

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
TECHNICAL ADVISORY COMMITTEE

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

TAC SECRETARIAT
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
March 1989

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FORTY-SEVENTH MEETING OF THE TECHNICAL ADVISORY COMMITTEE
TO THE
CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
(Washington, D.C., 24 - 29 October 1988)

REPORT OF THE MEETING

A. SUMMARY

1. Main Highlights and Recommendations

1.1. CIMMYT External Reviews

In considering the External Programme and Management Reviews of CIMMYT, TAC noted that both Review Panels had relied heavily on a draft strategic plan prepared by the Centre. A number of issues relating to sustainability, marginal lands and food versus feed had been raised in the draft strategic plan and discussed in the EPR Panel report. After discussing the Panels' reports and the response by the CIMMYT Board and Management, TAC concluded that significant changes would be warranted in the draft strategic plan.

TAC was in broad agreement with the recommendations of the Panels and noted that most of them were acceptable to the Centre. The Committee urged CIMMYT to strengthen its disciplinary research and endorsed the EPR Panel's recommendations with respect to up-stream research. Further, TAC agreed with the essence of the Review Panels' recommendation on overall research coordination both at headquarters and in outreach. It concluded its consideration of the CIMMYT External Reviews by preparing a commentary which, along with the two reports, will be transmitted to the CGIAR in time for discussion at the 1989 Mid-Term Meeting.

1.2. IITA's Medium-Term Programme Proposal

TAC was concerned that, as a result of a communications problem, the Committee's recommendation on IITA's activity involving resident scientists in the medium-term programme was not reflected in the Centre's document sent to the CGIAR. In discussion with TAC, Dr. Larry Stifel, Director General of IITA, indicated that the activity involving resident scientists was in his opinion "essential" but he would reclassify it as "desirable" if TAC insisted.

The Committee reconfirmed its decision and asked the Chairman to explain the situation to the Group when the IITA medium-term programme was discussed. TAC further advised Dr. Stifel that it would be willing to reopen the matter again at its next meeting, if he so desired.

1.3. IFPRI's Medium-Term Programme Proposal

During TAC 46, TAC noted that IFPRI had revised its budget request for 1989 to the level originally approved for 1992. Since the Committee considered this increase constituted a significant shift in the scale of operations, it requested IFPRI to explain the changes. Dr. John Mellor, Director General of IFPRI, revealed that the expansion was primarily in collaborative research with developing countries, and was entirely in the "desirable" category.

TAC observed that all of IFPRI's activities were within the approved priorities of the CGIAR, that there had been no change in the level of "essential" activities, and that the increased scale of desirable activities would not become a contingent liability on CGIAR funds. It therefore reconfirmed its endorsement of IFPRI's essential programme at the level already approved by the CGIAR.

1.4. Relations with Non-Associated Centres

The Committee in its consideration of an expansion of the CGIAR, discussed approaches for assessing candidate institutions proposed by the Chairman in the draft document entitled "The Possible Expansion of the CGIAR: A Draft Outline of Possible Approaches for TAC and the CGIAR". The Committee endorsed the main directions proposed in the draft outline, and made some suggestions for refining the analytical framework. The Chairman agreed to brief the Group on progress at ICW 1988 and at its 1989 Mid-Term Meeting at Canberra. TAC expects to have the report on its approaches ready for CGIAR consideration at ICW 1989.

TAC also set up panels consisting of Members and outside experts which would visit each of the candidate centres for an initial evaluation in April or May 1989. A full report of the results of this assessment would be discussed at TAC 49 and decisions taken then on the details of the follow-up.

2. Progress on Other Items

2.1. ICRISAT's Medium-Term Programme Proposal

TAC, after a second discussion of ICRISAT's medium-term programme proposal, was still not satisfied with the rationale presented by the Centre for the scale of activities proposed, and especially for the continuous expansion at ICRISAT Centre. In TAC's opinion, much of the problem arose from the lack of a clearly enunciated overall strategy for the Centre (with a description of the components applying specifically to Africa and to Asia), plus the lack of an analysis of the options available and a rationale for the choices made.

The Committee requested clarification or further information on a number of other items, including the role of ICRISAT in enabling national programmes to become self-reliant and in encouraging them to participate in international activities as ICRISAT's partners, the coordination of network activities, and the functions of the biotechnology unit in serving the major research programmes.

Finally, TAC concluded that it would have difficulty in endorsing ICRISAT's medium-term proposal as presented, and requested that a revised document be prepared for review at TAC 48.

2.2. WARDA's Medium-Term Programme Proposal

The Committee was pleased with the progress WARDA had made in developing its medium-term programme proposal and was impressed with the clarity and the soundness of the proposal.

TAC agreed with the essence of the proposal but was concerned that some of the proposed activities were not supported by a minimum critical mass of staff. The Committee therefore requested WARDA to make a number of revisions to the proposal which would be discussed again at TAC 48.

2.3. Future Reviews

(a) CIAT

A short-list of candidates for Panel chairman and members was approved by TAC, a preliminary list of questions reviewed and a list of countries tentatively selected for Panel visits during June and July, 1989. CIAT agreed that the main phase could take place in a three-week period between the end of August and the end of September.

(b) CIP

TAC confirmed the Panel composition, the proposed timing and the programme for the Third CIP EPR. Dr. William Tossell had accepted

the invitation to chair the EPR Panel, and Dr. Lowell Hardin to chair the EMR Panel.

(c) Other

After consultations with the Centres TAC decided that the third EPRs of IITA and ICRISAT would take place in 1990, and the second EPR of IFPRI in late 1990 or early 1991. The Committee agreed for planning purposes, tentatively to schedule external reviews of IBPGR, ILCA and ISNAR in 1991, and those of ILRAD, IRRI and WARDA in 1992.

2.4. Evolving Trends in World Agriculture

The Committee considered, in a joint session with Centre Directors, the paper "Evolving Trends in World Agriculture: A Long-Term Scenario" prepared by the Secretariat. In the wide-ranging discussion there was general agreement on the focus of the paper but a number of specific points were raised which would require inclusion of some aspects not covered (e.g. environmental issues) or which should receive more attention (e.g. assessing the strength of national systems).

This paper will undergo revision taking into account the comments. It will serve as an update of Chapter 2 of the TAC priorities paper and it will also be used as an input for the TAC document on the non-associated centres.

2.5. IRRI's Strategic Plan

Dr. Klaus Lampe, Director General of IRRI, informed TAC on the progress being made in the preparation of IRRI's strategic plan. He reported that wide consultations involving staff, Board Members, national systems and others had been held. Further, negotiations were continuing with IITA and WARDA on collaboration with respect to rice research in Africa.

It was proposed that IRRI's strategic plan and its medium-term programme proposal would be presented for TAC's consideration in March 1989. It was therefore agreed that during that meeting, TAC could conclude its consideration of IRRI's Third External Programme Review.

2.6. Future Meetings

TAC confirmed the dates of the following meetings:

- TAC 48: 13 to 21 March 1989 at CIP, La Molina, Lima, Peru
- TAC 49: 19 to 25 June 1989 in Rome, Italy
- TAC 50: 23 to 28 October 1989 in Washington, D.C., USA.

3. Information on Other Matters of Interest to TAC

3.1. Sustainability and the CGIAR

TAC and the Centre Directors in joint session received a presentation from Ambassador R. Blake of the International Institute for Environment and Development, who discussed sustainability in relation to agricultural development. He complimented the CGIAR on its initiatives in this respect and stressed the need for better communication with the general public.

3.2. Meeting Reports and Invitations

TAC received reports on the outcome of the following meetings:

- (i) IARC's Workshop on Human Resources Development, 12-16 September 1988, at CIP, La Molina, Lima, Peru; and
- (ii) Meeting on Desert Locust Research, 18-20 October 1988, at FAO Headquarters, Rome, Italy.

TAC received and accepted invitations to participate in the following meetings:

- (i) Inter-Centre Working Group on Plant Genetic Resources, 6-9 February 1989, at IRRI, Los Baños, Philippines;
- (ii) Crop Protection Information Workshop, 9-14 April 1989, at CAB International Centre, Wallingford, UK.
- (iii) Symposium on Plant Biotechnology for Developing Countries, 26-30 June, Luxembourg.

B. RECORD OF THE PROCEEDINGS

1. The Forty-Seventh Meeting of the Technical Advisory Committee (TAC) to the Consultative Group on International Agricultural Research (CGIAR), was held from 24-29 March 1988 at IFPRI and at the World Bank Headquarters, Washington, D.C. Dr. Alex McCalla was in the chair.

2. The meeting was attended by all TAC Members, by a representative of one of the Co-Sponsors, and by members of the CGIAR and TAC Secretariats. The Chairman of the Committee of Board Chairpersons, several Centre Directors, observers representing members of the CGIAR, and a number of other participants attended open sessions of the meeting (Annex I).

3. A joint session was held with the Centre Directors, who were meeting concurrently. A special closed session of the Committee was held with the Chairman of the CGIAR to discuss a number of matters on TAC's current and future agendas. As usual, TAC started and ended its meeting with a closed executive session.

Opening Session - (Agenda Item 1)

(a) Opening Remarks

4. Dr. McCalla declared the 47th Meeting of TAC open. He then welcomed the TAC Members and introduced the new Member, Dr. Ken-Ichi Hayashi. He also welcomed a Co-Sponsors' representative and the observers, and invited them to participate actively in all the open sessions of TAC and its working groups.

(b) Adoption of TAC 46 Report

5. The report of TAC 46 1/ was adopted without amendments.

(c) Matters Arising from TAC 46

6. The Chairman noted that the medium-term proposal of IITA submitted to the CGIAR did not fully reflect the recommendations made by TAC, and would therefore need reconsideration by the Committee. (See below under "Adoption of the Agenda".)

(d) Adoption of the Agenda

7. The Chairman proposed that IITA be added to Agenda Item 3, Resource Allocation, and that the reports of the Standing Committees be given under Agenda Items 3, 5 and 6. This was accepted by the Committee

1/ Draft Report of the 46th Meeting of TAC (AGR/TAC:IAR/88/22)

and the Agenda with these amendments (Annex II) was adopted. The Chairman also announced a number of items to be discussed under Other Business (Item 7) and invited TAC Members to convey to the Secretariat any other topics they wished to be included.

CIMMYT External Reviews - (Agenda Item 2)

8. Dr. McCalla welcomed the members of the CIMMYT Board and Management and the Chairmen of the External Reviews. He then gave the floor, in turn, to Sir Ralph Riley, Chairman, External Programme Review (EPR) Panel, and Mr. Don Mentz, Chairman, External Management Review (EMR) Panel, to present their reports.

9. Sir Ralph stated that his Panel was unanimous on the outcome of the report, and that its recommendations were intended to be constructive and to help TAC and CIMMYT to steer a course for the Centre's future. There had been good and frequent interactions with the EMR Panel, and with the Centre's Board, Management and staff throughout the period of the review. Both reports 1/ had been discussed with the Board, Management and senior staff during oral presentations made on 18 August 1988.

10. The EPR Chairman assured TAC that CIMMYT was in good health. The Centre's research and training programmes were productive, creative and relevant to the needs of its client countries - even though some of its collaborators in developing countries would like to assume part of CIMMYT's present role! Sir Ralph made a brief outline of the origin and evolution of CIMMYT, including its earlier achievements. He noted that the autonomy of the commodity programmes was jealously guarded.

11. Some members of the EPR Panel had made visits to ICARDA and IITA and to selected countries in Asia, Africa and Latin America to review collaboration between CIMMYT and its partners. Overall national leaders were satisfied with CIMMYT. Without exception, national programmes wanted help with crop management research to a greater extent than with germplasm development and enhancement.

12. Sir Ralph reported that CIMMYT had experienced major changes in directing staff since the last External Review, and a number of new innovations had been introduced both in management and in programme priorities and strategies. The concept of mega-environments had been developed to characterize the major growing environments for CIMMYT's commodities.

13. In the Panel's opinion the draft strategic plan of CIMMYT provided a logical analysis of the future responsibilities of the Centre. It established decision rules to be used in evaluating priorities and in allocating resources among programmes, and attempted

1/ - Report of the Third External Programme Review of the International Maize and Wheat Improvement Centre (AGR/TAC:IAR/88/23)

- Report of the First External Management Review of the International Maize and Wheat Improvement Centre (CIMMYT)

to quantify the state of development of national programmes and their capacity to assume greater responsibility either on their own or cooperatively with the Centre. The plan sought to increase research at headquarters by "decentralizing" crop management research and crop production training to countries, and by shifting outreach core positions to Mexico. This would have financial and organizational implications for CIMMYT.

14. The Panel noted that while the last two External Reviews had urged CIMMYT to make greater commitments to science, there was only a modest move towards this in the draft strategic plan. The Panel concluded that although CIMMYT should remain primarily a plant breeding institution, the relative commitments to other research disciplines should be enhanced. To promote disciplinary research at CIMMYT, it therefore recommended the establishment of two distinct inter-programme research groups which would be required to devote at least 30% of their time on disciplinary research in crop production and crop protection.

15. The Panel supported proposed changes in the Economics Programme to emphasise market research, research resource allocation, impact of research, and commodity sector analyses. With respect to germplasm conservation, the Panel noted that CIMMYT had accepted responsibility for the base collections of maize and recommended that CIMMYT extend this responsibility to spring bread wheat and triticale. Further, the Panel urged CIMMYT to be more explicit in describing its policy on germplasm conservation. CIMMYT was also encouraged to proceed with its plan to strengthen seed health and quarantine studies, particularly with respect to bacterial and virus diseases.

16. The EMR and EPR Panels observed that there had been no technical links between the commodity programmes and there had been little coordination of their policies or training. As currently organized, the programmes did not project a one-centre philosophy. This view was shared by many national research leaders. Therefore, both Panels recommended that coordination of Centre-wide research and training activities should be the responsibility of a Deputy Director General, Research and Training.

17. In his presentation of the EMR report, Mr. Don Mentz stated that the EMR report covered the major management issues facing CIMMYT. Extensive consultations had been held with the Board, Management, and staff. The Panel found the Centre to be a dynamic organization, which was also well managed.

18. With respect to CIMMYT culture, the Centre was in a period of transition. The Panel had expressed some concern on the performance of the Board with regard to the attention given to management matters.

19. The EMR Panel considered the Director General to be seriously overburdened and recommended a more supportive structure through the establishment of the Office of the Director General as a distinct organizational unit. It further recommended a restructuring of the Directing Staff Committee into a Management Committee with a wider representation. A need to strengthen information flow within CIMMYT was identified.

20. All but four of the 48 recommendations made by the EMR Panel had been accepted either in full or with slight modifications. The four remaining recommendations were: the proposed restructuring of CIMMYT by appointing a Deputy Director General, Research and Training; the establishment of two disciplinary research groups; the appointment of a qualified physician, and the lines of reporting for the Head of Information Services.

21. In his response on behalf of CIMMYT, Dr. Lucio Reca, Chairman of the Board of Trustees, expressed deep appreciation for the quality of the reviews and the overall soundness of the recommendations. He then outlined for TAC the activities the Centre had organized in preparation for the Reviews and especially those connected with the development of the draft strategic plan. Before giving the Board's specific comments on the Panels' recommendations, he asked Dr. Don Winkelmann, Director General of CIMMYT, to provide additional information on the process leading to the External Reviews.

22. Dr. Winkelmann, because of the reliance of both Panels on CIMMYT's draft strategic plan, outlined the main features of the plan, the assumptions and assessments made, and the major conclusions reached. He also identified a number of unresolved questions mainly arising as a result of the 1985 TAC recommendation on the priority which should be accorded to wheat for which he sought clarification.

23. Regarding the draft strategic plan, Dr. Winkelmann elaborated on the mega-environments concept; the decision criteria and the application of weights for resource allocation among programmes, based on specific assumptions; the feed versus food issue with respect to the relative priority and resources allocated to maize and wheat. CIMMYT had not factored in the TAC and CGIAR recommendation that resources allocated to maize should increase relative to those for wheat, and was uncertain about its role in research with a sustainability perspective.

24. Finally, Dr. Reca provided CIMMYT's views on the major recommendations of the EPR and EMR teams, and the actions that would be taken as a result of those reviews.

25. In the ensuing discussion, TAC expressed overall support for the Panels' recommendations, especially those relating to disciplinary research, Centre-wide research coordination, and germplasm conservation. TAC also endorsed proposals that CIMMYT should move upstream in research, and better coordinate its outreach research.

26. Some TAC Members were disappointed that sustainability and marginal lands had not been used as criteria in priority setting and resource allocation. They considered CIMMYT had taken too narrow a view of sustainability. Its work on plant genetic resources, breeding for durable resistance to diseases and pests, stress physiology, and its proposals on wheat-rice rotation studies were examples of research with a sustainability perspective and concern for marginal environments.

27. The importance of crop management research and disciplinary research were stressed. CIMMYT explained that it had made a commitment to strengthen disciplinary research. A Head of Pathology for the Wheat Programme had recently been appointed and more than 30% of disciplinary

scientists' time in the Maize Programme was on crop protection. In this regard, TAC observed that there were some contradictions between what was stated in the draft strategic plan, in the preliminary CIMMYT response to the EPR report, and in the version presented at the meeting.

28. 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. Further, according to present projections, by the year 2000 about 60% of all hybrid seed in developing countries would be in private seed companies. CIMMYT pointed out that the Maize Programme was using recurrent selection extensively. Further, the purpose of the hybrid programme (except for the quality protein maize) was not to develop inbred lines. CIMMYT would put emphasis on non-conventional hybrids due to the poor state of infrastructure in many developing countries. The development of non-conventional hybrids would enable developing country scientists to make the best use of heterotic groups. The success of hybrid maize in Zimbabwe and Kenya was cited. The products of the programme would be available to both the private and public sectors.

29. In further discussion, a number of issues raised in the reports were considered in greater detail. Doubts were expressed on the comparative advantage of CIMMYT to conduct strategic research on parasitic weeds. CIMMYT was urged to exercise caution in the level of resources allocated to triticale because of its limited impact and spread. The priorities for plant protection were considered to require further analysis. Irrigation in sub-Saharan Africa was considered to be among the critical elements in future wheat-growing environments.

30. TAC welcomed the agreement reached with IITA on maize in West Africa and noted that there were good prospects for a similar accord between CIMMYT and ICARDA. Finally, TAC prepared its commentary on the Reviews noting that not much had been discussed on the EMR report as it was considered by the Panel, the CIMMYT Board and Management, as a "good news" EMR.

31. The Chairman thanked the Chairmen of the two Panels and their colleagues for their comprehensive analytical and constructive reports. He also thanked the CIMMYT Board, Management and staff for their transparency and collaboration with the Panels. He noted that TAC had been in general agreement with the Panels' findings and recommendations and looked forward to the discussion with CIMMYT on its strategic plan and medium-term programme proposals in March 1989.

TAC Commentary on the CIMMYT External Reviews

32. In transmitting the External Programme Review report of CIMMYT to the CGIAR, TAC wishes to commend and thank Sir Ralph Riley, Chairman of the Panel, and his colleagues, for their analytical, constructive, and perceptive report. TAC wishes also to commend the External Management Review Panel and its Chairman, Mr. Don Mentz, for the excellent report which will undoubtedly assist CIMMYT in further improving the management of an already well run institution. At its 47th Meeting, TAC discussed the reports in the presence of both Panel Chairmen, Dr. Lucio Reza,

Chairman of the CIMMYT Board of Trustees, Dr. Donald L. Winkelmann, Director General of CIMMYT, and other directing staff of the Centre.

33. The Committee commends the Centre for the significant progress made in implementing the recommendations of the 1982 External Review Panel, particularly in rationalizing the Centre's mandate. The Committee welcomes the information that the Government of Mexico is in the process of recognizing CIMMYT's international character by granting the necessary privileges and immunities needed for its international activities and to further its work in the rest of the developing world.

34. TAC is in general agreement with the recommendations of the two Panels. However, the Committee would like to highlight a number of issues raised in the reports and in the Centre's response, and in some of the major recommendations.

35. The work of the Panels was greatly facilitated by the existence of an advanced draft of the Centre's strategic plan. The Committee benefitted also from having received copies of the draft strategic plan with the reports but restricts its comments mainly to the External Reviews. TAC commends the Centre for the process followed in developing the plan, particularly for the explicit consideration of the future environment in which the Centre would operate, and for the active consultation with its clients and partners from developing countries.

36. The Committee notes in the Board's response to the EPR Panel recommendations an assumption that the draft strategic plan should be finalized with little change. However, CIMMYT's response to a number of the Panel's recommendations and TAC's observations would make significant revisions warranted.

37. The EPR notes that CIMMYT has made a judgement on the relative importance of wheat versus maize by not factoring into the plan the TAC-CGIAR recommendation that the resources devoted to wheat should decline and those to maize should increase. The Committee recalls that the recommendation (made in the 1985 TAC Review of CGIAR Priorities and Future Strategies), was based mainly on the perceived strength of national wheat research programmes as compared with maize programmes in low-income countries. The information presented in the draft strategic plan confirms this perception. Thus, the Committee wishes to reiterate its recommendation that higher priority should be placed on maize relative to wheat.

38. The Committee notes that in its response to the EPR, CIMMYT considers sustainability to be an integral part of the decision-making framework, yet the Centre is still struggling to make it an explicit criterion. CIMMYT should not underestimate the sustainability perspective embodied in the research the Centre is carrying out, as exemplified by germplasm conservation, resistance breeding, stress tolerance breeding, etc. The Committee concurs with the Panel's recommendation (Section 9.6) and urges the Centre to make such an important criterion more explicit, in such a way that it permeates all research and training activities.

39. On marginal lands, CIMMYT argues that TAC's concern with marginal lands is adequately covered by the Centre's focus on helping the poor.

However, marginal lands need a much more analytical approach, because they can be marginal for many reasons. These reasons have to be clarified for a better understanding of the possibilities for research.

40. With regard to the Panel's recommendation on the hybrid maize programme, TAC would wish to distinguish between hybrid breeding per se and research on hybrid breeding. The Committee endorses the Panel's recommendation that CIMMYT undertake further studies to improve the understanding of the economic factors affecting the use of hybrid maize in particular environments. TAC is concerned that under certain circumstances hybrid programmes carry with them a sustainability risk, particularly if they are not backed by a well-established seed industry and by effective population improvement programmes.

41. Realizing that increases in yield in the developing countries would require improved crop management, the Committee endorses the Panel's recommendation that CIMMYT expands crop management research at its headquarters and strengthens its regional and national capabilities.

42. Regarding the recommendation of the Panels concerning the organizational structure at CIMMYT, the Committee finds the arguments presented by the Panels persuasive, and urges the Centre to carefully examine the need to ensure overall Centre-wide coordination of research and training activities. The Committee considers that in the light of the Centre's plan to decentralize some aspects of its training activities to national/regional programmes, it is imperative that these activities be coordinated at the Centre-wide level.

43. Both Panels recommend that CIMMYT should follow its commitment in the strategic plan to disciplinary research by the creation of a Crop Protection Research Group and a Crop Production Research Group. TAC agrees with both the Centre and the Panels that a matrix organization across programmes is the most appropriate model for the Centre. The Committee concurs with the views of the Panels in that without separate budgets there are little chances of the model becoming functional and operational. Hence, the matrix organization must be recognizable in the budget.

44. TAC was pleased to learn that the long standing issues with IITA have been, in principle, adequately resolved. The Committee looks forward to the result of the cooperation efforts between both institutes on maize research in West Africa. Similarly the Committee was pleased to learn about the progress being made in resolving the outstanding issues between CIMMYT and ICARDA and urges both Centres to reach formal agreement on the collaborative research activities in the region as soon as possible.

Resource Allocation (Medium-Term Proposals) - (Agenda Item 3)

45. The Chairman introduced the work of the Committee on this item by indicating that ICRISAT's revised medium-term programme proposal and WARDA's medium-term programme proposal would be considered. In addition, the Directors General of IITA and IFPRI had each agreed to meet with TAC on matters related to their programme plans.

46. Before welcoming the Board Chairmen, Centre Directors and senior staff from the Centres concerned and requesting each Centre Director in turn to make his presentation, Dr. McCalla announced that the final sub-item would be a progress report from the Chairman of the Standing Committee on Resource Allocation.

(a) ICRISAT

47. The Chairman, in inviting Dr. Fenton MacHardy, Chairman of the ICRISAT Board, to introduce the revised medium-term programme proposal, stressed that TAC would focus mainly on the issues raised at TAC 46. Dr. MacHardy first indicated that while the Board had approved the substance covered by the proposal before TAC, neither the Executive Committee nor the Board had yet had the opportunity to discuss the current document. He then asked Dr. Leslie Swindale, Director General, to outline the revised proposal.

48. Dr. Swindale referred to the much reduced size of the document and indicated that it contained essentially the same information as the first draft but in a much more compact form. He stressed that the aim of ICRISAT remained the same - to increase food, fuel and fodder for the small farm holder in the semi-arid tropics. He noted that ICRISAT's overall strategy had been outlined using a series of brief statements, and the section on Resource Management Programme completely rewritten, while a rationale for the emphasis on sustainability, and a number of milestones, had been provided.

49. However, Dr. Swindale did indicate that the Centre had found difficulties with the definitions of "essential" and "desirable" activities and how these were related to core and special project funds. He explained that there were a number of activities, now with assured special project funding, that ICRISAT considered essential for its overall programme. He also indicated that the increases at ICRISAT Centre were based on the need to expand activities in Asia.

50. TAC Members first expressed their appreciation for the leaner, more accessible document. They noted that it was now clear that ICRISAT overall was requesting 6 new senior scientist years (SSYs), in addition to requesting the transfer of 20 SSYs, mainly involved in African-based special projects, to the "essential" category. Nevertheless, they expressed concern about a number of issues.

51. The first of these related to strategy. TAC suggested that ICRISAT consider outlining its global strategy, and then indicate the components which applied specifically to Africa and to Asia, as it considered that the strategic elements listed in the document were somewhat cryptic. In addition, the potential strategic options should be elaborated and the rationale given for the options adopted. Without such an analysis and an element of zero-based budgeting, it was difficult for TAC to come to grips with matters such as scale. Further, a better reflection of ICRISAT's strategy was needed in the sections on the individual programmes.

52. With respect to scale, TAC noted that overall ICRISAT was requesting a real increase of 27% by 1993. However, from the base of

core support in 1988, a 54% growth in expenditures for essential activities was being proposed, approximately a 10% annual increase. TAC needed explicit justification for the scale of the increase before it could consider such a proposal. Since the Committee also needed to make cross-Centre comparisons, the relationship between the elements of ICRISAT's programmes and the items on the TAC activity list should be provided. Quantitative information by activity should be included.

53. Other issues raised included: the continued growth of ICRISAT Centre; the place of biotechnology at ICRISAT; the measurement of the impact of ICRISAT's technologies, including the varieties released; the rationale for continuing germplasm collection (question of quality vs. quantity); agroforestry activities; and the lack of explicit reference to sustainability concerns in the commodity programmes.

54. In response, Dr. Swindale indicated that ICRISAT would make changes when preparing the final draft. However, he was not convinced that it was necessary for TAC to consider zero-based budgeting in its discussion on scale, especially when special project funding had already been secured.

55. With regard to ICRISAT's strategy, Dr. Swindale indicated that it was based on the 10-year plan which had grown out of past activities. He pointed out, in relation to the growth of activities in Africa relative to those in Asia, that in the early eighties ICRISAT had made substantial transfers of resources from ICRISAT Centre to the African programmes. In 1986 the Board had advised TAC that there would be no further reductions at ICRISAT Centre in order to strengthen its activities in Africa. He also stressed that considerable changes were underway with the redeployment of resources, including the reassignment or release of staff, according to the need for skills.

56. With respect to agroforestry, ICRISAT had found no need to develop a programme in Asia but was backstopping work at the Central Research Institute for Dryland Agriculture. ICRISAT's own research on agroforestry had been transferred entirely to West Africa. As far as sustainability was concerned, there had not been a thorough analysis, nor had major thought been given to what might be done if work were to be undertaken in this field. Dr. Swindale noted that as chairman of the CGIAR group on sustainability, he expected that recommendations of the group would affect ICRISAT's future programme. He also explained that the Biotechnology Unit was composed of four laboratories that served the whole Centre.

57. Following further discussion, TAC concluded that, on the basis of the analysis provided, ICRISAT had not given a clear justification of the proposed rate of growth in essential activities. Further, Members recalled that in 1985 (TAC 37), following ICRISAT's second EPR, TAC had indicated the need for the Centre to continue its effort directed towards a balanced transfer of resources to Africa. In 1986 (TAC 40), TAC approved ICRISAT's proposal to increase the SSYs in Africa to 50, to equal the number at ICRISAT Centre, but requested that the increase be phased. When no explicit plan for phasing was presented in 1987 (TAC 43), the Committee took a conservative view of ICRISAT's programme request for 1988, and decided to wait for the discussion of ICRISAT's medium-term programme proposal, scheduled for 1988.

58. The medium-term proposal included further increases at ICRISAT Centre both in staff positions and in capital investment. TAC was not convinced by the evidence presented, that ICRISAT had taken a hard look at opportunities for terminating projects, the justification for continuing some of them appearing to be historical, rather than strategic. TAC stressed that the origin of funding (core or special project) was not relevant to its consideration of the Centre's budget proposals.

59. Finally, the Committee requested that the following information be included in the revised version of ICRISAT's medium-term programme proposal:

- a global strategy, with an elaboration of the specific strategy components for Africa and Asia, and a rationale for the scale of increase proposed;
- an analysis of the options available, e.g. decentralization, and rationale for the choices made, since availability of funds for an activity was not a justification;
- a clear indication of programmes which had been or would be terminated, and shifts that would be made;
- an explicit description of the biotechnology activities showing how they would support the major research programmes;
- a clear description of the network activities and their coordination;
- the role of ICRISAT in enabling national programmes to become self-reliant as well as in encouraging them to participate in international activities as ICRISAT's partners;
- a clear justification for the increases in the capital budget at ICRISAT Centre;
- an indication of the cost and composition of a SSY (which should probably be qualified, since costs for an administrator would differ from those of scientists in headquarters or in Africa);
- a table showing the relationship between the elements of ICRISAT's programmes and the items on the TAC activity list together with quantitative data by activity; and
- absolute figures in tables where percentages are used.

60. TAC also requested that ICRISAT include the following information in Annexes:

- an overview of special project activities, their nature and geographical location;
- a table showing the breakdown of the budget by object of expenditure and by programme; and

- a table showing the national scientists and support staff by programme.

61. Finally, TAC indicated that it would have difficulty in endorsing ICRISAT's medium-term programme proposal on the basis of the current document. It therefore requested ICRISAT to prepare a revised version for review at TAC 48.

(b) WARDA

62. After some preliminary remarks on the present status of WARDA Dr. H.D. Weltzien, Chairman of the Board of Trustees, paid tribute to his predecessor, Dr. M. Touré, who had carried much of the lead in bringing about the many changes. He then introduced Dr. Eugene Terry, Director General of WARDA and Dr. Peter J. Matlon, Director of Research, to present WARDA's medium-term programme proposal.

63. Dr. Terry described the development of the proposal from the Centre's strategic plan, and stressed that during its preparation there had been close interaction among management, staff, and members of the Board of Trustees, and with national systems, IRRI, IITA and donor agencies. WARDA was meeting a series of challenges, both of an institutional and technical nature, which had determined the framework of this medium-term proposal. The Centre's goal was to provide and strengthen West African capability in the science, technology and socio-economics of rice production. Its principal client groups were the national systems and its target group the resource poor farm families. WARDA's functional programme areas were research, training and communication and these were founded on three underlying concepts: (i) environmental orientation and management; (ii) partnership with national systems in planning and implementation; and (iii) full integration of research, training and communication activities. The three major rice growing environments on which WARDA's research programme was based, were the upland/inland-swamp continuum found in the forest and forest-savanna transition zone, the Sahel, and the mangrove swamps.

64. Dr. Matlon then presented an overview of the research programme which had been based on three guiding principles: (i) a clear problem-solving constraints-based research focus; (ii) interdisciplinary project orientation and management; and (iii) a close integration of on-farm and on-station research. WARDA's research was organized in five programmes: the Upland/Inland-Swamp Continuum, the Sahel Irrigated Rice, the Mangrove Swamp Rice, Complementary Socio-Economics Research, and the Germplasm Resources Unit.

65. The importance of different constraints to increased rice production by ecosystems in West Africa had been assessed, and WARDA's priorities based on the results. Consequently, WARDA's first priority environment would be the upland/inland-swamp continuum, and the proposed research would focus on the development of improved soil fertility techniques, the development of alternative cropping systems, the development of improved rice varieties, and the development of improved methods for soil erosion, water, and weed control. Of second priority are the Sahel irrigated environment (where research would focus on the

development of improved water, weed, and soil fertility management practices, as well as on improving rice varieties), and the mangrove swamp environment (where research would focus on the development of improved cultural practices and cropping systems, improved methods for control of crabs, major insect pests, and diseases, and improved rice varieties). Dr. Matlon also summarized the proposed training and communication programme and the intended cooperation with national and international institutes.

66. Finally, Dr. Terry briefed the Committee on the human and financial resource requirements WARDA would face between 1989 and 1994. To undertake the proposed programme WARDA required an average annual growth of 4.8% in scientific and technical staff, i.e. from 27 SSY in 1988 to 34 SSY in 1994. The resource requirement for the essential programme would be US\$ 6.3 million in 1989 and would increase to US\$ 9.5 million in 1994. In 1989 approximately 45% of resources would be allocated to research, increasing to 61% in 1994. Dr. Terry also gave an overview of the requirements for capital, and provided a brief on the phased programme for the development of its new headquarter facilities. Finally, Dr. Terry suggested that the next EPR for WARDA could be held in 1993.

67. The discussion was opened by the liaison scientist who expressed pleasure with the progress WARDA was making in becoming a new, research-oriented institution. He indicated that every major concern addressed by WARDA's mid-term review had been addressed in the sound and well prepared medium-term proposal. He questioned, however, whether WARDA had a critical mass of research staff in the Sahel Irrigated Rice and Mangrove Swamp Research Programmes to address the problems requiring an interdisciplinary approach. He also asked how WARDA intended to focus its research efforts, where the field sites were located, how the remaining facilities in Monrovia would be used, and how WARDA intended to cope with funding shortfalls.

68. Other questions and issues raised during the discussion concerned: details on how WARDA would involve national systems in its on-farm research; the way WARDA would address environmental problems associated with mangrove swamp clearance; and WARDA's approach to the production of rice in irrigated areas where, because of high investment costs, rice may not always be the optimal crop. TAC also raised the issue of water-borne human health hazards in West Africa and their effects on farmers and crop productivity.

69. In his response, Dr. Terry listed the different field research sites that would be used by WARDA and noted that in Liberia research would continue at Suakoko, and training activities at Fendall. He explained that the focus of WARDA's research programme was the development of sustainable cropping systems, and that rice would not always be considered as the optimal crop per se. Non-rice options would also be considered.

70. Dr. Matlon stressed that WARDA's approach would be to assist rice farmers, and not just to try to increase rice productivity. There was a strong need to build up the research capacity of the national systems through training and cooperation, before responsibilities for on-farm research could be more clearly allocated. Dr. Matlon explained that

scientists working mainly in the upland/inland-swamp continuum research programme would provide inputs to the other programmes. The work in mangrove swamps should continue in order to ensure that the information resulting from earlier work by WARDA was not lost.

71. In further consideration of WARDA's proposal, TAC discussed the optimum allocation of resources to rice research in West Africa within the framework of overall CGIAR priorities. Concern was expressed about the high cost of rice production in the West African region, especially as rice could be imported more cheaply from elsewhere. In this regard, TAC recalled its previous discussions on priorities which stressed the importance of achieving food self-reliance rather than self-sufficiency.

72. 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 African 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.

73. TAC was impressed by the clarity and the soundness of the medium-term proposal and noted with satisfaction, the importance given to strong partnership with national systems of the region and the collaborative activities with other international research centres. The Committee stressed, however, that WARDA should not assume responsibility for activities which could appropriately be carried out by national systems. In view of the importance of the effects of government policies on rice production in West Africa, TAC strongly supported the proposed cooperation with IFPRI in policy research.

74. TAC concurred with WARDA that the primary objectives of the research programme should be on the development of more cost-effective but sustainable crop-management techniques and the development of higher yielding and more stable rice varieties. It also supported the proposed environmental orientation and the high priority given to research on the upland/inland-swamp continuum. TAC endorsed WARDA's priorities with respect to sustainability issues, and the development of improved rice-based cropping systems. WARDA was clearly recognizing the importance of increasing the productivity of the whole farm, rather than that of a single crop.

75. The Committee was in general agreement with the proposed classification of activities as "essential" and "desirable" on the basis of whether or not a primary constraint was being addressed, but noted that a certain minimum scale of activities was required to challenge such constraints effectively. In this regard, the Committee appreciated the degree of self-restriction and cost consciousness of WARDA's management in formulating its proposal, but would like to receive further clarification on how WARDA would obtain a critical mass of staff for all of its proposed research, and especially for that proposed on the mangrove swamps and the irrigated Sahel.

76. In revising the proposal, TAC requested WARDA to give greater attention to how the substantial human-health hazards affecting farmers

and the productivity of rice farming in the target areas could be overcome. The Committee also raised the issue of environmental problems associated with the management of mangrove swamps and encouraged WARDA to take these into account when formulating management strategies.

77. TAC requested WARDA to clarify its proposed research on water management, and to make a clearer delineation of the importance of constraints to increased rice production by ecosystem in West Africa. TAC was particularly concerned about the high cost of producing irrigated crops, and suggested that WARDA should explore the possibility of developing intensive cropping systems that would give a greater return to irrigation investment.

78. The Committee would also appreciate a somewhat sharper definition of the activities proposed as desirable, and a table that indicated the equivalence of WARDA's proposed activities with the CGIAR list of activities.

79. TAC was pleased with the achievements made by the management and Board of WARDA during the last 12 months, and noted that the scale of the proposed activities were considered the "minimum essential" to carry out effectively the mandate of the Centre. The Committee agreed with the essence of the proposal, and looked forward to discussing a revised version at TAC 48.

(c) IFPRI

80. In its 1985 Review of CGIAR Priorities and Strategies, TAC recommended that policy research should receive greater emphasis in the CGIAR. This was endorsed by the Group. When considering IFPRI's medium-term programme proposal, TAC encouraged the Centre to come up with proposals which would expand its programmes significantly. This the Centre did in close cooperation with the other IARCs. Subsequently TAC and the CGIAR approved IFPRI's medium-term proposal in 1987. Since then the Centre has been very successful in attracting the required funding.

81. During TAC 46, the Committee noted that IFPRI had revised its budget request for 1989 to the level originally approved for 1992. The rapidity with which the budget was increasing caused some concern among TAC Members and fears were expressed that such a rapid growth rate might overburden the Management of IFPRI and impair its efficiency. Further, since TAC considered this increase to constitute a major programme change, or at least a significant shift in the scale of operations, it requested IFPRI to explain the changes.

82. The discussion with Dr. John Mellor, Director General, revealed that there had been a major expansion in the amount of collaborative research activities with developing country institutions, activities which were intended to enhance the capacity of national systems. The Committee also noted that the expansion was in the desirable category, an expansion which would result in IFPRI increasing the proportion of its desirable activities from 50% of its programme in 1989 to about 60% in 1992. TAC observed that despite this change in the proportion of essential relative to desirable activities, all of IFPRI's activities were within the approved priorities.

83. Further, TAC was assured that there would not be any distortions in regional balance as a result of the increase in project funding, and that the increase in desirable activities was not expected to become a contingent liability on CGIAR funds. Staff appointments would be co-terminus with the life of the special projects being funded by donors.

84. TAC was encouraged by IFPRI's response to the concerns expressed and reconfirmed its endorsement of the essential programme at the level already approved by CGIAR. TAC, in addition, supported IFPRI's Management in the view that it would be necessary for the Centre to continue to receive the recommended support for essential activities, in order to fully implement its collaborative research programme.

(d) IITA

85. At TAC 46, as part of its consideration of IITA's medium-term programme proposal, the Committee discussed with Dr. Larry Stifel, Director General, the justification for classifying the activity involving resident scientists as "essential", and concluded that IITA did not have a comparative advantage in the area. It therefore requested IITA to classify this activity as "desirable". This request, although communicated to IITA after the meeting, was apparently received too late for amendments to be made to the document entitled "IITA Medium-Term Plan 1989-1993" before it was sent to printing and distributed to the Group. In the meantime, the CGIAR Secretariat circulated to the Group the document "CGIAR Resource Allocation - Medium-Term Program Plans and Funding Requirements of CIAT, ILCA, and IITA" which correctly reflected the TAC position on the activity involving resident scientists. It was because of the differences in the two documents that Dr. Stifel was invited to meet with TAC to clarify the situation.

86. Dr. Stifel stated that he still considered he had a convincing case for classifying the activity as essential, and enumerated the reasons. In concluding he said that he would be willing to have it reclassified as desirable if TAC insisted.

87. Subsequently, TAC reviewed the situation and confirmed its earlier position. It requested the Chairman to inform the Group of the Committee's position when the IITA medium-term programme was discussed during International Centres Week. TAC also agreed that it would be willing to reconsider its position in March 1989 if Dr. Stifel wished to come back to the Committee.

(e) Report of the Standing Committee for Resource Allocation

88. Professor T. Odhiambo reported to the joint session of TAC and the Centre Directors that the Standing Committee for Resource Allocation met briefly at ICRISAT during TAC 46 to consider the terms of reference, identify the main issues to be addressed, and make tentative plans for its future work. It agreed to concentrate on the following topics:

- (a) review TAC's experience with the new resource allocation process;

- (b) seek more information on Centres' budgets and budget trends;
- (c) have a better understanding on how Centres use their resources;
- (d) consider the need or otherwise of redefining the terms used in the new budget allocation process for classifying Centre activities, i.e. "essential" and "desirable", before starting the second round of medium-term plans of Centres.

89. The Standing Committee examined experience to date with the new resource allocation process and identified a number of emerging issues including: how underfunding (or overfunding) of Centres with approved medium-term plans should be handled; and how to ensure balance among Centres, and among commodities or commodity groups, at the System level.

90. With respect to budget trends and growth rates, the Standing Committee suggested that those medium-term plans which had already been approved by TAC, should be analyzed. The information should include details of what constituted a SSY.

91. The Standing Committee observed that most of the budget growth was occurring in the early years of the programme plans, and that in all cases, the growth in the already-approved programme plans was substantial. This fact could well establish a trend for other Centres coming into the pipeline. It stressed that the donor of last resort would have a very important role to play in order to facilitate an orderly implementation of TAC's recommendations.

92. The CGIAR Secretariat was requested to provide information on items (b) and (c) above, in time for TAC 47.

93. The Standing Committee discussed these issues in detail assisted by working papers and notes developed by the CGIAR Secretariat, Dr. E.T. York, and Dr. J. Stafford, Vice Chancellor for Programme and Budgeting, University of Texas. The discussion revealed that the information on budgets provided to TAC was inadequate. To enable TAC to make rational decisions in matching programme priorities with resource needs, details were needed on what and how the Centres spend their funds. The Standing Committee stressed that it was not so much a question of detailed information, but the type of information provided. On the basis of currently available information, the Standing Committee was not confident that the level of resources allocated adequately reflected programme priorities.

94. The primary problem was identifying the type of information necessary to enable TAC to make rational decisions on resource allocation, i.e. to reflect in monetary terms the programmatic priorities in a way which would give equal opportunity to all Centres. The unit of account which could provide this information was considered to be the cost of a SSY, provided there was adequate and reliable information on what a SSY was, and what it contained.

95. The Standing Committee requested the CGIAR Secretariat to develop an inventory of comparative ratios, i.e. information which showed how things were done. The Standing Committee noted that a discussion paper prepared by the CGIAR Secretariat on Trends in CGIAR Expenditures:

1983-1988 provided a good start. The Standing Committee suggested that this activity be confined to those Centres which had already embarked in the new resource allocation process.

96. While realizing that the new resource allocation process facilitated TAC's consideration of the entire programme of a Centre and its total funding, some Standing Committee members suggested that the move away from the principle of "core" and "extra-core" (unrestricted and restricted) funding would encourage donors to move towards selective support of programmes as the term "essential" was not considered to be synonymous with "core". It was argued that selective programme funding by many donors might jeopardize the role played by the donor of last resort and reduce the availability of unrestricted funding.

97. The issue of scale was considered at two levels: at the level of the Centre; and at the level of the programme/activity. Some of the issues raised in the First Review of the CGIAR, and the CGIAR Priorities and Strategies Paper regarding the optimal size of the Centres and the System, were highlighted. It was noted that the terms "essential" and "desirable" as currently used by TAC were more an indication of scale rather than classification of activities.

98. Further, the Standing Committee suggested that TAC needed to have a better mechanism for allocating resources to comparable activities at different Centres, such as germplasm improvement. A joint discussion with Centre Directors on this issue would help to develop some ground rules for comparing programmes/activities across Centres.

99. The possibility of building the scale issue into the terms of reference for EPRs, commodity, and activity reviews was considered. But the Standing Committee noted that the issue needed to be resolved quickly and could not wait for the next round of external reviews to be completed.

100. The question of how the System would handle underfunding was also considered. The Standing Committee suggested that clear guidelines for handling shortfalls should be developed so that the CGIAR Secretariat could apply them without having to involve TAC. Some of the options considered for handling shortfalls in funding included:

- (i) postponement of capital budgets;
- (ii) use of the stabilization mechanism; and
- (iii) postponement of growth - it was noted that 60% of proposed growth was for personnel and 30% for capital.

101. In concluding this sub-item the Chairman of the session indicated that as this report was an item for information, there would be no discussion.

Relations with Non-Associated Centres - (Agenda Item 4)

102. The Chairman introduced the item by recalling the decision of the Group at the Mid-Term Meeting in Berlin to consider an expansion of the

CGIAR. It had, therefore, asked TAC to undertake the assessment of a selected number of candidate institutions.

103. At TAC 46, the Committee had requested him to prepare an outline of a paper on how TAC should go about this task. This he had done. He had also distributed it to TAC members for comment, discussed it with the Chairmen of the three Standing Committees and staff of the TAC Secretariat in early September, and subsequently revised it. He stressed that the annotated outline 1/ now in Members' hands, consisted of two parts: (a) a description of the CGIAR in the global agricultural context; and (b) a discussion of alternative approaches on how to proceed with the evaluation of candidate centres or activities. He stressed it would not become a TAC document until the Committee agreed on its contents.

104. The Chairman indicated that the first part of the document started with an overview of global developments in world agriculture and discussed the many roles of agriculture in developing countries. It also looked at some emerging trends and provided the statistical context for the broad developments, although long-term projections on population and income growth up to the year 2025 would have to be incorporated. It continued with an appraisal of the contribution of agricultural research to development, including the special role of international agricultural research, and within this global context, the role of the CGIAR. It described the priorities and operational strategies of the CGIAR, its mechanisms for considering priorities, and the evolution of these priorities in recent years.

105. The Chairman then outlined his proposed analytical framework for a rational evaluation process of candidate centres/activities. The framework included a logical sequence for identifying major constraints to the solution of critical problems, determining appropriate research approaches, and identifying the subset of activities for which the CGIAR would have a comparative advantage. This framework would allow TAC to assess the extent the candidate activities paralleled current CGIAR work, evaluate how they augmented or duplicated CGIAR activities, and appraise the remaining gaps. It would also facilitate TAC's appraisal of the current distribution of effort among all research thrusts/approaches relative to perceived future needs. The outcome of using this logical sequence would be the preparation of a revised statement of CGIAR priorities, and recommendations about additions to the CGIAR with appropriate adjustments to existing programmes.

106. Dr. McCalla then turned to part two of the outline on procedure. He suggested four options ranging through the "clean slate" approach, subject matter approach, conditional programme adjustment approach, to single "in" or "out" decisions. He discussed the implications of each option for the structure of the CGIAR System in the short and long term, and the criteria for adding elements to an expanded CGIAR. Finally, he proposed tentative operational procedures for tackling the task, and a timetable for the evaluation process. He also reviewed the short- and long-run implications of an expanded System for TAC.

1/ The Possible Expansion of the CGIAR: A Draft Outline of Possible Approaches for TAC and the CGIAR (AGR/TAC:IAR/88/24)

107. In the discussion that followed, TAC Members and observers were complimentary about the paper, and supported the broad and comprehensive approach that was proposed by the Chairman.

108. With respect to part one, questions were raised about the number of non-associated centres being evaluated, the role of regional and other international institutions not being evaluated, and how TAC would reconcile the additional activities with the CGIAR goal. The merit of making long-term projections was raised, with some Members referring to the difficulties of quantification and the unreliability of the results. Completion of the tables in the analytical framework was another concern, particularly the difficulty of overcoming problems associated with trying to aggregate across disciplines, commodities and agroecological zones. Other issues were the nature of the gaps that the candidate activities were expected to fill, and the need for the CGIAR to support activities in less favoured areas.

109. In response, the Chairman confirmed that for this exercise, TAC's analysis would be restricted to the nine centres given priority by the CGIAR. Other institutions could be assessed at a later stage. He also noted that it would be necessary to assess the future of the CGIAR on a more regional basis than previously, and agreed that the role of regional organizations in agricultural research should be addressed in the paper. On the matter of long-term projections the Chairman argued strongly that TAC needed to have a clearer picture of the probable agricultural situation in 25-30 years, as that would be the leadtime for pay-off from today's research investments.

110. With regard to the operational approaches described in part two of the paper, Members stressed that flexibility would be essential. It would be necessary to look at entire subject matter areas across both CGIAR and non-CGIAR centres, but remain practical by assessing non-CGIAR centres on the basis of a set of solid criteria. It would perhaps be necessary to use all options simultaneously.

111. An alternative analytical approach for an assessment of the appropriateness of the candidate activities was suggested based on a qualitative analysis. A list of activities needed to achieve the CGIAR goal could be prepared, and compared with current CGIAR activities which would lead to the identification of remaining gaps. However, caution about the use of appropriateness criteria was expressed, particularly the need to avoid confusion with quality criteria. Difficulties associated with a broad and inclusive approach were noted because certain activities could not be excluded.

112. In summarizing the discussion, the Chairman noted that the Committee generally endorsed the proposed directions. However he indicated that there was a need to refine the analytical framework to facilitate the multi-dimensional analysis. After thanking the Members and observers for their many useful comments, the Chairman requested the Standing Committee for priorities and strategies to take them into account as they prepared a full draft of chapters 1-4 for TAC 48.

113. The Chairman then outlined the work which was required over the next twelve months. He first described the tentative procedure for the assessments. The non-associated centres were grouped into three sets

(i) resource/input related: ICRAF, IBSRAM, IFDC and IIMI;
 (ii) commodity/production related: ICIPE, INIBAP and ITC; and
 (iii) commodity/resource related: AVRDC and ICLARM. TAC would constitute panels consisting of Members and outside experts to visit each of these centres for an initial evaluation before the TAC meeting in June 1989. In a second stage, following TAC's assessment of the findings of the first phase, selected activities/institutes would be subject to external reviews. These second phase reviews could probably be completed by October 1989.

114. Returning to the preparation of a report for ICW 1989 on TAC's approaches for assessing the non-associated centres, the Chairman noted that the original schedule would now be difficult to meet without an additional meeting of TAC. Since the initial assessments of the non-associated centres would not be completed before April/May 1989, TAC could not discuss the results and decide on the exact follow-up until TAC 49 in June. Only then would the Committee be in a position to give directions for completing the report dealing with the approaches being used. The document would then have to be discussed and approved by the whole TAC before it was sent to the Group. He concluded the agenda item by saying he would report on progress at both ICW 88 the following week and at the Group's Mid-Term Meeting in Canberra in 1989.

Future Reviews - (Agenda Item 5)

(a) CIAT

115. Dr. Patricia Roberts-Pichette presented a progress report 1/ on the status of the CIAT External Programme Review which contained the general outline of the timing, programme activities, Panel profile and composition, and a preliminary list of specific questions. Subsequently, meetings with the Director of CIAT, and of the Standing Committee for External Reviews had resulted in more precision and clarification on the following items for TAC's approval:

- Timing. CIAT proposed a period of twenty days between 28 August and 6 October 1989, to be selected in conjunction with the Panel Chairman.
- Terms of reference. TAC agreed that the interim Terms of Reference would be used as a guide until TAC 48. At that time, the Committee was expected to consider the revised Terms of Reference (which the Standing Committee suggested would not be markedly different from the interim Terms of Reference). TAC also reviewed the list of questions.
- Panel profile and composition. TAC confirmed that the Panel should have six members covering the disciplines of agronomy/soils, breeding, economics/sociology, information/communication, pasture/animal nutrition, and pathology/virology.

1/ Third External Programme Review of CIAT - Progress Report
 (AGR/TAC:IAR/88/25)

The Committee considered it essential that, collectively, the Panel should include persons knowledgeable about advances in biotechnology, familiar with the concerns of national systems, and fluent in the Spanish language, and that at least two of the Panel members should come from developing countries. TAC approved a short list for Chairman and Panel members.

- Programme activities. TAC approved the suggestion that the country visits be selected from among the following countries, in addition to Colombia: Thailand, Ethiopia, Rwanda, Tanzania, Brazil, Chile and Peru. The exact timing of the visits would be determined in collaboration with the Centre Director and Panel Chairman, but would most likely be in June and July 1989.

(b) CIP

116. Dr. Guido Gryseels presented the progress in the preparations for the CIP EPR. 1/ He reported that Dr. William Tossell had agreed to chair the five-member Panel, which was now complete except for a sociologist/anthropologist. The EMR Panel would be chaired by Dr. Lowell Hardin. A preliminary list of questions had been prepared for review by the Committee and circulation to CGIAR members.

117. The main phase of the review would take place over a 20-day period between 17 April and 12 May 1989 at Lima, Peru. Panel members would attend CIP's annual internal review on 5-9 December 1988 and undertake country visits to Chile and Colombia subsequently. During January and February visits would be undertaken to selected countries in Asia and Africa, most likely to Burundi, China, Egypt, Indonesia, Kenya, Philippines and Rwanda. Discussions would also be held with AVRDC and IITA on their respective agreements with CIP on sweet potato.

118. TAC confirmed the composition of the Panel, the proposed timing and programme and agreed that the preliminary list of questions be circulated to the Group.

(c) Other

119. TAC accepted the recommendation of the Standing Committee (in light of the agreement in "Review Processes in the CGIAR", that the interval between reviews be five years plus or minus one year), that IITA, ICRISAT and IFPRI should undergo EPRs in 1990.

120. Agreement was reached with the respective Directors General, that the main phase of IITA would take place in January-February 1990, that of ICRISAT in August-September 1990, and that of IFPRI after the Board meeting in September 1990 and before the March TAC Meeting in 1991. Such a schedule would mean that EPR/EMR reports for CIAT and IITA would be ready for CGIAR consideration at its 1990 Mid-Term Meeting, and those of ICRISAT and IFPRI for the CGIAR Mid-Term Meeting in 1991.

1/ Third External Programme Review of CIP - Progress Report
(AGR/TAC:IAR/88/26)

121. The Standing Committee also recommended that TAC tentatively consider commissioning EPRs for IBPGR, ISNAR and ILCA in 1991, and for ILRAD, IRRI, and WARDA in 1992, thus completing/starting another cycle of external reviews.

(d) Report of the Standing Committee for External Reviews

122. The Chairman of the Standing Committee for External Reviews, Dr. Michael Arnold, reported progress to the joint session with the Directors General. Essentially the Standing Committee had two main responsibilities: (i) the planning of future reviews (see (c) above), and (ii) the streamlining of external reviews (both the process and the product).

123. Dr. Arnold reported that the terms of reference for external reviews and also the guidelines were being revised and would be ready for the Committee's consideration at TAC 48. In preparation for this task, both Secretariats, chairpersons of recent reviews, and some of the Centre Directors had been consulted, but additional comments would be welcome. In trying to reduce the workload and the resources currently expended on external reviews, the Standing Committee was reviewing the current briefing materials and would make recommendations for their consolidation.

124. The Standing Committee was also looking for ways of reducing the time spent on country visits and for making them more sharply focused and productive. One possibility at an early stage of planning an EPR, would be to send a questionnaire to developing countries seeking their opinions on the Centre under review. The responses to such a questionnaire could help identify issues and aid in the selection of the countries to be visited. The Standing Committee indicated that it was testing the efficacy of a questionnaire in connection with the CIAT EPR.

125. Another matter affecting the review process was the restricted size of the current data-base used for selecting chairpersons and panelists. The Standing Committee had linked up with the CGIAR Secretariat and its consultant, Dr. John Dillon who, as a result of the Oversight Committee's recommendation on the need to expand the data-base used for identifying Board and TAC Members, was studying the whole matter. Dr. Dillon estimated that the study and the implementation of the recommendations would take about a year to complete.

126. Since TAC could not afford to delay expanding its data-base, the Standing Committee and CGIAR Secretariat had agreed that the search for new names should be initiated immediately by the TAC Secretariat. Centre Directors and TAC Members would be asked to supply names of institutions in developing countries that were likely to have suitable people. Donors would also be requested for names of institutions in developed countries. Meantime a provisional format for the data-base would be developed in the CGIAR Secretariat. It was hoped that by the time the TAC Secretariat received the responses to its request, the data-base format could be tested when contacting the institutions identified.

127. Dr. Arnold noted that the TAC Secretariat would continue inviting each Centre to suggest names for its EPR panel. He requested that

Centres in answering this request, include the names of suitable people, whether or not they were eligible for their Centre's EPR panel. He also asked that Centres supply at least an abbreviated CV and current address for each person suggested.

128. The Chairman, in closing this item indicated that there would be no discussion as the report was essentially for information. Centre Directors would be kept informed of the Standing Committee's work.

Priority Setting - (Agenda Item 6)

129. Dr. McCalla in welcoming the Centre Directors to the joint session indicated that the main topic would be a draft secretariat document updating chapter 2 of the TAC priorities paper. In addition, Ambassador Blake of the Institute for Environment and Development would address the session on matters pertaining to sustainability. Dr. McCalla invited Dr. Ross Gray, Chairman of the Centre Directors, to co-chair the session.

(a) Evolving Trends in World Agriculture: A Long-Term Scenario

130. The topic was introduced in the joint session by the Chairman who recalled the discussions at TAC 46 at which the Committee had requested the TAC Secretariat to revise Chapter 2 of the TAC Review of CGIAR Priorities and Strategies. As the Standing Committee for Priorities and Strategies was to guide this revision, he asked Dr. Gustavo Nores, Chairman of this Standing Committee, to provide some introductory comments. Dr. Nores indicated that the paper before the Committee ^{1/} had been prepared by Dr. Guido Gryseels of the Secretariat, with substantial inputs by Dr. Kees de Wit. Although the paper was still a draft working document, much of the information it contained could also be used as an input in the paper the Chairman was preparing on a possible expansion of the CGIAR.

131. In presenting the document Dr. Gryseels acknowledged the support received from Drs. David Norse (FAO), and Leonardo Paulino (IFPRI). Most of the quantitative information presented had been derived from FAO's Agrostat and "Agriculture: Towards 2000" data files. The paper discussed the factors that determined food needs in developing countries, the recent developments in food supply, and some emerging global trends which were of concern to the CGIAR. It provided an update but did not replace the information provided in the 1985 review by TAC of CGIAR priorities and strategies, which was still largely valid.

132. The main factors that determined food needs in developing countries were population growth (which although expected to slow down would still average 1.6% p.a. until the year 2000), income growth (which was projected as 2% p.a., although in Africa stagnation was expected), and urbanization (which determined the composition of food demand). The

^{1/} Evolving Trends in World Agriculture (AGR/TAC:IAR/88/27)

implications to be drawn showed a trend towards diet-diversification in the form of higher-value commodities, such as livestock products and vegetables. With respect to developments in food supply, he noted that agricultural output in developing countries had increased rapidly during the past 25 years, largely through substantial increases in yield (and was expected to further rise by 3% a year until the year 2000). There had also been a rapid growth in reliance on international trade as a source of food, and many developing countries had become net importers of cereals and dairy products. The expansion of food imports by developing countries had been facilitated by dumping practices and cheap exports from developed countries, a result of their domestic agricultural policies.

133. Dr. Gryseels elaborated on emerging global issues related to poverty and agricultural development, the need for a greater, but well-focused emphasis on marginal areas, the important role of agriculture in economic development, changing trade patterns, and evolving national research capacities.

134. In the ensuing discussion Dr. John Mellor agreed with the statements made in the paper that laid the groundwork for strong arguments to support agricultural research. He commented that the poor were heavily concentrated in the rural areas of very low-income countries, but a large number of them were living in areas where the potential for response to improved agricultural technology was high. A greater proportion of the poor lived in areas with good potential rather than low potential, and it was essential that the CGIAR continue its efforts to increase yields in such well endowed areas. However, CGIAR efforts in marginal areas should not be reduced and donor agencies in developed countries should therefore allocate more resources to agricultural research overall. The profile of poverty, particularly the location of the poor, was expected to change during the next 25 years as a result of economic growth. During the last decade the number of poor in middle-income countries had declined sharply, but had rapidly increased in low income countries.

135. Dr. Mellor was optimistic about the prospects of high economic growth rates during the nineties. He expressed some caution about predictions made with regard to urbanization rates and suggested a distinction be made between the rates of increase in metropolitan areas, and those in regional centres. Agricultural development in rural areas should help to avoid the metropolitan expansion, and thus was another reason for donors to increase their support to agricultural research in developing countries.

136. Dr. Mellor noted that the paper did not deal with environmental issues, an essential aspect of CGIAR activities. However, Dr. de Wit pointed out that the Secretariat paper should be read in association with TAC's paper on sustainability. Information had been collected on the implications of climatic change for CGIAR efforts, but for the short to medium term the consequences for technology development did not seem dramatic.

137. Dr. Mellor referred to the importance of smallholder livestock farming for employment generation, particularly in Asia. Because of the lack of livestock technologies, the increasing demand for livestock

products was constrained by rising prices. As a result, consumers were switching to other products and livestock production was not expanding as rapidly as could be expected. This led to the loss of millions of jobs every year. The CGIAR should therefore give much higher attention to livestock research.

138. Other speakers highlighted the need to give greater attention to research on soil and water management, to mechanization, and to the benefits of infrastructural development. Some also urged the CGIAR not to reduce its efforts in low potential areas, and give attention to the rainfed crops of such areas, e.g. millet.

139. An agriculturally-led development strategy which increased employment and alleviated poverty in marginal areas would have to give attention to land reform and rural industrialization. Attention was also drawn to the human health problems that existed in such areas and how they affected agricultural development. The latter should not only focus on food production but also on income and employment generation.

140. In response to the suggestion that there was a need to develop a set of indicators to assess the strength of national programmes, Mr. Alexander von der Osten, Director General of ISNAR responded that this had been attempted by ISNAR but had been found very difficult. Within one national system the strength of different programmes could vary widely. ISNAR would continue its efforts however.

141. Various speakers also referred to the complexity of the food versus feed issue. Grains used as feed would ultimately become food and the process of transformation was an important consideration. The trade aspects of this issue were also discussed.

142. Dr. Klaus Lampe, Director General of IRRI, pointed to the need for the System to give indications of possible solutions: too much effort was devoted to analyzing problems. Finally, various speakers reflected on the important role of national research programmes in generating technologies, and on the environmental aspects of developing sustainable farming systems.

143. In his concluding remarks, the Chairman stressed the need to look beyond the year 2000, and that long-term projections on population and income growth were necessary. Investments in research today would have a payoff only 20 to 30 years hence, and therefore a clearer picture of the food needs and what the world would look like at that time was needed. He thanked the speakers for many useful comments and in particular Dr. Gryseels for the paper which he considered highly relevant to the wider discussion on a possible expansion of the CGIAR. The paper would be further revised and some additional work undertaken to give greater attention to regional differences as indicators of agricultural development.

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

144. The report of the Standing Committee for Priorities and Strategies was presented by its Chairman, Dr. Gustavo Nores. The

Standing Committee had met for the first time at TAC 46 in Hyderabad to discuss its terms of reference and to allocate responsibilities for the preparation of the paper on "Evolving Trends in World Agriculture". It held its second meeting in Washington D.C. on the first day of TAC 47 to discuss the draft of this paper.

145. Additional background work would now be undertaken to incorporate into the paper long-term projections on population and income growth in developing countries until the year 2025, and to deal with environmental concerns. The Standing Committee had also discussed the annotated outline of the Chairman's paper on a possible expansion of the CGIAR. As some members had reservations about the feasibility of the analytical framework proposed by the Chairman, the Standing Committee would attempt to explore alternative approaches.

Other Business - (Agenda Item 7)

(a) IRRI Strategic Plan

146. Dr. Klaus Lampe, Director General of IRRI, outlined for TAC the contents of the draft strategic plan for IRRI. He apologized that the draft had not arrived in time for the meeting, and invited written comments from Members once they had had a chance to read the document.

147. In developing the current draft, Dr. Lampe explained that there had been broad consultation involving in-house committees, national systems, Board members and IRRI friends. Further revision would be undertaken before its final submission to the Board for approval.

148. Dr. Lampe then outlined the current structure of IRRI and how it would be modified in the future. He stressed that IRRI focused on both rice producers and consumers, and had the dual role of generating technology and enhancing national system capacity. He then turned to the details of the proposed five-part strategy, the research allocation priorities, research balance, and the shift in relationships with national systems.

149. Dr. Lampe also pointed out that consultations were under way with IITA and WARDA concerning rice research responsibilities in Africa. He indicated that IRRI would expect to continue its work in eastern Africa, including Egypt and Madagascar, but its collaborative role in the rest of Africa was still under discussion. Dr. Lampe concluded by saying that he anticipated a specific agreement would be reached before March 1989 and would be presented to TAC at its next meeting.

150. The Chairman on behalf of TAC Members welcomed Dr. Lampe's presentation as a progress report on the development of the strategic plan. He expressed his regret that no discussion was possible because the draft document had not been received by TAC Members prior to the presentation. However, he looked forward to the discussion with IRRI at TAC 48 when both the strategic plan and the medium-term programme proposal would be on the agenda.

(b) IARCs Workshop on Human Resources Development

151. Dr. Sawyer, Director General of CIP, briefly reported on the outcome of the IARCs Workshop on Human Resources Development held at CIP on 12-16 September 1988. The objective of the Workshop was to identify important training issues that required a collective approach among the Centres in order to improve the quality and effectiveness of training efforts of the Centres. He noted that training had been accepted as a major activity of the Centres and substantial resources were being allocated for training.

152. The TAC Study on Training in the CGIAR and the 1985 TAC Review of CGIAR Priorities and Strategies were used as background documents. The training programmes of each Centre were examined followed by an exchange of experiences and concerns on training issues among the participants. A diversity of approaches among Centres was observed.

153. The meeting identified a number of major issues and made recommendations to deal with them. These included increased collaboration among Centres in training, and sharing of information, methods and techniques.

154. Dr. Sawyer reported that the major recommendations had been considered by Centre Directors and approved in principle. They strongly endorsed the need to increase efforts in research management training for national research leaders and for regional programme staff. Training in research station management, and encouraging greater participation of women in Centre training activities, were also given special emphasis.

155. The TAC Chairman in thanking Dr. Sawyer welcomed and encouraged the steps the Centres were taking to enhance the effectiveness of their training activities.

(c) Sustainability and the CGIAR

156. The Chairman, in joint session with the Centre Directors, introduced Ambassador Blake of the International Institute for Environment and Development (IIED), who congratulated TAC for its efforts in supporting the CGIAR and for developing an excellent paper on sustainability. He stressed the need for long-range and system-wide planning. Ambassador Blake reflected on some common criticisms of the CGIAR and stressed the need for better communication with the general public.

157. Dr. Ross Gray, Chairman of Centre Directors, in thanking him for the presentation, stressed the importance of environmental concerns for the development of sustainable farming systems.

(d) Meeting on Desert Locust Research

158. Dr. John Monyo reported on the International Meeting on Desert Locust Research: "Defining Future Research Priorities" organized by FAO's Emergency Centre for Locust Control, in Rome, 18-20 October 1988.

The purpose of the meeting was to review previous research on the desert locust, relevant to its control, and to suggest research priorities for the next five years.

159. Various aspects of locust research were assessed, including: survey methods and target search; information and forecasting - meteorology, swarm behaviour, and biogeographical case studies, use of satellite products and their development; simulation models and use of computers in forecasting; chemical control; biological control; population dynamics and case studies of mechanisms for plague establishment and termination, and environmental impact of locust control.

160. The meeting recommended: strengthening of information and early warning systems on locust populations; and more efficient use of meteorological data and its analysis (including information obtained through remote sensing). The meeting also studied possibilities for a more systematic harnessing of modern technologies of analysis and treatment.

161. With respect to chemical control, the meeting observed that improvements could be achieved through better application of existing pesticides. It took note of studies and ongoing research on new pesticides, and on the environmental impact. Finally, it concluded that new and thorough studies should be undertaken for better pursuit, assessment and evaluation of the consequences of the desert locust campaign on the environment.

162. Regarding biological control as a possible alternative to chemical control, the meeting concluded that at the present state of knowledge, more research was still necessary before practical applications could be envisaged.

(e) Symposium on Plant Biotechnology for Developing Countries

163. The Chairman informed the meeting about an invitation for TAC to participate in a Symposium on Plant Biotechnology for Developing Countries in Luxembourg, from 26-30 June 1989. The Symposium was being organized by FAO in cooperation with the ACP-EEC Technical Centre for Agricultural and Rural Cooperation. The main objective of the Symposium would be to design an action plan for further development on plant biotechnologies in and for developing countries.

164. TAC accepted the invitation and nominated Drs. Arnold, Muhammed and Paterniani to represent the Committee at the Symposium.

(f) Crop Protection Information Workshop

165. Dr. Monyo informed the meeting about a letter received from CAB International inviting TAC to participate in a Workshop on Crop Protection Information, from 9-14 April 1989, at the CAB International Centre, Wallingford, UK. He stated that a number of IARCs had also been invited. The meeting was being organised by CABI in cooperation with FAO. TAC accepted the invitation and nominated Dr. Arnold to attend the meeting.

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

166. TAC was notified that the Inter-Centre Working Group on Plant Genetic Resources would meet at IRRI, Los Baños, from 6-9 February 1989. Since TAC has normally been represented at such meetings, Dr. Hayashi was nominated to participate on behalf of TAC.

Future Meetings - (Agenda Item 8)

167. TAC confirmed the dates of the following meetings:

- TAC 48: 13 to 21 March 1989, CIP Headquarters, La Molina, Lima, Peru
- TAC 49: 19 to 25 June 1989, Rome, Italy
- TAC 50: 23 to 28 October 1989, Washington D.C., USA.

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AGENDA

1. Opening Session
 - (a) Opening Remarks
 - (b) Adoption of TAC 46 Report
 - (c) Matters arising from TAC 46
 - (d) Adoption of the Agenda
2. CIMMYT External Reviews
3. Resource Allocation (Medium-Term Proposals)
 - (a) ICRISAT
 - (b) WARDA
 - (c) IFPRI
 - (d) IITA
 - (e) Report of the Standing Committee for Resource Allocation
4. Relations with Non-Associated Centres
5. Future Reviews
 - (a) CIAT
 - (b) CIP
 - (c) Other
 - (d) Report of the Standing Committee for External Reviews
6. Priority Setting
 - (a) Evolving Trends in World Agriculture: A Long-Term Scenario
 - (b) Report of the Standing Committee for Priorities and Strategies
7. Other Business
8. Future Meetings

LIST OF DOCUMENTS

<u>Item</u>		<u>Document No.</u>
1(b)	Draft Report of the 46th Meeting of TAC	AGR/TAC:IAR/88/22
2	Third External Programme Review of CIMMYT	AGR/TAC:IAR/88/23
	Report of the First External Management Review of CIMMYT	CGIAR Document
3(a)	ICRISAT Looks to the Future - Programme Plans & Funding Requirements 1989-1993	Centre Document
3(b)	WARDA's Medium-Term Implementation Plan 1990-1994	Centre Document
3(c)	IITA Medium-Term Plan 1989-1993	Centre Document
3(d)	IFPRI Funding Requirements 1989	Centre Document
	IFPRI's Medium-Term Program & Budget Plan 1988-1992	Centre Document
4	The Possible Expansion of the CGIAR: A Draft Outline of Possible Approaches for TAC and the CGIAR	AGR/TAC:IAR/88/24
	Relations with Non-Associated Centres: A Preliminary Desk Analysis of Information Available in the TAC Secretariat	AGR/TAC:IAR/88/28
5(a)	Third External Programme Review of CIAT - Progress Report	AGR/TAC:IAR/88/25
5(b)	Third External Programme Review of CIP - Progress Report	AGR/TAC:IAR/88/26
6	Evolving Trends in World Agriculture	AGR/TAC:IAR/88/27
7	IRRI Strategy 1990-2000 and Beyond (Draft II)	Centre Document