminary Assessments)

169. Draft terms of reference for the preliminary assessment of the non-associated centres were considered, changed and approved, for use by the TAC sub-groups visiting the non-associated centres. These are attached as Annex VI.

Future Reviews - (Agenda Item 8)

(a) CIP

170. Dr. Guido Gryseels presented a progress report on the conduct of the CIP EPR. 1/ All Panel members, except Dr. Don Plucknett, who for health reasons had not been able to travel, had attended the Internal Programme Review of CIP held from 5-9 December 1988. During their period of stay, the Chairman of CIP's Board of Trustees had formally requested, on behalf of the Board and management, that the main phase of the External Reviews be delayed. The basis for this request were the results of a self-study by CIP staff that contained a large number of recommendations to management, which in turn required some time to study. Both Panel Chairmen agreed to this request and to a delay of the main phase of the EPR/EMR by 7 months. It will now take place between 16 November and 8 December 1989.

171. Subsequent to their stay at CIP, members of the EPR Panel had also conducted country visits to Chile and Colombia. The remaining country visits would take place between 13-26 April 1989 (Kenya, Rwanda, Burundi and Ethiopia), 13-28 September 1989 (Philippines and China) and 14-15 November 1989 (Ecuador).

172. The preliminary list of questions as approved at TAC 47 had been circulated to all members of the CGIAR. Several responses had been received and had been incorporated into the list of questions given to Panel members.

173. In opening the discussion, the Chairman announced that Dr. W. Tossell, Chairman of the EPR, had recently been appointed Chairman of the Board of Trustees of IBPGR. Although under normal circumstances the two positions would be considered incompatible, an exception was made in this particular case because the delay in conducting the main phase of the External Reviews had been unforeseen.

174. The Chairman expressed concern about the growing size of EMR panels, and requested clarification from the CGIAR Secretariat as to why in the case of CIP it had been necessary to have a team of four people, not including the Panel secretary. Dr. S. Ozgediz commented that one of these people was actually a consultant on human resource management and should not be considered as a full member of the Panel.

1/ Third External Programme Review of CIP - Progress Report
(AGR/TAC:IAR/89/5)

175. One TAC Member asked whether CIP had an adequate strategy and economic rationale for research on sweet potato. He was particularly concerned about the lack of an adequate data base on sweet potato. Dr. Gryseels said that the Panel would carefully consider this issue.

(b) CIAT

176. Dr. M.H. Arnold presented a progress report prepared by the Secretariat on the preparations for the External Programme Review of CIAT 1/. Following the selection of the CIAT Panel chairman at TAC 47 and subsequent consultations between him and the Chairman of the Standing Committee for External Reviews, a Panel had been constituted on the basis of the short list approved by TAC, with the addition of one candidate in lieu of one person's unavailability. The composition of the Panel was as follows: Dr. John Coulter (UK), Chairman, Dr. Abdalla Ahmed Abdalla (Sudan), Dr. Peter Brumby (New Zealand), Dr. Bryant Kearl (USA), Dr. Edgardo Mosecardi (Argentina), Dr. Ruben Villareal (Philippines), Dr. Ernesto Paterniani (Brazil - TAC resource person), and Dr. Michael Collinson (CGIAR Secretariat).

177. The Panel would assemble at CIAT for the period 11-18 June 1989, during which it would be briefed on CIAT's activities and visit relevant CIAT and national programmes in Colombia. Part of the Panel would subsequently undertake country visits to Brazil and Costa Rica. The remainder of the Panel would visit Ethiopia and Rwanda. The Chairman and one Panel member would also visit the cassava programme in Thailand from 20 to 23 April. The main phase of the review was tentatively scheduled for the period 11-29 September 1989.

178. At TAC 47 an agreement had been reached that questionnaires could assist in obtaining the opinions of national systems. A draft questionnaire had been developed for the CIAT EPR which would be translated into French and Spanish. The list of questions to be considered by the Panel was attached to the progress report.

179. Dr. S. Ozgediz announced that the EMR panel for CIAT would consist of Dr. Vijay Viyas (India), Chairman, Dr. Kenneth Hoadley (USA), Mrs. Joan Joshi (USA), Mr. Miles Wedeman (USA), and himself as Panel Secretary.

180. A question was raised as to the participation of staff of co-sponsoring organizations in external review panels, but the lively discussion which followed did not produce a consensus. TAC approved the composition of the Panel and the proposed timing and programme, and agreed that the preliminary list of questions be circulated to the CGIAR.

(c) IITA, ICRISAT and IFPRI

181. Dr. M.H. Arnold discussed the progress made in preparing for the external reviews of IITA, ICRISAT and IFPRI, which would be conducted during 1990. Final dates for the main phase were still to be arranged, but were tentatively scheduled for February in the case of IITA, for August in the case of ICRISAT, and for September in the case

of IFPRI. The Standing Committee on External Reviews had prepared a short-list of three candidates for the chairmanship of each panel. TAC agreed with the short-list and asked the Chairman to proceed with the appointment of panel chairmen after consultation with the Centre Director concerned.

182. The Standing Committee for External Reviews would prepare short-lists for other positions on these panels for consideration by the Committee at TAC 49.

(d) Report of the Standing Committee for External Reviews

183. Dr. M.H. Arnold, Chairman of the Standing Committee for External Reviews, gave a short briefing on the Committee's activities. Guidelines had been prepared for the conduct of External Programme Reviews of CGIAR Centres, as well as various lists of names which could be considered for possible membership of EPR panels. Each review panel would now contain a place for people without previous CGIAR experience.

184. With regard to the development of a data base of outside experts, letters had been sent out to many people and institutes that would assist in identifying organizations that employ such experts. The development of a data base management system, for which Prof. Dillon had taken responsibility, had been unavoidably delayed until June.

185. One TAC Member asked why names were being sought of institutes and not of individuals. Dr. Arnold replied that in the first stage, institutes were being approached, while individual persons would be approached subsequently. He encouraged TAC Members to send names and short CVs of qualified experts for consideration of possible membership of EPR panels.

186. Dr. Arnold also informed TAC that, in addition to the Guidelines on External Programme Reviews, the Secretariat would be developing a code of practice which would contain a checklist on the conduct of EPRs.

Other Business - (Agenda Item 9)

(a) CGIAR Committee on Sustainability

187. Dr. L.D. Swindale, Chairman of the Committee on Sustainability, gave a progress report on the Committee's activities. He recalled that after the CGIAR had considered the TAC paper on sustainability in May 1988, the CGIAR Chairman had asked him to chair an IARCs' Committee on the subject with the objective of informing the Group how the Centres were going to incorporate a sustainability perspective into their research programmes/activities. The Centres and TAC had been asked to nominate representatives to the Committee.

188. The Committee had held its first meeting at Winrock International towards the end of February, 1989. Twelve Centres, including IBSRAM, had been represented at the meeting. A methodology for analyzing the issue of sustainability had been developed in such a

way that it was possible to get down to the components of sustainability and analyze what the Centres were doing about the topic. The Committee had then synthesized the components back into some of the major issues in the light of their knowledge of donor concerns.

189. The methodology consisted of a two-dimensional approach. One dimension was essentially what was in the determinants of sustainability in the TAC paper: biological, physical, socio-economic and legal determinants. The Committee had used the analysis in the TAC paper and had added a few more determinants and sub-determinants of sustainability. The second dimension was one of complexity starting with the cell on the one hand, going to the organism and the community, and then finishing with the major agro-ecological system, on the other hand.

190. Using this two-dimensional approach, the Committee had considered that it was now able to tell what the Centres were doing. Further, the two-dimensional approach helped to provide a better understanding of the relationships between strategic, applied and adaptive research.

191. An outline of the Committee's report had been developed. The report was now under preparation for presentation at the Mid-Term Meeting of the CGIAR in Canberra. The Committee expected some feedback from the Group before preparing its final report.

192. One expected finding of the Committee was that a distinct shift by the commodity centres towards resource management research was now taking place. Another expected finding was that considerable work relating to integrated pest management and integrated nutrient management was being done. Work was starting on long-term trials on the environmental effects of farming practices. IARCs' activities dealing with low-input systems, genetic diversity, and climatic issues were expected to increase in importance. This work was expected to provide good opportunities for inter-centre cooperation. The Committee had also worked out a mechanism for assisting national programmes to address the issue of sustainability.

(b) Management of Donor Funds by ILCA

193. The Chairman informed TAC that he had referred a letter received from ILCA to the Standing Committee for Resource Allocation for its consideration and advice to TAC. Dr. Dudal, on behalf of the Standing Committee, outlined the contents of the letter to TAC Members. The issue under consideration was the channelling of funds by the Swiss Development Cooperation (SDC), through ILCA, to two Ethiopian national institutions. The funds, amounting to US\$615,000, were part of Switzerland's contribution to the ILCA budget. The money was for use by collaborating national programme scientists on the ILCA vertisol project.

194. TAC considered the issue of channelling funds to collaborating national systems to be a matter of policy. It recalled that in the Second Review of the CGIAR, made during 1981, Centres were cautioned to avoid being seen as executive agencies for donors, particularly with regard to technical assistance, as this might divert Centres from their

main responsibilities as specified in their mandate. TAC wished to adhere to that principle.

195. TAC noted that a number of other Centres were faced with the same issue, and therefore suggested that a cross-centre study be undertaken to examine the extent of the problem, and suggest suitable approaches to deal with it. The TAC Secretariat was asked to inform Centre Directors that this topic would be placed on the agenda of TAC 49 for discussion in the joint session. Centre Directors would be requested to share their experiences with TAC on the handling of donor funds for collaborative activities with national systems.

196. In the meantime, TAC decided to ask ILCA to explore with SDC the transfer of the money allocated for collaborating national programme scientists directly to the Ethiopian institutions concerned. If this does not work, ILCA should seek further advice from the CGIAR Secretariat.

(c) TAC/Centre Directors Working Group on Plant Genetic Resources

197. Dr. Arnold reported on the first meeting of the TAC/Centre Directors Working Group on Plant Genetic Resources, held in Washington D.C. during TAC 47. Membership comprised Drs. Arnold and Paterniani for TAC, and Drs. Sawyer and Williams for the Centre Directors. Three major issues were identified for consideration:

- (i) how plant genetic resources in the CGIAR relate to the FAO Commission on Plant Genetic Resources;
- (ii) relations between Centres and the IBPGR; and
- (iii) plant breeders' rights and intellectual property rights with respect to biotechnology.

198. TAC was informed that relationships between IBPGR and the FAO Commission were good. A full day's session had been reserved for IBPGR at the next meeting of the Commission to be held in Rome during April, 1989. Dr. Arnold remarked that the latest developments concerning the decision of IBPGR to transfer its headquarters from Rome to Copenhagen might affect future relations between IBPGR and the FAO Commission.

199. Regarding relationships between IBPGR and the other CGIAR Centres, some tension was apparent. The reasons for this were not clear, but there were some indications that they had something to do with the funding of genetic resources activities. Some of the Centres were under the impression that IBPGR would fund their activities in germplasm collection and conservation. IBPGR considered that each major commodity centre was responsible for its own mandate crops. In this regard, the CGIAR policy statement on plant genetic resources should help, provided that TAC implements the policy. Some Centres have not accorded high priority to plant genetic resources.

200. The issue of plant breeders' rights was being kept in abeyance by the TAC/Centre Directors Working Group on Plant Genetic Resources because the European Agency for Plant Breeders' Rights (UPOV) were

revising their rules. The Working Group noted that the UPOV rules differed from those applying to patents. It was therefore gathering information and holding a watching brief on this matter. IBPGR was in contact with institutions in Europe, the United States of America and Australia to follow developments concerning plant breeders' and intellectual property rights.

201. Concerning intellectual property rights, mention was made of the CGIAR Task Force under the chairmanship of Hans Wessel of the Netherlands. Dr. Arnold was a member, and through this he would be able to bring to bear TAC's concerns to the Task Force.

(d) Inter-Centre Working Group on Plant Genetic Resources

202. Dr. Ken-Ichi Hayashi gave his report on the Second Meeting of the Inter-Centre Working Group on Plant Genetic resources, held at IRRI, Los Baños, Philippines, 6-9 February, 1989. The main highlights of the meeting were the emerging strong and positive working relationships among plant genetic resources workers at the IARCs with respect to joint germplasm collecting missions, and the signing of memoranda of understanding between a number of the commodity centres and IBPGR.

203. The IARCs have agreed to inform each other at an early date of their collecting missions, and IBPGR has offered to form and maintain a comprehensive data base on collection missions. The Group agreed to enhance their efforts in the exploration, collection, evaluation and utilization of wild species because of their increasing importance in plant breeding.

204. The meeting had recommended areas where strategic research should be encouraged, such as: non-destructive methods of testing seed viability; cryo-preservation techniques; studies on genetic diversity; characterization of landraces and wild species populations in order to enhance their efficient evaluation and utilization; core collections and long-term storage; genetic erosion during long-term storage; genetic and cyto-genetic studies of newly observed variants; and germplasm regeneration. Further, the meeting had considered the issue of duplicate storage of base and active collections; seed health practices and code of conduct for germplasm distribution; publications, public information and awareness; and germplasm evaluation and enhancement.

205. A number of policy issues had also been touched upon by the meeting. These concerned relationships with the FAO Commission on Plant Genetic resources, already discussed under the Centre Directors/TAC Working Group, and IARC-NARS collaboration.

(e) CIP/IITA Agreement on Sweet Potatoes

206. TAC noted that on 27 June, 1988, CIP and IITA had reached agreement on the transfer of the mandate for sweet potatoes from IITA to CIP. This move was consistent with the IITA Board of Trustees' decision during the strategic planning study, and with the TAC 43 endorsement. TAC was satisfied that the terms of the agreement would ensure the maintenance of the progress achieved in research on sweet potatoes by

IITA, and that there would be no confusion among national programmes concerning the roles of CIP and IITA. TAC welcomed CIP's plan to locate a breeder at IITA.

(f) Ad Hoc Donors Meeting in Paris

207. Mr. Curtis Farrar, Executive Secretary CGIAR, reported the outcome of the ad hoc Donors Meeting in Paris, called by the CGIAR Chairman. Three topics had been discussed, namely funding of the System, relations with national research programmes, and forestry. The meeting had not intended to reach conclusions on any of these topics, but merely to advise the Chairman on how he might approach these issues at the Mid-Term Meeting of the Group in Canberra.

208. The idea of this meeting had arisen during ICW, 1988, when concerns had been expressed about the seemingly uncontrolled growth in Centre budgets, and the lack of notable progress in strengthening national agricultural research systems. The subject of forestry had been added later, after the Bellagio II meeting.

209. The meeting had observed that competition with other enterprises such as health education and environmental issues was affecting the level of resources likely to be available for agricultural research. There was strong pessimism on the ability of donors to maintain the present level of funding in real terms. Donors wanted more and better information on how resources were being used by Centres. They wanted to see comparative analyses of Centre funding and expenditures. Some donors were not comfortable with the terms "essential" and "desirable" being used in the new resource allocation process.

210. TAC cautioned against unqualified interpretation of the data presented in the paper "Trends in CGIAR Operating Expenditures: 1983-1988". The paper had originally been developed for the TAC Standing Committee for Resource Allocation and had been used as a background document for the ad hoc Donors Meeting. The figures were not comparable between Centres.

211. Regarding the NARS question, the ad hoc Donors Meeting had noted that many NARS, particularly in Africa and Latin America, were declining in capacity. While the meeting considered that donors and some IARCs were partly responsible for this state of affairs, it was agreed that structural adjustment policies had also contributed. The meeting had stressed that the Centres did not appear to have a comparative advantage in strengthening NARS. The role of ISNAR had been discussed, and a suggestion made to ask ISNAR to report biennially to the CGIAR concerning the state of NARS. The need for some more specific case studies of NARS had been identified. For instance, it was pointed out that there were no criteria for determining the relative strengths of NARS.

212. With respect to forestry, the meeting had suggested that the CGIAR should be expanded to incorporate forestry in the context of natural resources. The meeting had also suggested that if the proposal was accepted by the CGIAR, the Chairman of TAC should be asked to

consider issues related to institutional options for providing technical advice to the Group in the light of the broadened mandate. The meeting had considered that some interim measures for funding forestry would be necessary, since it would take some time for the Group to reach a decision on how to integrate forestry into the system.

213. The Chairman stressed that TAC would like to be consulted before the paper reporting the ad hoc meeting is widely distributed. The Committee expressed serious concern that the ad hoc Donors Meeting had been held at a time when TAC could not be represented. It considered the topics discussed to be of crucial importance with respect to TAC's roles in resource allocation, assessment of the non-associated centres, and priority setting in the CGIAR.

(g) CASAFA

214. Dr. Arnold reported on his attendance at the annual meeting of the Commission for the Application of Science to Agriculture, Forestry and Aquaculture (CASAFA). The meeting had been preceded by a symposium entitled "Drought Resistance in Cereals - Theory and Practice", sponsored jointly by CASAFA, the Australian Centre for International Agricultural Research (ACIAR), and the International Biosciences Network (IBN). The symposium had brought together practising cereal breeders and other scientists working on drought tolerance, for discussions on the application of new techniques evolving at the frontiers of research. ICRISAT, CYMMYT, ICARDA, IRRI and WARDA had been represented at the meeting.

215. The CASAFA meeting had received reports from various organizations whose activities related to those of CASAFA. The meeting had also considered a number of other topics, including the capacity of universities in developing countries to meet the needs of training in the biological sciences. Of particular interest was the application of biotechnology to research in agriculture, forestry and aquaculture.

(h) ICRISAT Sahelian Centre - Opening Ceremony

216. Dr. Arnold reported on the inauguration ceremony for the ICRISAT Sahelian Centre (ISC), located at Sadore, near Niamey. The inauguration ceremony had been officiated by the President of Niger. The Centre was reported to have excellent facilities, and more than five IARCs were operating out of ISC, plus a number of French institutions.

(i) Popular Version of the Sustainability Paper

217. The Committee considered a letter received from Dr. E.T. York, in which he had expressed serious concern about the proposed popular version of the TAC sustainability paper. He recognized the tremendous efforts put in by a TAC Member to revise the draft prepared by a consultant. While the revision had greatly improved the previous draft, he still considered the revised draft did not adequately reflect the concerns expressed in the TAC paper. Doubts were voiced by Dr. York on the desirability of going ahead with the publication of a popular

version. Reactions among TAC Members were mixed. Some suggested that the idea of a popular version should be dropped, while others felt that the current draft should be cleaned and reviewed by Drs. York, Arnold, and de Wit. TAC would make a final decision on the basis of this review. The latter option was endorsed.

(j) IITA Capital Budget

218. TAC had received a request from IITA to re-classify as essential capital expenditure the purchase of a new aircraft. The Centre had included a sum of US\$ 625,000 in its 1989-1992 medium-term plan to upgrade the existing IITA aircraft. The item had been classified as a desirable capital expenditure. The Board of Trustees had later approved raising the priority of the new aircraft to an essential capital expenditure, subject to TAC's agreement. TAC, in approving the request, considered the deteriorating air services in West Africa, and the increasing need for scientist travel in the region as a consequence of the decentralization approved in the medium-term plan. It took into account problems of safety, range and servicing for IITA's present 1969 piston-drive Piper Aztec. It also took into account the fact that the Board of Trustees had established a financial reserve in their 1988 balance sheet sufficient to purchase a turbine engine plane.

Future Meetings - (Agenda Item 10)

219. TAC confirmed the dates of the following meetings:

- TAC 49: 19 to 24 June 1989, FAO, Rome, Italy
- TAC 50: 23 to 28 October 1989, IFPRI, Washington D.C., USA
- TAC 51: 12 to 17 March 1990, FAO, Rome, Italy.

220. It was also decided to hold a special meeting in Rome, 4-6 September 1989, to finalize stage one of the assessment of the non-associated centres.

Chairman's Closing Remarks

221. In closing the meeting, the Chairman thanked the observers for their active participation and positive contribution. He paid special tribute to the management and staff of CIMMYT for the excellent arrangements and hospitality, and for the very interesting interactions TAC Members had had with CIMMYT's programmes, both in the field and in the laboratories. A word of thanks was also given to the CGIAR Secretariat staff for their very positive contribution and invaluable assistance during the meeting. Finally, the Chairman commended the TAC Secretariat staff for their good performance under immense pressure.

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AGENDA

1. Opening Session
 - (a) Opening Remarks
 - (b) Adoption of TAC 47 Report
 - (c) Matters Arising from TAC 47
 - (d) Adoption of the Agenda
2. Strategic Plans and Resource Allocation
 - (a) ICRISAT
 - (b) WARDA
 - (c) IRRI
 - (d) ICARDA
 - (e) CIMMYT
 - (f) Report of the Standing Committee for Resource Allocation
3. Completion of External Programme Review of IRRI
4. Inter-Centre Co-operation on Rice Research in Africa
5. Relations with Non-Associated Centres
 - (a) A Possible Expansion of the CGIAR: Approaches for TAC and the CGIAR - Part I
 - (b) Report of the Standing Committee for Priorities and Strategies
6. Report on Bellagio II: Tropical Forestry Research
7. Terms of Reference and Guidelines for External Programme Reviews
 - (a) CGIAR Centres
 - (b) Non-Associated Centres (Preliminary Assessments)
8. Future Reviews
 - (a) CIP
 - (b) CIAT
 - (c) IITA
 - (d) ICRISAT
 - (e) IFPRI
 - (f) Others
 - (g) Report of the Standing Committee for External Reviews
9. Other Business
10. Future Meetings

LIST OF DOCUMENTS

<u>Item</u>		<u>Document No.</u>
1 (b)	Draft Report of the 47th Meeting of TAC	AGR/TAC:IAR/88/29
2 (a)	ICRISAT Medium-Term Program Plans and Funding Requirements - 1989-1993	Centre document
(b)	WARDA's Medium-Term Implementation Plan: 1990-1994	Centre document
(c)	IRRI Toward 2000 and Beyond	Centre document
(d)	Sustainable Agriculture for the Drylands - ICARDA's Strategy	Centre document
	ICARDA Medium-Term Plan 1990-1994 - An Overview	Centre document
	ICARDA Medium-Term Plan 1990-1994 - Background documents	Centre document
(e)	CIMMYT's Five-Year Budget Proposal 1990-1994	Centre document
5 (a)	A Possible Expansion of the CGIAR: Approaches for TAC and the CGIAR - Part One	AGR/TAC:IAR/88/24 Add.1
6	A Global Research Strategy for Tropical Forestry - Report of an International Task Force on Forestry Research, September 1988	
7 (a)	Draft Terms of Reference for External Programme Review Panels	AGR/TAC:IAR/89/1
	Draft Guidelines for External Programme Review Panels	AGR/TAC:IAR/89/2
(b)	Draft Terms of Reference for the Preliminary Assessment of Non-Associated Centres	AGR/TAC:IAR/89/3
8 (a)	Third External Programme Review of CIP - Progress Report	AGR/TAC:IAR/89/5
8 (b)	Third External Programme Review of CIAT	AGR/TAC:IAR/89/4

DRAFT TERMS OF REFERENCE FOR EXTERNAL PROGRAMME REVIEW PANELS

1. BACKGROUND

The Consultative Group on International Agricultural Research (CGIAR) has charged its Technical Advisory Committee (TAC) with the responsibility of conducting External Programme Reviews (EPRs) of those International Agricultural Research Centres (Centres) that it supports financially. Through its support of these Centres, the CGIAR seeks to contribute to increasing sustainable food production in developing countries in ways that improve the nutritional level and general economic well-being of low-income people.

The purpose of external programme reviews is to ensure the continued relevance of the Centres' programmes and strategies to the goals of the CGIAR, and the quality and cost-effectiveness of the work in order to reinforce accountability. EPRs are also essential components in the CGIAR's integrated planning process. The context in which EPRs are undertaken is to be found in the document "Review Processes in the CGIAR".

TAC normally discharges its responsibility for EPRs by commissioning a panel to conduct the review and to submit a report for consideration and comment by TAC before it is transmitted to the CGIAR. TAC does not delegate its responsibility for reviews to the panel, but employs a panel to facilitate the review process. While TAC and the CGIAR normally endorse the panel's main recommendations, such endorsement should not be presumed by either the panel or the Centre under review.

2. THE REVIEW

Against this background, the panel is requested to make a thorough and independent appraisal of the Centre and all its activities, following the broad topics outlined below and the appended list of questions.

(a) Mandate

The continuing appropriateness of the Centre's operational mandate in relation to the goal and objectives of the CGIAR.

(b) Strategy

The policies and strategies of the Centre, as described in its strategic plan or other long-term planning document, and the mechanisms used for monitoring and revising them.

The extent to which the Centre's existing programmes and strategy have been successfully implemented; the rationale for any proposed changes and their implications for future activities.

(c) Research Organization and Management

The mechanisms in place at the Centre to ensure the excellence of the programmes and the cost-effective use of resources.

The adequacy of the organizational structure, and the mechanisms in use by the Centre to manage, monitor, review and coordinate its research programmes and related activities.

(d) Resources and Facilities

The level of resources available to the Centre in relation to its present and future programmes.

The land, laboratories and services available for supporting the programmes.

(e) Relationships with Other Institutions

The Centre's relationships with national agricultural research systems in developing countries.

Collaboration with advanced institutions in research and training, in both the public and private sectors.

Collaboration with other CGIAR Centres, and undesirable overlap of activities.

(f) Impact

The Centre's contributions to the goal and objectives of the CGIAR and methods of assessing them.

Recent achievements of the Centre in research and training and their potential for future impact.

3. THE REPORT AND RECOMMENDATIONS

The panel is requested to prepare a succinct report in plain language (to facilitate its understanding by non-technical readers), in which factual material is kept to the minimum necessary to set the conclusions in context. The report should include clear endorsements of the Centre's activities where appropriate, as well as recommendations and suggestions for changes.

The recommendations should be justified by the analysis, agreed upon by the panel and the text completed before the panel disperses. The report should be formally transmitted to the Chairman of TAC by the chairman of the panel.

QUESTIONS

1. Questions Applicable to All or Most Centres

1.1. Previous review

To what extent has the Centre responded to the ultimate outcome of the previous external review?

1.2. Strategy

- Within the context of CGIAR, does the strategic plan provide a sound basis for defining the Centre's research priorities?
- Are national authorities satisfied with the Centre's strategy and did they have adequate opportunity to contribute to its formulation?
- What attention does the Centre give to consideration of sustainability?
- What mechanisms does the Centre have to ensure equal recognition of the role of men and women in agricultural research and access to its products?
- To what extent does the need to demonstrate impact distort the Centre's strategy and its research priorities?
- What consideration has the Centre given to the future nature and scale of its activities in relation to the growing strengths of national research systems?

1.3. Quality and efficiency

- How successful is the Centre's strategy for collaboration with national research systems, especially in relation to their different sizes and stages of development?
- Is there a need for greater decentralization of the research programmes?
- How effective has the Centre been in exploiting the concept of "critical mass", both at headquarters and in the regions?
- Is the balance of capabilities appropriate for the aims of the research?

- To what extent is the peer review mechanism used by the Centre?
- Do the qualifications of the senior staff match those expected of international research workers? To what extent have they published in refereed journals during the last five years?
- In relation to the efficient use of national and international resources, does the Centre give appropriate attention to post-harvest losses and effective utilization of its mandated commodities?
- How does the Centre ensure that it makes better use of resources available for germplasm collection, evaluation, storage and use?

1.4. Research organization and management (EPR and EMR)

- Has the Centre developed an organizational structure suited to good programme performance? What coordination mechanisms are in place? Are these effective? What alternative structures could serve the Centre well in future in light of the Centre's programme strategy?
- How effective is the strategic planning process used by the Centre?
- How effective is short- and medium-term operational planning? How well is programme planning linked with budgeting?
- What monitoring and review systems are in place? Are these effective?
- How are the regional programme and outreach staff linked with the headquarters?
- What are the panels' views on the management effectiveness of individual programmes and the needs for improvement?

1.5. Resources and facilities

- If the Centre had to face budgetary constraints resulting in no further growth for the next five years, what activities should be accorded highest priority?
- Does the proportion of the Centre's budget received as restricted funding distort the priorities accorded to its various activities?

1.6. Relationships with other institutions

- How does the Centre ensure that collaborative activities with its host country remain in balance with other demands on its resources?
- Does the Centre have adequate strategies for keeping abreast with new opportunities in research, arising from the advancing frontiers of science and technology?
- What processes does the Centre have in place to ensure that feedback from research in the region(s) influences the formulation of its central programmes?

1.7. Impact

- How successful has the Centre's training programme been in responding to the needs of the countries it serves?
- Do the Centre's information services adequately fulfill the most important needs of national agricultural research systems with respect to both content and language?

2. Questions Specific to ... (Centre under review)

DRAFT GUIDELINES FOR EXTERNAL PROGRAMME REVIEW PANELS

Building on Past Experience

Being a member of a review panel has usually been found to be an interesting and rewarding experience. Moreover, Centre staff usually welcome the opportunity to discuss with panel members their achievements, problems and future plans. This healthy atmosphere of mutual respect and collaboration in the interchange of ideas is the key to the success of a review. It helps to ensure that the recommendations of the panel are realistic, that they are acceptable to the staff, and that they will be willingly, or even enthusiastically implemented.

The conduct of a review is a demanding task, however, putting great pressure on the panel members to complete their assessments, agree on their recommendations and write a report in the time available. These requirements make it essential that the chairperson and the panel should agree on their own strategy or "game plan" as soon as possible and that they should work as a team, constantly exchanging ideas, sharing assessments and refining their conclusions.

Part of the panel's strategy involves working out how it will integrate its activities with those of the panel conducting the associated external management review. Usually the two reviews are conducted simultaneously, or at least during overlapping periods. In the context of organization and management, the responsibilities of the programme review panel are primarily associated with the quality and cost-effectiveness of the Centre programmes. CGIAR policy requires that the two panels jointly prepare a chapter on these issues to be included in both reports.

Preparation and Briefing

A list of documents provided to panel members is given in the Annex. These include background information, an analysis of the responses to a questionnaire circulated in advance of the review, and other information specifically requested for the panel by the TAC Secretariat, after discussion with the Chairperson.

The process of assimilating the necessary information and preparing for the tasks ahead is assisted by initial briefing meetings, usually held in conjunction with the Centre's internal review, or during a meeting of the Centre's Programme Committee. These meetings usually involve formal presentation of the Centre's programmes and strategies but also provide opportunities for informal discussions between panel members and the Centre staff.

It is important that this period of familiarization with the Centre's activities should be accompanied by daily meetings of the panel in closed session to reflect on what it has absorbed and to plan its strategy for the remainder of the review. Experience has emphasized the importance of the panel making the maximum use of these initial opportunities.

By the time the briefing sessions have been completed, the panel should have reached consensus not only on what the major issues are, but also on its first and very tentative conclusions and recommendations. Responsibilities for writing should have been clearly defined and an approximate structure of the report agreed.

The Country Visits

The briefing sessions are followed by visits to individual countries so that panel members can acquire some first-hand knowledge of the Centre's regional activities. Normally, the first country visit will be undertaken by the whole panel, after which the panel may split into sub-groups.

The remainder of the country visits and the main part of the review, conducted at the Centre headquarters, will be concerned with testing the validity of the tentative conclusions already reached, modifying them and adding new ones as necessary. How the panel sets about doing this depends to a large extent on the panel chairperson, but the efficient use of time is crucial to the success of the review.

The Main Review

During the main part of the review, it is usual for the whole panel to participate in discussions on major issues in order to arrive at a strong consensus. At other times, it is often found to be more efficient for the panel to work in sub-groups, or even individually, but care has to be taken to avoid subjective judgements. For this reason, some panel chairpersons insist on panel members working in groups of at least two or three.

There has also been considerable variation in the conduct of discussions and interviews. Some panels have confined their activities to group discussions. Others have conducted interviews of individuals chosen more or less at random on a stratified sampling basis. Some of the best reviews have contained a suitable mix of both techniques. In general, at this stage of the review process, "show and tell" presentations have not proved to be the best way of making progress.

Each panel chairperson should decide which technique will best suit the style of the particular panel members and be most appropriate for analysing the issues identified as requiring most of the panel's attention. Under guidance of the panel secretary, and after full discussion with panel members, the chairman should also agree on deadlines for the preparation, editing and production of the report. Monitoring progress of the report and ensuring its timely production should then be regarded as a responsibility equally shared by all participants.

Presenting the Panel's Findings

On the last day of the review, the panel chairperson presents the panel's findings to the staff of the Centre, by which time the report must have been printed and distributed to Board members. As a courtesy to the Board, it is usual for the panel chairperson to present the main findings of the review to Board members in closed session on the preceding day.

The report is then distributed to TAC members, whom also receive a written response to the panel's findings by the Centre board and management. The report and the response are discussed at the next TAC meeting in the presence of the panel chairperson, the Board Chairperson and the Centre Director. TAC then writes its own commentary on the report which may endorse the panel's findings, but might also reject some of them, or even defer its final commentary pending further clarification of Centre strategies.

All three documents - the report, the response and the commentary - are then bound as a single volume and circulated to donors. The report is presented to the next convenient CGIAR meeting by the panel chairperson, with presentations also by the Centre Chairperson and the Centre Director. Only when the CGIAR has approved the report in light of the conclusions drawn by TAC in its commentary do the recommendations (as modified) become operative.

Documents to be provided to the EPR Panel

The TAC Secretariat arranges for the distribution of the following documents from the CGIAR Secretariat or the TAC Secretariat as appropriate:

- Review Processes in the CGIAR
- Terms of Reference for External Programme Review Panels, including the Guidelines for External Programme Review Panels and the list of questions
- Terms of Reference, Guidelines, and membership of the EMR panel
- Report of the most recent EPR
- Extracts from TAC reports of the most recent discussions on the Centre's programme
- Most recent TAC review of CGIAR priorities

The TAC Secretariat may commission special preparatory studies for the assistance of the panel when deemed appropriate.

The Centre should provide the panel chairperson and members with the following documents prior to the initial briefing of the panel:

- Most recent Annual Report of the Centre
- The Board approved (draft) strategic plan
- The current medium-term programme and an indication of the stage of its implementation
- Summary of the actions taken by the Centre on the recommendations of the preceding EPR (as endorsed by TAC and the CGIAR)
- Analysis of the main achievements, constraints and impact of the programmes of the Centre during the previous five years
- List of the agreements with other Centres and institutions on cooperative activities
- List of contracted projects

At the time of the panel's arrival at the Centre, the sets of documents referred to in the lists above should be made available to the panel together with the following:

- Most recent programme and budget document
- Reports of major planning conferences, internal reviews, expert meetings, etc., which have had a major influence on the direction of the specific programmes of the Centre
- Staff list with qualifications
- Staff publication list
- Charter and other basic documents establishing the Centre and subsequent amendments
- Review of the interpretation of the mandate of the Centre as evolved by the Board of Trustees over the years
- Any additional material requested by the chairperson.

TERMS OF REFERENCE

FOR THE TAC MISSION TO THE NON-ASSOCIATED CENTRES

Introduction

The CGIAR decided at its May 1988 meeting to consider a possible expansion of the System to incorporate some of the activities being undertaken by the so-called non-associated centres. TAC was given the responsibility of assessing ten of these institutions. The Committee has defined the strategy to be followed and has developed criteria for the evaluation. Two stages are envisaged in the evaluation process.

In stage one, for which these terms of reference have been developed, sub-groups of TAC Members will visit the non-associated centres to review the subject matter represented by their programmes. The sub-groups will be assisted by one or two external experts for each centre. After reviewing the mission reports, TAC may proceed to stage two and subject those centres whose activities might be eligible for CGIAR support to a more detailed assessment in the form of external programme and management reviews.

Purpose and Scope of the Mission

The main objective of the mission in stage one, is to assess the programmes/activities carried out by the non-associated centre(s) in order to determine whether they meet the criteria established by TAC for CGIAR support.

The review mission is expected to give particular attention to the following aspects of the work of the centre:

- (i) Obtain information on actual programmes/activities.
- (ii) Obtain five-year and longer-term strategic plans, if available.
- (iii) Make a preliminary analysis of the potential contribution of the programmes/activities of the centre to elements that TAC would probably use in its CGIAR priority setting exercise such as:
 - contribution to food production and food security;
 - contribution to sustainable use of resources;
 - internationality of efforts;
 - research and related activities; and
 - contribution to the strengthening of national agricultural research programmes.
- (iv) Determine current and potential interactions of the centre with CGIAR institutes, with other non-associated centres, as well as with other research organizations, and assess how the centre interacts with national programmes.

- (v) Make a preliminary assessment of the research and related activities with respect to:
 - results of past research;
 - current and planned research;
 - adequacy of research-support facilities; and
 - potential impact.
- (vi) Assess the nature and appropriateness of the governance, organizational structure and research management.
- (vii) As much as possible, identify quantitatively how they allocate resources among activities, as specified in the revised glossary of CGIAR activities (Appendix I), currently and within five years.
- (viii) Make a preliminary assessment of the physical plant.

The sub-groups of TAC Members and consultants will prepare reports on their findings at the end of the review mission for consideration by TAC.

Proposed Report Outline (Items in parenthesis correspond to specific items in the Terms of Reference)

- 1. BACKGROUND
 - a brief history of the centre
 - mandate/mission statement
 - the centre's clients and how it perceives them
- 2. THE CENTRE PROGRAMME (i)
 - the centre strategy, and its implementation (ii)
 - constraints addressed, constraint analysis
 - the programme approach and operation
 - the research programme
 - . strategic
 - . applied
 - . adaptive
 - training
 - support programmes
 - the regional distribution of programmes
 - future plans
- 3. RESEARCH RESULTS AND IMPACT (v)
- 4. GOVERNANCE, MANAGEMENT, AND METHODS OF OPERATION (vi)
 - governance and structure
 - methods of operation
 - relations with other institutions (iv)
 - . national programmes
 - . other IARCs
 - . institutions in advanced countries

5. A PROFILE OF RESOURCES (vii)
 - physical facilities (viii)
 - staff resources
 - funding resources (allocation based on glossary of CGIAR activities)
6. ISSUES AND CONCERNS