

D R A F T

**TAC'S VIEWS ON IMPLICATIONS OF
THE NEW CGIAR VISION AND STRATEGY
FOR STRUCTURE AND GOVERNANCE**

Paper prepared for the Synthesis Meeting
organized by the CGIAR Oversight Committee
Sonning, 4-8 October, 2000

TAC SECRETARIAT
FOOD AND AGRICULTURAL ORGANIZATION OF THE UNITED NATIONS
October 2000

TABLE OF CONTENTS

	Page
1. Introduction	1
2. Present CGIAR Structure and Future Options	1
2.1 Current Structure and Mode of Operation	1
2.2 Structural Implications of Vision and Strategy	4
2.2.1 Background	4
2.2.2 Organizing for Impact on the Poor in High Priority Areas	6
2.2.3 Organizing for the Advanced Sciences and Technologies	6
2.3 Structural Implications for Programme Outputs	7
2.3.1 Germplasm Collections	7
2.3.2 Germplasm Improvement	7
2.3.3 Natural Resources Management	8
2.3.4 Socioeconomic and Policy Research	10
2.3.5 Enhancing Institutions	10
2.4 Task Forces	10
3. CGIAR Governance	11
3.1 Current Governance	11
3.2 Functions of Future Governance	12
3.3 Options for Governance	12
3.3.1 Unified Centre	12
3.3.2 Federation	13
3.3.3 Continuing Need for Independent External Advice	15
3.4 Future Financing of the CGIAR Research Agenda	17
4. CGIAR in the Global Agricultural Research System	19
5. Conclusions	19

TAC's Views on Implications of Structure and Governance in the New CGIAR Vision and Strategy

1. Introduction

At ICW'99, TAC was asked to lead an exercise to develop a new vision and strategy for the CGIAR. The Committee's proposals on the new vision and strategy were endorsed at MTM 2000 and TAC was subsequently asked to proceed in assessing the implications of the new vision and strategy for the future structure and governance of the CGIAR. Logic of form follows function and, therefore, proposals on structure and organizational design have to be made to suit the requirements of the programmes that will lead to the efficient and effective attainment of institutional goals. In the following sections, TAC looks at the implications of the new vision and strategy of the CGIAR for structure and for its governance. This paper reports on work in progress and was prepared at short notice following discussions at TAC 79. There was not enough time to formally clear its contents with TAC Members. It should be read in association with the final draft of *A Food Secure World: Toward a New Vision and Strategy for the CGIAR*.

2. Present CGIAR Structure and Future Options

2.1 Current Structure and Mode of Operation

The CGIAR is based on the concept of the international centre as the prime organisational mechanism for conducting research and research related functions. The operational principle of these centres is that they should be legally autonomous, operate as centres of excellence, have a problem solving and multidisciplinary research approach, bring together a critical mass of scientific and financial resources, have the ability to catalyse and coordinate research on well focused themes, are free from political constraints and have ability to maintain continuity of effort over sometimes long term periods necessary for success. This centre concept is complemented by other organizational approaches such as network arrangements, Systemwide research programmes, partnerships, and outposting of staff.

The current structure of the CGIAR comprises 16 autonomous centres, each having a sovereign charter, an autonomous Board, and internationally recruited professional staff and management. Centres have been set up along the different axes of research, i.e. commodities, agroecological zones, themes and geography. An overview of current centre responsibilities is provided in Table 1.

Table 1: Current CGIAR Centre Responsibilities at a Glance

Centre	Global Responsibility	Regional Responsibility	Agroecological Responsibility
CIAT	beans, cassava, tropical forages	rice in Latin America and Caribbean	Tropical areas in LAC
CIFOR	forestry policy, forest management	--	--
CIMMYT	wheat, maize	--	--
CIP	potato, sweet potato	Andean root and tuber crops	Andean ecoregion and global mountain ecoregion
ICARDA	barley, lentil, faba bean	chickpea and wheat in West Asia and North Africa	dry areas (non-Tropics)
ICLARM	living aquatic resources	--	coastal areas, coral reefs, pond systems
ICRAF	agroforestry, multipurpose trees	--	
ICRISAT	sorghum, millet, groundnut, chickpea, pigeonpea	--	semi-arid tropics
IFPRI	food policy	--	--
IITA	banana and plantain	cassava, maize, yam, cowpea, soybean in SSA	humid and sub-humid tropics in SSA
ILRI	livestock diseases, livestock production	--	--
IPGRI	conservation and use of plant genetic resources	--	--
IRRI	rice		
ISNAR	institutional development of NARS, research policy	--	--
IWMI	water management	--	--
WARDA	--	rice in West Africa	--

The organizational structure of the CGIAR has served the System well. Its many strengths are: apolitical and international character; generally high scientific quality; a critical mass to address key issues; hands-on research capability; a close links to clients and partners; the global dimension of the research; the interdisciplinary focus and the integration of commodity and resource management research; and its ability to evolve with changing needs.

As successive external reviews of CGIAR centres have found, centres are generally managed well, produce outputs highly relevant to the CGIAR mission and goal, in general nurture scientific excellence and are positively regarded by their stakeholders.

Discussions on the future of the CGIAR in the context of the new vision and strategy, however, raised several concerns that have organizational implications for the CGIAR. TAC synthesizes these concerns as follows.

- (a) The CGIAR has made good progress in helping to increase agricultural productivity in favourable areas, especially through its work on wheat, rice and maize. Its impact on poverty in marginal and “hard” areas¹, however, has been more limited.
- (b) There is uneven performance among the centres.
- (c) In an increasingly competitive world, the CGIAR needs to strengthen its accountability mechanisms.
- (d) The CGIAR lacks the critical mass to deal with new areas of science, in particular, biotechnology, social and natural resources management research. There is a need to investigate the extent to which economies of scale can be obtained through the grouping of some CGIAR activities.
- (e) There is remaining concern about overlapping responsibilities among CGIAR centres. This complicates effective interaction with national research systems. There is a perception that there is duplication of efforts among the centres as well as competition for funding from the same donors, that there are inadequate synergies and that there is a need to better integrate and coordinate activities of different centres in various countries or regions.
- (f) The CGIAR lacks adequate priority-setting mechanisms. Stakeholder participation in setting priorities is ad hoc rather than institutionalized.
- (g) It is believed that the CGIAR has high overheads at the System level and that its governance structure is too complex. Each centre encounters also high transaction costs in developing partnerships. There is a lack of common services among the centres.
- (h) The CGIAR System has difficulties in developing common policies on international conventions, the new challenges of IPR, environment, agricultural trade and stewardship of genetic resources.
- (i) In recent years, political support for agricultural research in general has been diminishing and the CGIAR is suffering from a certain amount of donor fatigue. Core funding has declined in recent years with donors increasingly favouring targeted programme support.

In considering organizational change, TAC has pursued four overall objectives: improving the quality of the CGIAR’s science and its performance; enhancing the impact of its activities; obtaining increased efficiency in resource use and effectiveness in achieving goals; and meeting future challenges of agricultural research more successfully.

¹ Marginal = difficult agroecological environments

Hard = difficult policy and weak institutional environments

2.2 Structural Implications of Vision and Strategy

2.2.1 Background

New Strategy: The CGIAR plans to develop an integrated approach that would entail support for agricultural and natural resources research to address the needs of the poor in the more favoured environments (by breaking yield barriers and through maintenance research), while at the same time tackling the more complex problems of poverty and food security in the hard areas.

The new CGIAR vision and strategy and the seven strategy planks are presented in a separate document. The implications of the seven planks for future CGIAR activities and mode of operation are summarized in Table 2.

Table 2: Implications of Vision and Strategy Planks

Strategy Plank	Implications
1. People and Poverty Focus	<ul style="list-style-type: none"> • strengthen links between CGIAR outputs and poverty reduction and identify researchable issues; • MTPs and projects to be revised to ensure linkage to poverty and food security; • accountability and evaluation procedures to be improved; • need additional efforts in mapping and benchmarking of poverty in conjunction with others.
2. Best Available Science	<ul style="list-style-type: none"> • improve quality of science in CGIAR; • improve incentives to attract best scientists; • create enabling environment; • consolidate particular research activities where lack of critical mass and/or outsource world-wide; • opportunities for innovations in marginal areas.
3. Focus SA and SSA	<ul style="list-style-type: none"> • better understanding of constraints to technology diffusion and adoption needed; • reassess CGIAR efforts in accordance to priority of regions and redeploy resources.
4. Regional Approach	<ul style="list-style-type: none"> • need for decentralized and devolved structure; • need to assign specific regional responsibilities; • need for stronger linkages with national and regional institutions and development agencies; • stronger interface with World Bank and regional development banks; • strengthen capacity-building role.

Strategy Plank	Implications
5. New Partnerships	<ul style="list-style-type: none"> • new forms of partnerships needed; • new types of partners needed; • define evolving role for the CGIAR.
6. Task Forces	<ul style="list-style-type: none"> • flexible institutional organization of research needed to complement centre model; • fixed term, accountable.
7. Catalytic Role as Broker and Investigator	<ul style="list-style-type: none"> • increase service function; • developing honest knowledge broker role; • develop absorber-dissemination role • strengthen collaboration with Northern and Southern platforms and with GFAR.

Recognising the CGIAR's comparative advantage, the System's activities should complement the efforts of other organizations working in agricultural research and in sectors whose development is key to agricultural growth, particularly health, education, nutrition, infrastructure, the environment and social and economic policy. This implies an important new role for the Cosponsors, particularly the World Bank and FAO, in strengthening the interface between research and development.

Two key organizing principles that naturally evolve from an assessment of TAC's seven strategic planks are:

1. the heterogeneous nature of poverty in different regions dictates that research focused on poverty reduction and prevention should primarily be organized along regional lines; and
2. the increased globalization of science and the rapid pace of change and advance in the external science environment dictate that the CGIAR be strategically placed in a global context to be able to take full advantage of the advances and be able to mobilize and finance areas of science relevant to its mission.

These two organizing principles drive the System toward, on the one hand a more focused regional approach to mobilizing science for poverty reduction and food security, and on the other hand a global presence and focus on major commodities and problems.

The keys to success in structuring and organizing research within the CGIAR are:

1. to define the regional and global structural implications for each of the logframe outputs in which the CGIAR engages;
2. to take advantage of the potential complementarities between these two thrusts in organizing the whole System and its activities, i.e. to choose the optimum means of creating strong, complementary regional and global programmes through development of mutually enforcing linkages between the two sets of activities; and then,

3. to create the governing mechanisms to ensure oversight, System priority setting, accountability and the other prerequisites for a productive function of the CGIAR System.

2.2.2 Organizing for Impact on the Poor in High Priority Areas (See Plank 3 – Geographic Priorities)

TAC's proposition is that a regional approach can help open new potentials for poverty reduction where appropriate new technologies have not been available or adopted. For these areas, there should exist advantages for the CGIAR in combining the global approach, which has been the hallmark of its research, with regional approaches. This suggests a need for a more decentralized and devolved structure of the System and consequently assigning clear regional responsibilities among the centres.

There are two approaches to initiating regional programmes with a poverty focus. One is a planning exercise that would determine the optimal number of regions and define an approach for each region. The other is an experimental and incremental approach. Given the uncertainties involved, and the need to learn by doing, including to mobilize donor support, the CGIAR may prefer to take the second approach. **The CGIAR would start experimenting with one or two regions through centres that are interested in pursuing this approach.** Most likely initial sites are Western Sub-Saharan Africa and Central America. TAC would welcome specific proposals from the centres that would like to initiate pilot studies.

2.2.3 Organizing for the Advanced Sciences and Technologies (See Plank 2 - Modern Science)

The developments in the biological, physical, and social sciences have major implications for the future research strategy of the CGIAR and the way in which research is organized in the System. These areas include functional genomics, bioinformatics, GIS, management of information, issues of IPR and policies on technology transfer.

The recent Systemwide Review of Plant Breeding Methodologies identifies several areas in mainly biological sciences where new resources are needed and where progress in crop improvement can be achieved via closer inter-centre collaboration and consolidation of some activities.

There are many other actors in biological sciences both in the private and public sector that do research both complementary to and competitive with the CGIAR. To best exploit opportunities from advances in science, the CGIAR needs to expand and strengthen its partnerships particularly with advanced institutes.

TAC sees need to strengthen the System's capacity in new areas of research. Options include new funding/incentive mechanisms through establishment of virtual research groups, delegating specific responsibilities amongst the centres, and outsourcing to advanced research institution and private sector.

There is a need and opportunity to make more effective use of advances in the areas of genomics and informatics, and GIS, management of common databases and their use by the centres and our NARS partners. Structurally, there are two options:

- formal, separate structures for these two major initiatives versus
- task forces with activities/groups built in into current centre structures.

The Duvick Panel on the System Review of Plant Breeding Methodologies would consider creating new structures as a last resort to which TAC concurs. The advantage of flexibility of new structures is outweighed by the loss of efficiency and effectiveness of the centre programmes if development of these new enabling techniques is divorced from their utilization as well as by the additional overheads new structures will require.

TAC therefore suggests that consideration be given to the establishment of task forces to address major new areas such as **genomics, bioinformatics, applications of information and communication technologies (ICT) to research on natural resources management, and development and management of databases.**

The concept of task forces is further explored in Section 2.4.

2.3 Structural Implications for Programme Outputs

2.3.1 Germplasm Collections

The germplasm collections that the CGIAR centres hold and the value adding work done at the centres through characterisation, evaluation, and enhancement, are some of the most important CGIAR activities of an international public goods nature. Currently, IPGRI is responsible for conservation and promotion of agricultural biodiversity and provides oversight for global plant genetic resources programmes and policies, while the commodity centres manage their own respective *ex situ* collections.

Value adding activities such as systematic characterisation and those connected to functional genomics and pre-breeding should continue to be developed at the locations where crop improvement takes place. IPGRI will play a stronger role in database development, in in-situ conservation methodologies, in international negotiations and in policy implications deriving from them. TAC is supportive of establishing more sustainable financing mechanisms to ensure long term support for the CGIAR genetic resources.

2.3.2 Germplasm Improvement

Considerations for organising crop improvement activities on crops, livestock and fisheries are guided by the strategic planks TAC describes in its Vision and Strategy document and motivated by a number of external factors, some of which have particular implication for the way in which commodity research is organised, e.g., new scientific opportunities, increasing involvement of the private sector, sustainability and biodiversity concerns (in particular finding more effective ways to integrate commodity and NRM research).

Crops

With respect to crops, there are continuing valid reasons for supporting germplasm improvement programmes for those commodities that account for most calories and proteins of the poor. These include cereals, roots and tubers and bananas and plantains. In cases where a crop is dominant in certain region and there are strong NARS capable and willing to serve as alternative suppliers of international public goods, the NARS could assume greater

responsibility for the improvement of that crop (e.g. sweet potato in China and pigeon pea in India are possibilities).

TAC sees that the advantages in keeping the commodity research programmes decentralised as independent entities in the region of origin of the crop and/or where it is a major component of the local farming system override the advantages from centralising all crop improvement activities in the System. New developments in molecular biology present the possibility of greater use of more sophisticated research techniques that have relevance across many crops. There are significant opportunities for Systemwide collaboration and consolidation and for use of outsourcing in several areas of research associated with germplasm improvement, such as genomics and bioinformatics. TAC concurs with the Review Panel's analysis that, instead of establishing new formal structures, collaboration groups and/or inter-centre task forces be organised to maximise synergies and reach critical mass. The inter-centre activities could be organised on basis of commodity (crop or crop group), research theme (e.g. new plant type, apomixis) or research tool (need for compatible data bases, bioinformatics). Funding mechanisms may also be used to foster inter-centre collaborations and provide incentives for external collaboration.

In the new regional planning and priority setting mechanisms, additional commodities may be identified, both for their nutritional value and/or income generating potential. These might include vegetables, pulses, fruits, speciality and tree crops. Variable treatment would depend on relative regional priority and circumstances as well as availability of new sources of support. Possible models could be comprehensive regional programmes in CGIAR centres, CGIAR research components contributing to NARS-based programmes or CGIAR-supported networks.

Livestock

Livestock has both regional and global components. Research on feed resources could be conducted within the framework of regional/ecoregional institution structures. Global themes such as livestock health and nutrition of inter-regional importance should be conducted through a global mechanism. They would benefit from stronger collaboration with other public institutions and the private sector. Livestock production systems research would also benefit from greater integration with other components of NRM research, and regional research efforts.

Fisheries

Fisheries research remains a high priority at the work of the CGIAR, both in its commodity and its resource management aspects. TAC sees a need for a global aquatic resources research centre. Closer linkages with other CGIAR centres are recommended, e.g., with policy and NRM programmes, in conducting fishery policy research on the management of common property resources and open access issues.

2.3.3 Natural Resources Management

INRM research aims at benefiting human well-being through the management of natural resources which govern output from agriculture, fisheries and forestry. INRM is thus people focused and output-driven. It focuses on sustainability issues related to the goals and objectives of the CGIAR.

Effective INRM research involves integration across disciplines in resolving management-related issues and opportunities being addressed. Thus, INRM requires the integration of the geochemical and social sciences with those of agriculture, fisheries and forestry production. It involves working with farmers through appropriately oriented public and civil institutions to resolve key management issues.

Most of the NRM issues that need to be addressed in the context of the CGIAR goals and objectives are regionally defined and need to be researched and resolved regionally, with appropriate input from the best disciplinary scientists from around the world. This conclusion was supported in general by the CGIAR INRM group meeting in Penang in August 2000.

Given the above, we conclude that **a stand-alone global centre for INRM makes little sense**. Such a centre would provide only a very narrow portion of the science needed for application to any production system in any specific ecoregion. With the new ICT revolution, it is possible to gain much of the needed knowledge and useful data sets from ARIs around the world.

Soils

The effective and efficient harnessing of natural resources presents sets of technical problems characteristic of geographical zones. Within those zones, human and social factors and their interaction costs are often the most limiting factors. Soil erosion control and watershed development require both property rights and collective action. **It is far more practical to organize expertise in natural resources for production systems applicable to an ecoregion of reasonable homogeneity and at a scale where stakeholder groups and institutions can interact at reasonable cost.**

In the CGIAR, soil erosion, fertility and other quality concerns should be handled within production systems and within regions. **Soil management is best placed within centres having a regional as well as a crop, tree or livestock mandate.** Some of the basic soil biology and chemistry, and physics research could be centralized. Such research could be done within the System or outsourced and built into centre programmes through virtual connections with the experts from around the globe.

Water

Water management follows several patterns depending on region. In Asia, irrigation management is dominant. In dryland areas, local water harvesting is critical. Water management has global, river basin and/or regional modelling needs, making it amenable to a global science dimension as well as having local and region-specific needs. The global dimension could be serviced from a base located **anywhere**, with outposted staff meeting the needs of region-specific programmes.

Trees

In addition, considering forests, trees, fish, and aquatic resources as natural resources, research on trees and forests requires both a regional presence and input from the best of global science. Tree improvement is decades behind the advanced state of science in the food crops areas. Thus, in the case of trees there are domestication issues, with provenance trials for species and variety selection, which require a strong regional presence.

2.3.4 Socioeconomic and Policy Research

Socioeconomics and policy research includes a large number of activities and types within the System. Thus, as indicated in Chapter 5 of the Vision and Strategy Paper, included are such diverse fields of research as individual, household and community behaviour studies, characterization of agricultural and technological needs, adoption studies, impact assessment, priority setting and so on. Much of this research is undertaken at the centre level, and often in collaboration with (or directed towards) scientists in the other (natural sciences) programmes. IFPRI accounts for about 40 % of the socioeconomic and policy research within the System. Economists, anthropologists and other social scientists at the other CGIAR centres undertake the rest. TAC believes this decentralized model is the correct one, and that over time, **more of the System's policy research should be undertaken at the regional level**, with due allowance made for cross national and cross regional comparisons.

Stronger focus on poverty will also require greater regional expertise in poverty mapping and understanding the causes of poverty and options to escape poverty. The potential of technology and of CGIAR research in general to provide instruments for poverty reduction will need to be assessed at that level both *ex ante* and *ex post*.

2.3.5 Enhancing Institutions

Presently, research policy and institutional strengthening are handled at the System level - by ISNAR primarily, and, at the centre level - as NARS capacity-strengthening activities are on the agendas of almost all CGIAR centres. Consistent with the move towards a stronger regional focus and a regionally driven agenda, TAC believes that most of the individual NARS development and institution strengthening and support issues could be dealt with at the regional level. There is also a need for a special effort by the CGIAR to support the NARS in the 11 countries where 80% of the poor people live. The CGIAR should also play a greater role as a catalyst and integrator of knowledge in support of a global agricultural research system. This implies the need for a global programme on science policy issues and knowledge management across the System.

2.4 Task Forces

The basic organizational unit of the CGIAR System is the autonomous international centre. This model has served the CGIAR System well, and will continue to do so. However, in tackling new and cross cutting problems of poverty and in mobilizing modern science to address the problems of poverty and food security, some institutional innovations would aid greater efficiency and effectiveness. Task Forces could be mobilised to address some cross-cutting issues and/or some high priority problems needing greater focus and additional expertise and resources.

Task Forces would be an additional mechanism to complement the centre and system-wide programmes models and assist the CGIAR in responding more comprehensively to new opportunities. They also provide a mechanism of bringing together diverse expertise within and outside the CGIAR System. Similar approaches are already used successfully by some centres and it is proposed to expand the use of these more flexible implementation mechanisms. Task Forces will not duplicate nor replace present efforts but rather provide an additional flexible mechanism to complement the present CGIAR centre and system wide efforts in specific areas.

The Task Forces will need to be managed, to have a clear purpose, time frame, sunset clause, sustained finance and agreed outputs. There will need to be flexibility in terms of developing the appropriate financing, implementation and accountability arrangements of various Task Forces. Different mechanisms could be used for these purposes and the selected ones will depend on the context, the problem they address and the range of institutions involved. Participation of all actors involved from problem identification to final ownership of knowledge and utilization of results will be key to the success of these approaches. TAC could be responsible for monitoring the scientific quality and relevance of the work of some initial Task Forces in order to monitor the appropriateness of the greater use of this mechanism in the CGIAR.

TAC is exploring some priority themes emerging from the Vision and Strategy where it may be useful to explore the possibility of developing Task Forces. These are illustrative of a range of different areas and other opportunities are likely to emerge from the CGIAR centres and their partners. Possible topics among others may include functional genomics, bioinformatics, knowledge management.

3. CGIAR Governance

3.1 Current Governance

As noted by the 1998 System Review, the CGIAR's governance is based on the principles of donor sovereignty, centre autonomy, independent scientific advice, a non-political nature, consensus decision-making among Members, and an informal organisation of stakeholders. The CGIAR's structure includes the Consultative Group (the Chair, Cosponsors, Members, fixed-term representatives, and the Finance and Oversight Committees), the centres, partners and clients; and central advisory and administrative units, including the Technical Advisory Committee and the CGIAR Secretariat. The Review found that although the principles and structure of CGIAR governance had largely remained unchanged, the System had become increasingly complex in recent years as it attempted to adapt to changes in the external environment in which it operated. The Review Panel, therefore, recommended that the CGIAR System strengthen its governance and finance by improving its capacity for strategic policy-making and oversight while protecting the principles of donor sovereignty and centre autonomy.

TAC observes that the CGIAR may not be responding rapidly enough to change. Competition between centres for scarce donor resources, and disparate efforts between some centres on key cross-cutting research topics often limit the System's efficiency and effectiveness which, potentially, is in a unique position to gain from complementarities and synergies across the centres. As well, the build-up of elaborate structures in many cases has resulted in high overhead costs. The System Review emphasised that as a decentralised global system the CGIAR needed to ensure that its research is well focused, that duplication of effort and unnecessary competition among centres is avoided and that inter-centre collaboration improved. The need for improvement in cross-centre activities has also figured significantly in TAC's recommendations on future programme strategy. TAC's consideration of System governance has dealt more with its operational consequences for CGIAR research and research-related activities than with its structural dimensions. Although the latter may be causally related to the former, the Committee believes that the System's underlying principles

are not at issue. Rather, it is the way these principles are put into practice that requires the Group's attention.

3.2 Functions of Future Governance

The CGIAR's new vision and strategy has implications not only for the structure and conduct of the System's research and related activities, but also for the governance of those activities. **The most salient recommendation to emerge from the Committee's programmatic analysis is the need to enhance impact and accountability at the regional level through the most efficient and effective application of advanced science to the problem of sustainably reducing poverty and food insecurity.** It follows that decision-making with respect to research priority setting and resource allocation will need to be decentralised and participatory to enable the System to be more responsive to national and regional needs. Mechanisms must also be in place to ensure the coherence of the CGIAR's Research Agenda in a global sense, i.e., to guarantee that in serving regional needs the international public goods nature of CGIAR research remains intact. Finding the right balance between central coordination and oversight, on the one hand, and decentralised decision-making and implementation, on the other, is the fundamental challenge of System governance.

This challenge has both a technical dimension (see section 2.3) and a public sector management dimension. New directions in performance-based management of public sector organisations have already begun to be incorporated into the CGIAR, as evidenced by the adoption of the logframe approach to research planning and reporting and the growing importance of impact assessment and evaluation at the centre and System levels. These innovations reflect an underlying demand on the part of the System's stakeholders for greater accountability. These instruments, in turn, derive from a conceptual framework for public sector management comprised of three key and separate functions. These functions are: the setting of measurable objectives derived from a policy framework reflecting a consensus of the relevant stakeholders; the allocation of resources to implementing agencies having the discretion to utilise those resources flexibly to meet agreed objectives; and the rigorous evaluation, assessment and reporting of research providers' performance in terms of impacts achieved on policy goals.

Traditionally, CGIAR Members have taken responsibility for defining the System's policy framework and allocating resources to achieve its overarching goals. In recent years, the consultative nature of the Group's decision-making has been strengthened by expansion of its membership to include a broader range of stakeholders, notably from the South, as well as by formally including representatives of NARS, civil society, and the private sector in its deliberations. TAC believes the CGIAR's new vision and strategy reinforces the need for wide consultation to identify and address System goals and operational objectives.

3.3 Options for Governance

3.3.1 Unified Centre

The EIARD proposal calls for restructuring the CGIAR with respect to four fundamental elements. These are:

1. the existence of strong NARS and, where appropriate, strong regional and sub-regional organizations;

2. four regional CGIAR programmes servicing the needs of South and South-East Asia, West and Central Asia and North Africa, sub-Saharan Africa, and Latin America and the Caribbean;
3. a single, centrally managed CGIAR research facility with two components: one responsible for CGIAR germplasm conservation and maintenance activities, and the second focusing on strategic research of global relevance including germplasm improvement and other research of crops, livestock fish, trees, policy research, etc.
4. use of flexible and time limited Task Forces - drawn from IARCs, ARIs, the private sector, NARS, NGOs, etc. - to address specific research issues

TAC considered this model carefully. Two of the four elements that EIARD proposed (#2 and #4) are highly compatible with the seven strategic planks in the new Vision and Strategy Paper. The first element, strong NARS and regional organisations, is consistent with TAC's view about the need for a stronger regional focus and national objectives.

TAC's main concern is with the third element, which it does not endorse. While the proposed restructuring into a single centrally managed CGIAR research facility has a number of attractive features, for example if donors were to return to core funding the work in its entirety, TAC believes that the disruptive element of merging 16 autonomous centres would be major and thus significantly adversely affect the productivity and impact of the System. Furthermore, legal obstacles to implementing the re-organization proposal are not to be underestimated given the autonomy of the centres and the important role of their host countries.

3.3.2 Federation

The following analysis focuses on the CBC/CDC proposal for a Federation Model and compares/contrasts it with TAC's recommendations on a number of key issues of System governance.

The CBC/CDC model would create a Federation Board to perform certain functions "devolved" to it by the centres with a view to enabling the latter to function fully as a system of inter-related units rather than a loose coalition of independent entities. Specifically, it would be responsible for policy development, strategic planning, programme restructuring, inter-centre activities, resource mobilisation, science quality enhancement, monitoring and evaluation, public awareness, and science advocacy. A Federation Office would also coordinate provision of common services to centres and donors and provide support to the CGIAR Chair. The Board would report annually to a full meeting of the CBC/CDC and to CGIAR plenary meetings. The Office and the services provided by it would be funded by centres and by donors who wished to contribute to it. The CBC/CDC envisage that as the Federation evolves to make the CGIAR more efficient, the System might wish to consider streamlining other organs of governance.

General Comments

TAC sees great merit in the proposals for improved coordination of inter-centre activities, public awareness, science advocacy, and provision of central services. The Committee, however, notes that while the Board would report annually at CBC/CDC and CGIAR meetings, its actual line of *accountability* would be to its financiers - i.e., the centres themselves and those donors who choose to support it. Given the breadth of the Board's

functions, it is not clear what the role of other CGIAR governance mechanisms would be in the federation model. It is also not clear to what extent the "powers" which the centres would vest in the Board now actually belong to the centres. While the latter have legal autonomy, they voluntarily accept as a condition of CGIAR membership, and hence financial support, the governance of the Group for a broad range of System-level functions from priority setting to resource allocation to review and evaluation. Thus, the federal principle would not seem to apply to these key components of System governance, which the Group has either held itself or delegated to other bodies within a system of checks and balances to ensure transparency and accountability.

Inter-centre activities

TAC notes that the programmatic responsibilities of the Board are said to relate "primarily" to inter-centre activities. As TAC has identified this element of the CGIAR's Research Agenda as critical to implementing the System's strategic goals particularly at the regional level using integrated approaches, the proposal to centrally coordinate such activities is to be welcomed. However, TAC envisions that strategic planning for these programmes will still be undertaken at the regional level in partnership with the relevant actors. Moreover, as currently framed, the proposal combines decision-making on priority setting, resource mobilization/allocation, and monitoring and evaluation within a single entity, the Board. To ensure that independent technical advice informs decisions on priority setting and resource allocation, TAC believes it is necessary to structurally separate *recommending* from *decision-making* authority with respect to these functions. Similarly, to ensure accountability it is necessary to have the external monitoring and evaluation function to be structurally separated from the entity that approves and coordinates inter-centre activities.

On the key issue of fostering and exploiting programme synergies, the CBC/CDC proposal envisages a process to identify such opportunities within the framework of the deliberations of the Federation Board. On the closely related issue of coordination of inter-centre activities, the proposal is to lodge this function in the Board itself. TAC proposes additional options to deal with opportunities for programme synergy and inter-centre cooperation: (a) develop incentives for Systemwide or inter-centre activities through competitive financing of prioritised research themes; (b) give impetus to inter-centre collaboration at the regional level; (c) use task forces to address cross-centre issues requiring exceptional levels of cooperation and new scientific and financial resources.

Finally, it should be noted that the linkage between inter-centre and centre-specific elements of the Research Agenda would require careful coordination. The setting of Systemwide goals may well redirect the priorities of individual centres, and, the resources allocated to achieve those goals might also impact the core budgets of the centres unless substantially more core resources are mobilised by the Federation or the Group. To ensure the integrity of the core competencies of the individual centres, independent advice may be needed of the relative balance to be struck between inter-centre and centre-specific activities and the extent to which these elements of the Research Agenda complement one another.

Corporate policymaking

The absence of a mechanism to develop and articulate corporate policy positions on major issues decided at the intergovernmental level affecting CGIAR activities, e.g., the FAO International Undertaking on Genetic Resources, means that the System lacks a voice in

international fora on matters of vital concern to centres and their NARS partners. Both TAC and the CBC/CDC stress the need to remedy this deficiency by strengthening the CGIAR's capacity to provide policy and technical advice to the UNCED-associated conventions, the FAO Commission on Genetic Resources for Food and Agriculture, and national governments. The CBC/CDC also envisage creation of a legal entity, the Federation, which would "be active" in the UNCED-associated conventions and fora.² While TAC advocates improving the CGIAR's representation at meetings of these bodies, it believes that the Federation Board, as proposed, may not necessarily enhance the System's effectiveness. Because the Board is not intended to be a "representative" body, it would lack the political authority to adopt and advocate policies for the broad range of stakeholders currently comprising the CGIAR System. While it might, in a strict sense, have legal authority to do so, considerations of policy ownership and credibility would seem to require endorsement by the Group.

On the specific objective of establishing a common policy amongst the centres on intellectual property (IP), TAC welcomes this initiative as it has been recommended by both the System Review and the external review of the Systemwide Programme on Genetic Resources. However, the Committee believes that establishing a common centre policy in the context of legal incorporation may have implications for the existing legal obligations of the individual centres under the agreement governing the International Network of *Ex Situ* Collections under the Auspices of FAO. As there may well be a legal impediment to centres ceding authority in this area to the Federation Office, TAC concurs with the CBC/CDC's intent to seek legal counsel on this issue.

Funding of Federation

Funding of the Federation's Board and Office, as proposed, would be by subscription of the individual centres and any donors wishing to contribute. The inter-centre activities for which it proposes to assume coordinating responsibility would require additional funding from traditional and/or non-traditional sources, a task which the Federation Board proposes to address through, as yet unspecified, resource mobilisation activities. TAC finds considerable merit in the suggested approach, but wishes to caution that there is an inherent risk of a substitution effect which could potentially impact centres' current unrestricted allocations. This risk reinforces the need for an independent assessment of CGIAR priorities in terms of the balance between Systemwide/regional and centre-specific activities.

3.3.3 Continuing Need for Independent External Advice

TAC believes that the Group should continue to ensure its Members have access to an independent, objective source of technical and scientific expertise upon which to draw for advice in making decisions about, and seeking assurance of the quality and accountability of, the programmes which the CGIAR supports.

The CGIAR's Vision and Strategy has a number of implications for System-level technical and scientific oversight of the research programmes supported by the CGIAR. In this regard, TAC's own role may be envisaged to evolve in the following directions:

² It should be noted that even if the CGIAR were to legally incorporate, as proposed by the CBC/CDC, it would still be unable to formally participate (i.e., negotiate) in the deliberations of the inter-governmental bodies cited.

- Monitoring the global context for priority setting will increasingly take on regional dimensions which the centres are well placed to perform, working closely with their partners and other development agents. At the System level, judgement would be needed of the implications of regional trends for CGIAR priorities in the light of global developments in science and in institutional and regulatory environments affecting CGIAR activities.
- In deciding priorities and resource allocations, the System's global and regional activities would need to be reconciled. Advice will be needed on the relative balance between these activities and the regional distribution of CGIAR efforts. Should a share of CGIAR funds be accessible on a competitive basis, the Group would need to be apprised of which elements of the Research Agenda might be so financed while protecting and strengthening centres' core competencies and programmes. It would also require advice on specific research priorities, which would be subject to competitive bidding, and a mechanism and criteria would need to be developed for peer review of project proposals.
- Given the strategy's heightened emphasis on accountability, monitoring of programme implementation will become increasingly **output-oriented** and directed at assessing whether centre logframes are likely to produce the desired impacts at the System level. Measures of programme synergies (global-regional, inter-regional, cross-sectoral, interdisciplinary, inter-institutional, public-private) will figure increasingly in evaluations of the efficiency and effectiveness of centres' performance.
- The strategy's premise that centres practice "state of the art science" implies a strengthening of the quality assurance function. Verification will be needed, for example, that existing centre/Board mechanisms for assessing the quality and relevance of science are rigorously applied and produce credible evidence of research quality; that peer review is used in key phases of centre research from the design to output stages; that incentives such as competitive financing are used to promote scientific excellence and innovation; that quantitative indicators of scientific efficiency and effectiveness are employed to measure centre performance; and that advanced science is integrated into centre programmes through strengthening centre capacity, collaboration and/or outsourcing tasks. Priority research initiatives that integrate and/or build critical mass in scientific disciplines relevant to CGIAR goals will also need to be identified.
- The strategic planks on poverty, regional accountability, partnerships with other development agents, and task forces will require incentives to remedy the CGIAR's structural dispersion and lack of effective coordination. While primary responsibility for developing cross-centre initiatives will rest with the centres and their partners, criteria and oversight mechanisms will be needed to ensure that these initiatives, at a minimum, address problems of importance in at least one region of priority with potential for inter-regional spillovers, involve collaboration among centres and partners having comparative advantage in different sectors, disciplines, and/or branches of science, and exploit economies of scale offered by new science.³
- The new strategy makes it incumbent upon centres to verify *ex-post* the direct and indirect effects of their research and related activities using indicators to measure improvements in productivity, nutrition, environment (human health, soil quality, biodiversity, climate change, water pollution), research efficiency, institutional capacity (management efficiency, human resource development, social capital) and contribute to poverty reduction. System-level guidance will be needed to ensure that centres' capacity for *ex-*

³ The standard criteria for resource allocation - international public goods, no alternative suppliers, chances of success, and contribution to CGIAR goals - would also need to be applied and monitored.

post impact assessment accords with best practice in terms of the critical mass, disciplinary mix, and methodological rigor needed to undertake credible assessments of the socioeconomic, institutional, and environmental impacts of CGIAR activities. It will also be necessary to ensure that a Systemwide approach is taken to data development for impact analysis permitting the scaling up of centre impacts to the System level.

3.4 Future Financing of the CGIAR Research Agenda

Present situation

The CGIAR Research Agenda is financed through core (unrestricted) and restricted (programme and project) grants. Core grants may be assigned to the System as a whole or to specific centres. The World Bank and a few other donors continue to provide core funding to the CGIAR centres. The share of the CGIAR centres budgets derived from core funds is declining, with about 54% of the total centres' budgets being available as core support, compared to about 70-80% ten years ago. There are also wide fluctuations amongst centres in the level of core support.

Core funding is central to the operation of the IARCs as it enables research institutions to undertake long term strategic research programmes, recruit high quality scientists, and maintain necessary infrastructure and equipment in developing countries.

Present trends

The decline in unrestricted funding to the CGIAR centres has the following consequences:

- Distortion of centre priorities;
- Divergence from agreed system priorities;
- High transaction costs;
- Need to protect heartland agenda;
- Uncertainty amongst scientists and managers due to short term financing of a long term research agenda.

Future financing proposal

TAC believes that there is a need to:

1. **increase** the proportion of funds available for financing the **core** programmes of the centres;
2. establish a **competitive mechanism** based on scientific quality to provide financial incentives for change;
3. finance Systemwide governance mechanisms and activities.

National academic and research institutions that are in the competitive grants market usually have more than two-thirds of their operating expenses covered by fixed sources of revenues. Think tanks like The Brookings Institution and Resources for the Future have endowments that generate a secure stream of income complementary to the resources derived from competitive funds. Only a few international agencies operate long-term research programmes without a substantial proportion of core financing of their research agenda. Others, including

consulting firms, manage short-term research projects funded from a variety of national, bilateral and multilateral sources.

Competitive grants are an increasingly important component of most national research systems in both developing and industrial countries. Many development agencies are allocating some of their research monies on a competitive basis. Most of the World Bank supported agricultural research projects over the past decade include a substantial proportion (10-25%) of the loans as competitive grants. Their purpose is to provide incentives within national systems for increasing the efficiency, responsiveness to stakeholders, broadening the range of suppliers and fostering collaboration with civil society and the private sector in research. It is likely that these trends will extend to the international agricultural research arena.

Also, it is possible that new sources of finance derived from Ministries of Science could also be accessed by the CGIAR if the funds were internally allocated on a competitive basis. At the moment, the CGIAR is not able to receive these funds because it does not have an internal competitive allocation mechanism. If the current situation should prove to be a source of missed opportunities, the CGIAR would need to adjust its financing mechanisms to be in a position to receive and allocate new funds on a competitive basis.

Competitive research funding by the CGIAR

Competitive funding is a feature of science management all over the world. It is used as an instrument for promoting science quality, providing incentives for change, to address new problems, mobilising new sources of expertise, encouraging inter-institutional collaboration and encouraging competition amongst different suppliers. Present competition in the CGIAR System is mainly at the inter-centre level as centres compete for donor funds, and special projects from individual donors.

TAC sees a future role for competitive funding in science in the CGIAR System, as providing:

- New window for resource generation from non-traditional sources;
- Additional mechanism to enhance science quality in addition to current intra centre and external review mechanisms;
- Incentives to mobilise new sources of expertise in modern science and attract leading scientists to the problems of poverty and food insecurity.

Features of a CGIAR Competitive Grants Scheme may include:

- Not more than 25% of the total CGIAR research portfolio with the remainder of the funds being provided as unrestricted core;
- All investors agree to contribute to a common pool to reduce transaction costs, ensure equity, consistency, and transparency;
- Research priorities and areas for calls for proposals be determined by investors with independent scientific advice;
- Actual scientific assessments and resource allocation by scientific peer committees, within overall guidelines;
- Minimum transaction costs;

- Multiyear programme support as well as windows for post-doctoral fellowships and collaborative programmes
- Initial preference may be given to CGIAR scientists and their partners in NARS and ARIs rather than open competition amongst all research suppliers.

To help further define the process, TAC will carry out a review of the procedures followed for the competitive allocation of funds in a sample of research institutes across the world.

4. The Role of the CGIAR in the Global Agricultural Research System

The future needs of developing countries for agricultural research will be met by many institutions, public and private, national and international, and including the CGIAR.

Knowledge management

The CGIAR itself and its programmes and centres constitute about 4% of the total research effort. In addition to its direct research efforts, the CGIAR is an important service provider to NARS. It can also play an increasingly important role as a catalyst and integrator of knowledge, in partnership with other intergovernmental organisations such as FAO, UNESCO, World Bank, UNDP, CABI and other national and international agencies with expertise in information and knowledge management.

Central role of NARS in poverty reduction

CGIAR helps to strengthen NARS directly through training, research and management advice. It also has a role in promoting the sustainability of NARS and encouraging the investment in NARS by national governments, the World Bank and the regional development banks and bilateral agencies. Approximately 80% of poor people live in 11 countries. Ensuring that these countries have strong support for their NARS is critical to the success of the future CGIAR strategy.

5. Conclusions

This paper has provided an overview of the implications of the seven planks of the new strategy for programmes, structure and governance. It reports on work in progress. TAC has formulated tentatively a set of 16 propositions, which have been outlined in a separate paper.