

ORGANISATION OF AFRICAN UNITY ORGANISATION DE L'UNITE AFRICAINE

SCIENTIFIC, TECHNICAL AND RESEARCH COMMISSION COMMISSION SCIENTIFIQUE, TECHNIQUE ET DE LA RECHERCHE



Semi-Arid Food Grain Research And Development Recherche et Développement des Cultures Vivrières dans les Zones Semi-Arides

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ANALYSIS OF THE PERFORMANCE OF RESEARCH

INSTITUTIONS

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INTRODUCTION.

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The Semi-Arid Zones of Africa form major production areas for food and livestock products of the continent. However, the production potentials of this huge area are far from being realized; even worse, the resource base is subject to serious and continuous degradation as a result of recurrent droughts and While the former has directly rapidly growing populations. accelerated the desertification processes in the lowest rainfall zones, the latter leads indirectly to the same process under higher rainfall through overcultivation of a fragile resource While local farming technologies are often extremely sophisticated and contain valuable components for farming under high risk environments, these technologies also require important modifications to cope with the problem of sustained production under an increasingly permanent farming system (as compared to the earlier fallow systems).

For most African countries, these problems are compounded by poor infrastructures and marketing systems as well as weak (in terms of trained manpower, facilities and funding) National Agricultural Research Programmes and Extension Services, which receive relatively little support from national Governments.

The increased international awareness of Africa's food problems has caused a drastic expansion of foreign aid over the last two decades. A multitude of funding and implementing agencies operating at national and/or regional levels, through bilateral and multilateral agreements, have subsequently become active. While these developments certainly have had positive effects, they have also contributed to increased fragmentation of national research efforts and to a large degree of overlap and duplication.

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It was against this complicated background that SAFGRAD was created in 1977 as an OAU/STRC Project mainly with USAID support to reinforce and coordinate agricultural research and development for major staple food crops (maize, sorghum, millet, cowpea and groundnuts) on a regional basis; the ultimate goal was to increase the quantity and quality of these food crops available to the increasing populations of semi-arid sub-saharan Africa.

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SAFGRAD Phase I, targetted on regional research, was designed to develop technology in order to improve the production and productivity of food grains in semi-arid regions of sub-Saharan Africa.

The final evaluation (July 1991) of SAFGRAD Phase II, which has identified a number of positive indicators of project achievements, however, came short of quantifiable data to substantiate that the regional research networks could have comparative advantage, as an effective mechanism for building research capacity tunned to different stages of national research development and for promoting agricultural production and productivity.

Objectives and Purpose of the Study.

Based on the findings of the SAFGRAD II Project final evaluation, the purpose of the study has been to assess the efficiency and performance of the networks in the development and adaptation of agricultural technology through the national agricultural research systems; to quantify the changes of technical research capabilities of NARS as a result of networking activities; and to determine the contribution and impact of agricultural research on improving production, productivity and income resulting from the use of technology developed and adapted by the NARS.

Strategy and Methodology of the Impact Assessment

The study involved the cooperative efforts of national scientists and institutions; the network entities, particularly the Steering Committee of the respective networks and the Oversight Committee; and the International Agricultural Research Centres' particularly IITA (through the Maize and Cowpea Network Coordinators) and ICRISAT (through the Coordinator of Sorghum network in West and Central Africa and Sorghum and Millet Network in Eastern Africa).

First, the format for the collection of technical data levels 1 to 3 was developed in full consultation with more than 40 NARS scientists, and the network coordinators. The initial effort of the SAFGRAD Coordination Office in sensitizing the networks' entities and national institutions has facilitated cooperation in different countries.

With the arrival of the economist (third member of the assessment team) in July, an action plan for the collection and analysis of data was developed. This plan consisted of work programmes elaborating main activities, outputs, responsible entities, and target dates for completing activities of the assessment study.

Initially, the Steering Committee of each network identified four countries for an in-depth study. Realizing the shortage of funds and time available for the study, the Assessment Team used four basic sets of criteria with which it rated and ranked the 16 countries. This exercise led to selection of eight countries for the in-depth study as indicated in Annex

The travel plan and programme of specific activities specifing the countries to be visited and network programmes to follow were also developed. In consultation with network coordinators, the formats for the collection of technical data were dispatched in advance to the eight countries. Economic

tables for formats intended to measure the impact of research results were administered in two ways:

- i) The IARC economists, for example those of ICRISAT Sahelian Centre in Niger and the West African Sorghum Improvement Programme based in Mali, assisted in the gathering the data for Niger and Mali respectively.
- ii) In the countries where IARCs economists were not available national economists were contracted, (for example, Nigeria, Ghana, Kenya and Ethiopia) to assist in gathering the economic data.

Data for the impact assessment was taken, for the period 1982-1992, while focussing on SAFGRAD Phase II 1987-92.

Assessment of Impact was carried out at four levels of research and development activities. The framework for impact analysis briefly discussed below was used in certain NARS (Kenya, Malawi, Cameroon, etc.). It is based on series of relationships between inputs, outputs, and impacts at four levels of institutional development of national agricultural systems. The team has exhaustively dialogued with respective network entities in identifying appropriate indicators particularly between levels I, II and III.

Nature and Working of the Institutional Framework.

The 1987 Conference of National Agricultural Research Directors Conference adopted networking as the primary mechanism for regional cooperation.

This led to the establishment of network entities for research management and directions as described in Table 1.

1.0. Regional Research Coordination and Management.

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i) Policy Guidance.

The Council of National Agricultural Research Directors is the policy making body of SAFGRAD. It established the network operational policy framework and also approved the collaborative mode (networking) as the main strategy for regional research cooperation. It also created the Oversight Committee that meets at least once a year to review and monitor the implementation of policies and to appraise the performance of the networks.

ii) Monitoring the Implementation of Network Programmes.

The Oversight Committee, established in February, 1987, is directly responsible to the National Agricultural Research Directors Council. It monitored the implementation of project activities; appraised network performance, and deliberated on policy and administrative issues related to network development. Some of the management issues addressed by this committee is summarized in Annex 2.

iii) Technical Management and Direction of Networks.

The Steering Committee of the respective networks were elected during the General Workshop Assembly by national scientists. Technical leadership of the networks was provided through the Steering Committees (SCs) each comprising 5 to 8 eminent NARS scientists. The SCO, IARCs, CIRAD, INSAH and other relevant organizations served as observers in Steering Committees of networks. Close to 45 scientists from over 15 countries have served at various times in the four Steering Committee.

The main activities and deliberations of the respective network is summarized 3, 4, 5 and 6.

Table -	COMPONENTS OF SAFGRAD NETWORK MODEL

Netwo	rk Partn	ora		Network Entities	•	Responsibilities
1.	NARS ()	I Complete of Work	13	The Diseases of Assistance	12	an antidan an antida
	17	18 countries in West and Central Africa	i)	The Directors of Agricultural Research of National Programmes		cy guidance, addressing research and development ues.
	īi)	8 countries in Eastern Africa	ii)	The Oversight Committee.		itoring the implementation of SAFGRAD project activities. agement of SCO and appraisal of networks.
n.	IARCS		iii)	Network Steering Committees	- Tec	hnical Management of Networks.
	1)	IITA Technical backstop	i)	Maize Network Coordinator	- Tecl	nnical execution of network programmes.
			ii)	Cowpea Network Coordinator	- Tec	hnical execution of network programmes.
	2)	ICRISAT Technical backstop	i)	Sorghum Network Coordinator in West and Central Africa.		hnical execution of network programmes.
			ii)	Eastern Africa Sorghum and Millet Network Coordinator	Tecl	nnical execution of network programme 8.
	3)	ICRA F	-	Semi-Arid Lowlands Agroforestry network in West Africa.	- Tec	hnical execution of network programmes.
	4)	The West African Farming Systems Research Network	_	Administered by SCO Based at NARS.	— Тес	chnical execution of natwork programmes.
m.	OAU/		h _	The SAFGRAD Coordination Office	i)	Coordinate research activities among NARS and with
		cientific,Technical and Researc rission of OAU-Political and	—	The Opt Otto Continue of the	•	relevant government bodies.
		inistrative support.			ii)	Provides legal and logistic framework for network operation.
					iii)	Serves as secretariat to network entities.
					iv)	Facilitate the review of policy issues through regular channels of OAU.
				'	v)	Promote the adaptation and transfer of Network

technologies to farmers in different national programmes.

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Initial deliberations of SCs included review of constraints to, and research priorities of food grain production in the semiarid tropical Africa.

- 2.0. The Research Process.
 - Identification of Constraints and Research Priorities.

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Review of the network reports showed systematic identification of constraints and research priorities had been undertaken by national researchers themselves during the general technical workshops. Basically, the identifications of research priorities at national levels were based on the qualitative (in many NARS) and quantitative (in few NARS) data collected from on-farm socio-economic surveys, annual research review's etc. Farmers' participation in research and development planning process was apparently minimal. At regional level, the assumption has been that national research priorities (as identified by national researchers) in aggregate cover mutual problems of research and development for respective regions.

ii) Network Strategy for Regional Research Collaborations.

The inventory and assessment of research resources (including research manpower) by each network led to categorisation of national research systems into Lead Centres, Associate Centres and Technology Adapting NARS based on their relative staff strengths, research facilities, and infrastructure as well environmental conditions.

The establishment of research priorities and the inventory of research programmes led to the establishment of network strategy that took into account the specific requirements of both potential technology generating and adapting NARS. This strategy involved the enhancement of scientific leadership among NARS.

Thus, the relatively strong national programmes served as Lead NARS Centres in their specific area of research comparative advantage.

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Essentially, research at Lead Centres focussed on priority constraints in specific ecological zones. The major changes (since 1987) has been that the network scheme enabled partners such as NARS and IARCs to streamline the various (germplasm) nurseries and regional variety trials in such a way as not to overburden NARS, particularly the weak national programmes. On the other hand, the strategy enabled technology adapting countries to concentrate their efforts on adaptive research (such as regional trials, and on-farm verification tests) to quickly appraise the performance of potential technologies.

Collaborative research project activities at Lead Centres opened new challenges and opportunities to enable NARS to generate technologies not only to solve their own agricultural production problems, but also to provide widely shared the know-how to other participating countries. The research output from some of Lead NARS was assessment during the study and would be discussed following this presentation.

An important activity of networks has been the regional trials for direct exchange and evaluation of elite germplasm. This activity has facilitated the release of varieties to farmers by NARS in their respective countries. A presentation offer this one, has quantified the extent of germplasm diffusion in different countries.

3.0. The Network Partners.

i) The NARS are the major focus of network activities. As beneficiaries of the project' they are involved at various levels of network activities.

ii) International Agricultural Centres: These provided technical backstopping for the improvement of maize and cowpea (IITA) and of sorghum and millet improvement (ICRISAT) by conducting fundamental and applied research and by providing training to achieve network objectives.

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- iii) The Networks Secretariat: As an entity of the Organization of African Unity (OAU), the SAFGRAD Coordination Office (SCO) served as a secretariat for the various Steering Committees, the Oversight Committee, and the Council of Agricultural Research Directors. The SCO served as the vehicle for the attainment of network objectives by facilitating mobility of germplasm and related technologies; acting as liaison between steering committees, international and regional organizations and NARS; and soliciting funds to support the strengthening of national agricultural research programmes.
- 4.0. Adequacy and Quality of Human Resources.

Available research manpower data have been very sketchy and, in aggregate, cover several disciplines. During this assessment study attempts were made to collect data on the crop commodity networks covering the period 1982-1992. Thus far, reasonable data have been obtained on sorghum from Mali; and on maize from Burkina Faso and Ghana, while partial research manpower data on cowpea improvement was obtained from Burkina Faso, Mali, Niger, Ghana and Nigeria. It was evident from this survey, that not more than one researcher was available in each discipline (agronomy, breeding, entomology, pathology, etc.) or each crop in each of the countries selected for study.

The available research manpower for the four crop commodity networks as of 1990 is summarized in Fig. 1. Equally important,

the data showed that a considerable number of researchers (such as agronomists, pathologists, entomologist, etc.) share their time between two to three crops.

Through training, workshops, monitoring tours and diffusion of technical information (through regular publication) major changes were effected in the quality of research manpower.

As of 1986, SAFGRAD I provided long-term training to 31 participants from 10 SAFGRAD countries; of which 22 were M.Sc. level and 9 at Ph.D. levels. These scientists are now research leaders in the improvement of sorghum, maize, cowpea and millets in various countries (e.g. Burkina Faso, Cameroon, Guinea Conakry, Mali, Togo, Ghana and Senegal).

In collaboration with IITA and ICRISAT, short-term trainings (lasting from a few weeks to six months) were offered during SAFGRAD I and II to over 450 participants from West Central and Eastern Africa. Although some feedback information indicated that such trainings have made improvements in the conduct and analysis of trials, the impact of training was indirectly assessed from changes in research output. Our evaluation will be presented in a subsequent report at this meeting.

LEVEL I - IMPACT ASSESSMENT SAMPLE - COUNTRY - ETHTOPTA

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AGRICULTURAL RESEARCH IMPACT ASSESSMENT

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Level I. ASSESSMENT OF INSTITUTIONAL BASE

COUNTRY - ETHIOPIA

A.1. NARS Institutional Capacity.

1.1. Research Organization.

The Institute of Agricultural Research (IAR) was established as semi-autonomous public organization in 1967. It operates under the general supervision of a Ministerial Board of Directors that include the Ministers of Agriculture (Chairman). State Farms Development. Coffee and Tea Development; Commissioners for Science and Technology, Higher Education and Relief and Rehabilitation; Head of the Economic Sector in the Office of the National Committee for Central Planning (with the rank of Commissioner); and the General Manager of IAR (Secretary). IAR enjoys reasonable autonomy in its operation. Its organizational structure has been revised on several occassions to reflect the agricultural policy and development needs of the country.

1.2. Linkages

IAR has well established linkages with other research organizations such as of the Universities, the Department of Extension of the Ministry of Agriculture and non-government agencies. Since the 1970s, the IAR/Extension Liaison Unit has been operational. Thus, the Extension Department of the Ministry of Agriculture and IAR jointly conduct on-farm Verification Trials in different ecological zones of Ethiopia. Furthermore, IAR has established reasonably good linkages with international research institutions including ILCA, CIMMYT, CIAT, CIP, IITA, ICARDA, ISNAR etc. Cooperation with these institutions generally involves manpower training, germplasm exchange, consultancy service, collaborative research in selected project areas, etc.

A.2. Policy and Plan Formulation Processes.

2.1. Research Planning Process.

The research planning exercise of IAR starts from commodity teams that review past activities of performances in order to IAR also facilitates formulate future programmes. participation of development organizations such as Extension Department of Ministry of Agriculture, universities, development ministries. Farming Systems Research Unit and the Research Extension Coordination Teams also fully participate in the development of the commodity programmes. Research divisions (i.e. crops, animal' etc.) further screen and consolidate the The programmes of all commodity team research proposals. divisions are scrutinized at joint meeting of the heads of research divisions. Professionals and development experts from other organizations are also invited as external reviewers. Finally, the IAR Board of Directors has the final say on approval of any plans.

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2.2. Adequacy of System for Setting Research Priorities.

In general, the existing process seems to be adequate for setting research priorities and for resource allocation. The existing system can however be improved by making provision for the participation of farmers and private organizations in order to make research demand-driven and to impart impact on production, productivity and income.

2.3. NARS Involvement in Policy Formulations.

There seem to be adequate linkage between the Ministry of Economic Planning and IAR. Researchers and directors of experiment stations of IAR participate at different levels of planning as resource person to elucidate issues of agricultural research and development policy. With regard to facilities for collecting and analysis of data, IAR is just building that capacity. The collection of baseline and time series data on production, changes of crop patterns and inputs use, farm income,

are effectively carried out by other agencies such as the Central Statistics Authority.

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Through the World Bank assistance, IAR is building its capacity for data analysis, reporting, and utilization.

A.3. Financial and Human Resources

3.1. Funding Level

IAR receives most of its funds from the Government. institute's budgets primarily from government sources' has more than doubled during the last decade. IAR budget for 1990/91 has been about 12 million dollars. About 95% of the approved budget is provided, salaries and wages constituting about 30%; budget support from financial support from external sources up to 1990 Research budget as a percentage of AG.GDP has been very low. is 0.21%, while total expenditure per researcher is about IAR has reasonable accounting and financial disbursement system (although centralized). The regional research enters operate within approved budget. IAR, however, needs to develop its financial management capacity to improve its efficiency for backstopping its several research programmes at various zonal and regional centres.

3.2. The NARS has Adequate Control on Donor Fund on Agreed Programme Scheduled of Implementation.

Human Resources

The IAR has about 340 research scientists and 800 technicians; Thus, the scientists: technician ratio is approximately 1:2. It has general support staff of about 2900 persons.

This NARS is not adequately staffed for its size, particularly with regard to number of qualified scientists.

Information of researchers among various commodities, although not yet readily available, indicates that approximately 80% of the research staff are in crop commodities.

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A.4 Monitoring and Evaluation.

4.1. Monitoring and evaluation process is in place through annual research reviews and occasional external reviews. JAR needs to improve its capacity for an effective research monitoring and evaluation.

A.5. External Linkage

As mentioned earlier, IAR has reasonable external linkages particularly with CIMMYT, ILCA, CIP, and SAFGRAD/ICRISAT. It has benefited from training, germplasm exchange, and expert consultation activities of these centres.

B. Programmes

B.1. Appropriateness is ensured through the planning and review processes explained above. The IAR system needs to promote farmers participation. Feedback from on-farm is received through the extension-research on-farm verification project activities as well as from the farmers field-days. Programme adequately articulates activities and resource requirements. Programmes are not adequately funded.

B.2. Linkages.

Programmes are based on commodity. For example, the major crops improvement programmes have multidisciplinary teams (i.e breeders, agronomist, pathologist, entomologists, soil scientists, agricultural economists (occassionaly), etc.) and are coordinated by national team leaders for respective major crop (i.e teff, sorghums, barley, wheat, maize, root and tuber crops etc.).

IAR, has promoted the participation of its scientists in various seminars and workshops on identified themes. For example, National Crop Improvement Meetings are held every other year (since 1967). These for a were used for discussing research results.

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C. Extension Service.

Is under the Ministry of Agriculture and is fairly organized using a data base of several years. The extension service covers the whole country. It enjoys reasonable autonomy in the implementation of its programmes. External funding (mainly from World Bank, IFAD, etc.) for development through the extension department has increased during the last decade. Government allocation of budget not usually adequate (more information is being collected).

The extension service in Ethiopia has reasonable control over donor financed funds on agreed programmes. In general, however, the extension department has acute shortage of qualified staff. It needs to improve, in addition, its capacity to undertake accurate technology adoption data. Extension visits to farmers depends on the type of project support. The World Bank extension approach through training and visit is being tried in some parts of the country.

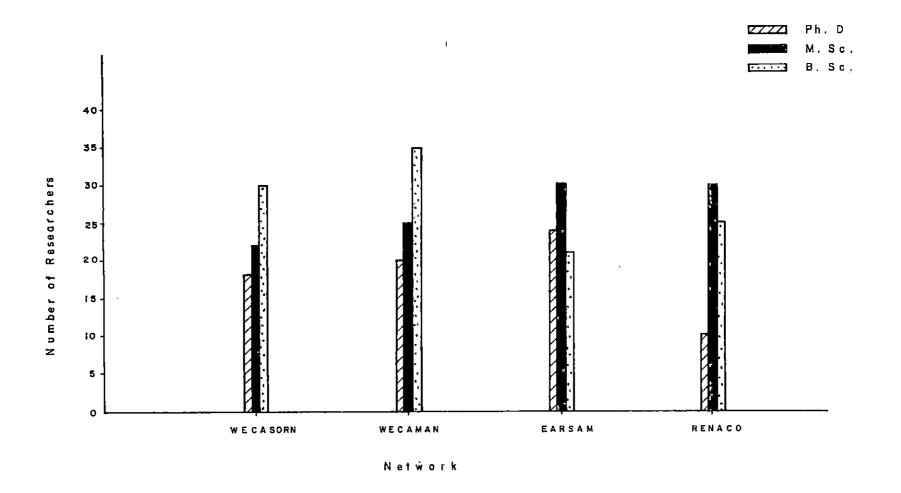


Fig. 1 Current Research Manpower in Food Grain Improvement in West, Central and Eastern Africa

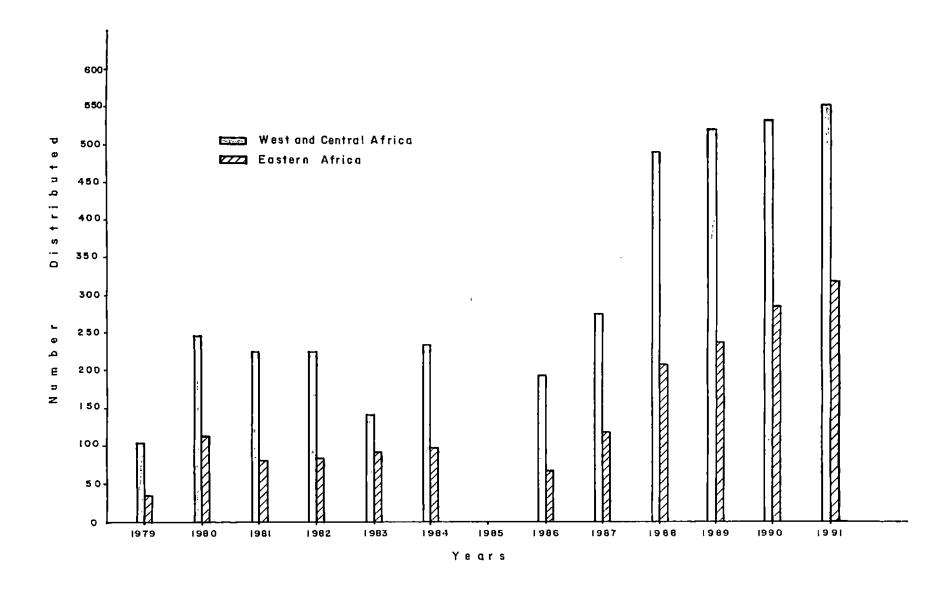


Fig. $\frac{2}{2}$ Diffusion of Technical Information Through SAFGRAD Newsletter

Annex 1.

SUMMARY INDICATORS OF PERFORMANCE AND MANAGEMENT 1987-92

	Alliex I.					T	
	ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
V	1.0 Request for more financial assistance from OAU.	DEC 87	Recommended to OAU to increase its financial contribution to SAFGRAD.	DEC 87	Action taken	88	OAU has in- creased its contribu- tions.
く (,	2.0 Request for financial assis-tance from SAF-GRAD countries	DEC 87	Recommended that SAFGRAD member countries should be requested for financial assis- tance	DEC 87	Action taken indi- rectly through OAU	MARC 92	In-kind con- tribution by NARS
X	3.0 Seeking sup- port from other donors	DEC 87	Recommended that other donors be approached for financial support	DEC 87	Action has been taken	89	ADB support for verifi- cation tri- als in 8 countries
7//	4.0 Streamlining publicity for different crop commodity net-works	DEC 87	Recommended that activities of all crop commodity networks be publicised through SAFGRAD Newsletter	DEC 87	Newsletter carries information on all networks		Efficient dissemina- tion of in- formation

* Oversight Committee.

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	ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
No service of the ser	1.0 Making sorg- hum coordinator more effective	DEC 87	Recommended that ICRISAT should appoint a full time coordinator for the West and Central African Sorghum Network	DEC 87	Full time coordina- tor appointed	1989	Network is much better managed
10 - 10 CA	2.0 Harmoniza- tion of SAFGRAD and CORAF Maize networks	DEC 87	Recommended that OAU should take action on harmo- nization of SAF- GRAD and CORAF maize networks	DEC 87 AUG 88 FEB 91	OAU has written to French government on the issue	1991	Agreement that harmo- nization will take plance in 2 years
	3.0 Self-ap- praisal of net- work activities	DEC 87	Recommended that self appraisal should be conducted by networks during biennial workshops and monitoring tours by Dec 1988	DEC 87 AUG 88	Self appraisal done for maize and cow- pea network. Not so in EARSAM and Western and Central African Sorghum networks	90	Improvement in the func- tioning of maize and cowpea net- works
701	4.0 Publicising SAFGRAD accom- plishments	AUG 88	Recommended that SAFGRAD accom- plishments are publicised in local, regional and internatio- nal media	AUG 88	Newsletter and SAF- GRAD brochure etc published		SAFGRAD ach- ievements well known

Oversight Committee.

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SUMMARY INDICATORS OF PERFORMANCE AND MANAGEMENT 1987-92

ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
1.0 Making SAF- GRAD a permanent body under OAU	DEC 87	Recommended to OAU/STRC to ins- titutionalize SAFGRAD as a permanent orga- nization under OAU	DEC 87 AUG 88 FEB 89 FEB 91	OAU meeting on SAF- GRAD accepted the permanent status of SAFGRAD	SEPT 91	Enhanced confidence of OAU and governments in SAFGRAD
2.0 Ensuring that West and Central African Sorghum Network obeys laid down procedures	DEC 87	Urged Sorghum Steering Committee to comply with laid down procedures by choosing its own chairmen and increasing its membership to six	DEC 87	Sorghum Steering Committee has com- plied with procedu- res.	89	Improved functioning of Steering Committee
3.0 Attraction of donor fun- ding.	DEC 87	Proposed the ocassional use of consultants for the development of projects for donor funding	DEC 87	This has been ac- complished; ADB, ECA projects		Funding se- cured from ADB.
4.0 Improving the management of SAFGRAD	DEC 87	Recommended strengthening of SCO staff.	DEC 87 AUG 88	No action. Lack of funds.		Reduced ef- fectiveness of SCO.

Oversight Committee.

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SUMMARY INDICATORS OF PERFORMANCE AND MANAGEMENT 1987-92

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	ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
₹	1.0 Administra- tion of funds for Networking	AUG 88	Recommended that SCO and OAU/STRC play activie role in adminis- tration of funds for SAFGRAD net- works	AUG 88	No action. Funds released to IARCs strictly controlled and administered by them.		No impact.
	2.0 continuity of support for the post of Di- rector of Re- search	AUG 88	Recommended fun- ding support for post of Research Director to be sought as IFAD- FSR programme was ending.	AUG 88	Director of Re- search post suppor- ted by USAID	APRI 89	Continued services obtained from Direc- tor of Re- search
(3.0 Data retrie- val and expedi- tions accounting for funds	AUG 88	NARDs should ensure speedy retrieval of data and expedi- tions accounting for network fu- nds	AUG 88	Expeditions returns on data and ac- counts	89 90 91	Improved functioning of networks
Q	4.0 Publicising SAFGRAD activi- ties	FEB. 89	Publication of a document on SAF-GRAD experiences in transfer of technology over the past decade in selected countries	FEB 89	Several reports from networks. Quarterly newslet- ter	·	Greatly im- proved in- formation on SAFGRAD.

Oversight Committee.

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ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
1.0 Improving accounting pro- cedures in NARS	FEB 89	Recommended SCO assistance to NARS in accounting for funds from SAFGRAD.	FEB 89	Financial Control- ler visited NARS to streamline their accounting procedu- res	91	Improved accounting for funds from SAF- GRAD.
2.0 Formulating Strategic Plan of SAFGRAD.	FEB 89	Recommended fur- ther work on Strategic Plan of SAFGRAD.	FEB 89	Improvement made to Strategic Plan	FEB 90	Acceptable long-term plan of SAF- GRAD known

^{*} Oversight Committee.

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	ISSUES/ ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
9	1.0 SAFGRAD Strategic Plan	FEB 90	NARDs should be sent executive summaries of SAFGRAD Strate- gic Plan	FEB 90	Summaries of Stra- tegic Plan of SAF- GRAD sent to NARDs	MAY 90	Long-term plans of SAFGRAD cla- rified
Ś	2.0 SAFGRAD Strategic Plan	FEB 90	Full copies will be distributed at NARDs meeting in Feb 1991	FEB 90	NARDs meeting in Feb 1991 could not be held because of financial cons- traints.		Inputs of NARDs to Strategic Plan delayed
	3.0 New Net- works	FEB 90	New Networks to be accepted must have capacity to positively strengthen existing SAFGRAD commodity networks.	FEB 90	SALWA Agroforestry Network accepted and functioning.	FEB 91	Confidence of NARS in SALWA enhan- ced
	4.0 Internal Evaluation of SAFGRAD	FEB 90	Two 4-man teams were constituted for internal evaluation of SAFGRAD networks	FEB 90	Internal evaluation completed. A number of proposals made for improving networks.	SEPT 90	Improvements in future functioning of SAFGRAD known.

^{*} Oversight Committee.

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	ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
	1.0 SPAAR sup- port for Net- works.	FEB 90	IC was to stop over in Washing- ton D.C. to dis- cuss support for SAFGRAD by SPAAR	FEB 90	IC discussed issue with SPAAR offi- cials	90	No positive outcome.
r	2.0 NARS contri- bution to SAF- GRAD .	FEB 90	In-kind contri- bution of NARS should be fully elaborated.	FEB90 FEB91 NOV91	Contribution of NARS now quanti-fied.	92	Donors aware of contribu- tion of NARS.
1/2/	3.0 Change of network manage- ment.	FEB 90	A 2-year transi- tional phase envisaged	FEB90 FEB91	No SAFGRAD III No action.		Management still in IARCs
	4.0 Change of network manage- ment		To effect chan- ges scenario 1; Current African coordinators transferred to SCO		No SAFGRAD III		Management still in IARCs

^{*} Oversight Committee.

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	ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
	1.0 Networks management.	FEB 90	Or 2 NARS scientists selected and posted to a lead centres (not in their own country).	FEB 90	No action. SAFGRAD III not yet designed.		No impact.
	2.0 Internal SAFGRAD organo- gram.	FEB 90	If funds are available 3 se- nior staff posi- tions could be filled. (A plan- ner, communica- tors officer and Liaison offi- cer).	FEB 90	Positions not fil- led because of lack of funds.		Effective- ness of SCO only 80%.
7	3.0 Publication of a scientific journal of agriculture by FSR Network.	FEB 90	Recommended joint publica- tion of journal with other net- works.	FEB 90	Four volumes of Journal of Agric. Systems published solely by RESPAO. Other scientists encouraged to cont- ribute	91 92	Improved dissemnia- tion of sci- entific in- formation
Ž.	4.0 Publicising SAFGRAD achieve- ments	FEB 90	Recommended that funds be made available for publication of SAFGRAD achievements	FEB 90	Brochure on SAFGRAD published.		Enhancement of informa- tion on SAF- GRAD by 60%.

^{*} Oversight Committee.

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	ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS DATE	MAIN IMPACTS
	1.0 Active pre- sence of SCO in Eastern Africa.	FEB 91	Recruitment of Liaison Officer for East Africa should be done as soon as funds are available	FEB 91	Eastern Africa not recruited because of lack of funds	SAFGRAD's image in Eastern Afr- ica not high.
•	2.0 Improvement of interactions with IARCs	FEB 91	SAFGRAD's parti- cipation in IARCs programme review and IARCs participation in SAFGRADs OC mee- tings	FEB 91	pation of policy 91 makers of IITA, ICRISAT and SCO in each others program	Coordination of program- mes and ac- tivities have impro- ved
5	3.0 Strengthe- ning of weak NARS	FEB 91	A fellowship exchange pro- gramme to enable researchers to work in different countries for 3-12 months.	FEB 91	Not yet initiated	No impact.
7 ½ ×	4.0 Impact as- sessment of net- works	FEB 91	The proposed impact assess-ment should as far as possible be based on outputs stipulated in the project document.	FEB 91 NOV 91	1 1110000 00000111111	Other acti- vities at a low level.

^{*} Oversight Committee.

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ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
1.0 ADB support for verification trials.	FEB 91	Network Coordi- nators to ensure harmonious inte- raction with on- farm activities of scientists.	FEB 91	On-farm trials pro- ceeding	91 92	Harmony of commodity work with on-farm verifications.
2.0 Delay in external evalua- tion	FEB 91	USAID to expe- dite evaluation in order not to jeopardise pro- ject continuity	FEB 91	Evaluation comple- ted but very much delayed	NOV 91	Low level of funding and operations of SAFGRAD
3.0 Renewal of membership in Steering Commit- tee	FEB 91	Stipulated pro- cedures be fol- lowed in mem- bership renewal multidisciplina- rity should be ensured	FEB 91	Members of steering committee of WECA-SORN on elected on merit and or multidicisplinarity lines	91	Improved functioning of Steering Committee

^{*} Oversight Committee.

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	ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
	1.0 SAFGRAD Do- nors Meeting	FEB 91	Requested SCO to coordinate the meeting expected to finally come on during 1991	FE8 91	Donors meeting not held because of scheduling diffi- culties		Low level of funding for SAFGRAD.
	2.0 Improving relations with ICRISAT	NOV 91	New Director General of ICRI- SAT to be writ- ten to regarding SAFGRAD's expec- tation of ICRI- SAT	NOV 91	Letter written Di- rector-General of ICRISAT visited SAFGRAD headquar- ters	92	Improved relations with ICRISAT
AM	3.0 SPAAR Assis- tance for Net- works	NOV 91	OC members at- tending SPAAR December meeting to request as- sistance from SPAAR for regio- nal networks	NOV 91	Discussion on sub- ject did not take place		No impact
7	4.0 Millet Net- work and SAF- GRAD.	NOV 91	Council of NARDs be asked to de- liberate on in- tegration of millet network into SAFGRAD	NOV 91	NARDs have not met owing to inadequate funding.		Millet net- work not enjoying full SAFGRAD support.

^{*} Oversight Committee.

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	ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
	1.0 Socio-econo- mic studies in network activi- ties	NOV 91	Socio-economic considerations should be incor- porated in de- sign of SAFGRAD III.	NOV 91	SAFGRAD III not yet designed Impact Study results awai- ted		No impact.
X	2.0 Inter-net- work activities	NOV 91	Inter-network subject matter task forces to be created for problems of mul- ti-network di- mensions	NOV 91	Inter-network task forces not created yet.		No impact.
	3.0 Project for- mulation for donor funding.	NOV 91	Projects to be developed with the participa—tion of coordinators, steering committees and other resource persons.	NOV 91	Not yet undertaken.		No impact.
	4.0 OAU meeting on Transforming SAFGRAD into a permanent insti- tution	NOV 91	Further discus- sion deferred until there was certainty about funding from OAU and donors.	NOV 91	No action		No impact.

^{*} Steering Committee or Oversight Committee.

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ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
1.0 Training in Scientific Wri- ting.	NOV 91	Course similar to one held in West Africa be planned for Eas- tern and Sou- thern Africa.	NOV 91	Donor assistance still being sought.		Improved writing skills of course par- ticipants
2.0 Revival of Sponsoring Group	NOV 91	Terms of reference and membership of Sponsoring Group accepted.	NOV 91	Terms of reference and membership av-ailable.	NOV 91	No impact yet.
3.0 SAFGRAD An- nual Report	NOV 91	Recommended that SAFGRAD produce annual reports beginning with 1991.	NOV 91	1991 Annual Report published	92	SAFGRAD ac- tivities better known.

^{*} Oversight Committee.

ENTITY* MAIZE NETWORK STEERING COMMITTEE

Annex 2. - SUMMARY INDICATORS OF PERFORMANCE AND MANAGEMENT 1987-92

ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
1.0. NETWORK ESTABLISHMENT	1987	1. Identification of constraints	1987	1. A catalogue of maize production constraints prepared 2. Constraints prioritized 3. Human resources and infrastructure inventorized 4. Training needs identified	1987 1987, 1990 1987	1. Identification of 5 lead centers and 11 technology adapting NARS 2. Focus on research areas of importance 3. Training programs planted.
-		2. Formation of a Steering Committee	1987	 6 Active NARS scientist to steer the Network 2. A chairman and 2 Secretaries elected. 3. Network Coordinator appointed. 	1987 1989 1991 1987 1988 1992	 Network activities planned and monitoring by Steering Committee Visits of Steering Committee members and coordinator to National programs.
		3. Development of Research Strategy	1987	 Establishment of collaborative research Allocation of research responsibilities 	1987 1987 1988 1991	1. 6 region-wide research problems (maturity, streak Striga, borer, tolerance, on-farm testing, agronomic problems) addressed 2. Increased collaboration and sharing of research tasks between Lead Centers and IARCs.

^{*}Steering Committee or Oversight Committee.

ACTIVITY	DATE	AM.	IN DECISIONS	DATE	_	MAIN ACTION/OUTPUTS	DATE	; 	MAIN IMPACTS
2.0 TRAINING		1.	Technical Training at Kamboinse	1988 1989 1989	1.	15 technicians offered 5-month practical training in field plot techniques, trial management, variety maintenance, seed multiplication, statistical analysis, data interpretation and analysis.		2. 3. 4.	Capability of technicians to manage trials improved. Increase in recovery of capable data Improvement in seed multiplication Increase in efficiency of making crosses.
		2.	Computer course in the use of MSTAT for data analysis	1991	1.	6 scientists trained in the use of MSTAT for data analysis		2.	Capability of some NARS scientists to analyse field data improved. Data analysed more easily and faster. Improved capability in generating field. books, randomization of entries of trials.
		3.	4 slots requested in IITA Technical Training.	1990	1.	None			None
		4.	Visiting scientist position for NARS in IITA.	1987	1.	4 NARS scientists offered visiting scientists position in IITA.	1988 1989 1991	2.	Improved research capability of scientists. Improved familiarity with IITA germplasm and breeding methodo-logy. Increased collaboration between NARS and IITA scientists.
		5.	Proposal for higher degree training prepare	1987 1991 d.		None			None

ACTIVITY	DATE	MAIN DECISIONS	DATE		MAIN ACTION/OUTPUTS	DATE		MAIN IMPACTS
3.0. TECHNICAL SUPPORT		1. Visits by Coordinator and other members of the Steering Committee.	1987-	 3. 4. 6. 	Identification of needs of some weak national programs. Provision of assistance in the form of research materials (eg. Mali, Guinea, Central Africa Republic, Burkina Faso). Problems in the above national programs identified. Plans made to train one two scientists/ technicians at CIMMYT IITA and SAFGRAD. Restructuring of national programs (eg. Benin). Practical guidance given on trial management, data collection etc. Increased avenues for scientist-scienti contact.	1988	3.4.5.6.	Improved implement- ation and efficacy or research trials. Institutionalization of National variety trials, prudcent varietal and germplasm maintenance seed production in several countries. Increased and diversified research activities. Improved capacity and effectiveness of some NARS to conduct research (eg. Benin, Mali). Increased effectiveness of some NARS to participate in Network. Exchange of technological information among NARS facilitated through visits. Spill-over of research technologies to other countries eff CMS 8602, released in Chad was due to scientists to scientist contact.

4.4

ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
		2. Visits by IITA scientists .		 Striga sick plots established in Ghana, Cameroon, Togo and Benin. Streak screening facilities established in Cameroon, Togo and Ghana. Identification of larger grain borer in Burkina Faso. Improved collaboration of NARS scientists with IITA Maize Program in hybrid development. 	1991 1988 1990 1991	 Increase in Striga research activities by Lead Centers. Increased in number of of streak resistant varieties tested and releaged by NARS. Improved capacity and effectiveness of NARS to conduct research. Increase in number of inbred lines and hybrids developed by some NARS. Increased exchange of germplasm between NARS and IARC's eg. inbred lines of Cameroon and Ghana are now being used by IITA and vice versa.
4.0 FINANCIAL SUPPORT	1987- 1992	1. Provision of funds and small research equipment to NARS (\$108,277 utilized).	1987- 1992	 Availability of funds for seed multiplication and varietal maintenance by Technology adapting NARS. National budget of Lead Centers supplemented by Network. Upgrading of research facilities. 	1987 n 1992	- 1. Increase in research facilities. 2. Improvement in precision of data collected. 3. Increase in research capability of weaker NARS. 4. Improved capacity of Lead NARS to generate technologies. 5. Increase availability of seed of improved varieties. 6. Increase in the number of countries participating in the Regional Trials.

ACTIVITY	DATE	MAIN DECISIONS	DATE	М	AIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
							 Increase in the number of sets of Regional Trial requested by NARS.
5.0 EXCHANGE O INFORMATIO		1. Organization of workshop	1987 1989 1991		80 NARS scientists from 15-17 countries attended workshop. 40 scientific papers presented by NARS at workshop.	1987 1989 1991 1987 1989 1991 1988 1990	 Enhanced research capability and capacity of national programs. Increased scientific leadership of NARS to direct Network. Increased avenues for scientist to scientist contact. Increased avenues for germplasm exchange.
		2. Organization of Monitoring Tours	1988 . 1990	2.1.	Monitoring Tour organized for 8 scientists of the Network to Burkina Faso and Ghana in 1988 and 11 scientists to Cameroon and Nigeri in 1990.		
		3. Visits of Coordinators and other members of Steering Committ to National Prog		3.1.	From 1987 to 1991 all the Network countries were visited by the coordinator and/or by members of Steering Committee.	1987- 1991	
		4. Organization, Editing and publication of workshop, seminar and meeting proceedings.	1987- 1992	4.1	Agronomist seminar organized for 20 National research agronomist from 12 countries and 13 resource person from IITA, ICRISAT and some national research institution.	1991	

ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
		5. Publish country reports, proceedings of workshops, seminars, report on Steering Committee meetin regional trials results and technician train reports.	.s	5.1. Eleven reports on Steering Committee meeting published. 5.2. Compilation of Regional Trials results from 1989-1992. 5.3. Six special publications on workshops proceeding maize varieties in SAFGRAD Regional Trials, maize production in West and Central Africa 5.4. Publication of maize technician trainee's reports of 1988, 1989 and		1. Research capabilities of NARS scientists strengthened. 2. Exchange of information facilitated. 3. Linguistic barriers between Francophone and Anglophone scientists broken as result of closer interaction.
6.0 COLLABORATIVE 1987 RESEARCH	/E 1987	 Resident researce by coordinator. 	ch 1987	1.]. 10 early drought tolerant varieties and 15 extra-early maize varieties developed as well 4 improved agronom practices (tied riseed treatment, fertilizer recomme	as ic dging ndation)	- 1.1.1 Increase of maize production in Network member countries. 1.1.2 Movement of maize into new frontiers. 1.1.3 Increase in maize productivity of some Network member countries.
				1.2. Through the networ 33 late and intermediate varieties, 24 early maturing varieties and 16 extra-early variet has been made avaito NARS.	1992 ies	- 1.2.1 Increase in germplasm availability.

ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACT
		2. Research responsibilities assigned to 6 lead NAR	1987 1988 S. 1991	2.1. 26 varieties origi- nating from NARS have been made available to Network member- countries by some NARS.	1987- 1991	2.1.1 Same as 1.1 to 1.21. 2.1. Research prob
				2.2. Improved agronomical package developed by Lead Centers.		once reserved IARC's now gradually bei addressed by Centers.
						2.2. Seed treatment Marshall 25st established to improved seed vigor, and 1 more grain to
						than untreat 2.3. 33:1 benefit ratio demons in favor of of Marshall control: Th
						2.4. In Soudan set the contribution of improved technological component to maize yield

ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
						2.5. Management practises for early and extra-early maize established as well as optimum plant density.
		Review of collaborative research.	1991	3.1. Lead Centers assigned addi- tional responsi- bilities.		-
		4. Establishment of 3 working groups (Breeding Agronomy & Plant Protection)	1991	 4.1. 6 research priority identify by breeding working 4.2. Standardization of scoring system for disease and Striga rating. 4.3. Standardization of tolerance, resistance terminology. 	1991 199	4.11 Rating scale of 1-9 1-9 adopted for disease and Striga ratings. 31 4.41 Stability of production achieved throught the use of of streak resistant varieties ailable.
				 4.4. Request for research intensification of maize utilization and storage. 4.5. Request for only streak resistant varieties to be tested in regional trials. 	1991 199:	4.51 Heterotic pool being developed by IITA, Ghana and Cameroon.

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ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
				4.6. Request for emphasis on the development of base populations (taking into account heterotic groups) by IITA instead of finished varieties, hybrids and inbred lines. 4.7. Request for Regional Agronomic Trial.	, 1991	
		5. Reports on Collaborative Research to be presented.	1987	 1.1. Lead NARS presented progress reports on assigned responsibilities. 1.2. Following the presentations, recommendations were made by the Steering Committee. 	1987- 1992 1987- 1992	
7.0. REGIONAL TRIALS	1987	1. Variety Trials to be conducted	1987	1.1. 3 types of Regional Uniform Variety Trials developed and distributed to NARS 135 RUVT-extra-early 192 RUVT-Early drought tolerant and 63 RUVT late trials conducted by NARS. 1.2. Through population improvement new version of varieties were developed and evaluated in the Regional Trials.	87-92 87-92 87-89	1.1. 21 varieties from RUVT series released in Network countries. 1.2. Extension of maize hectarage in all the 17 Network-member countries. 1.3. Movement of maize into new frontiers as the result of the availability of extra-early varieties from the network.

ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
						1.4. Early and Extra- early varieties fill hunger gap in some SAFGRAD member countries.
		2. Agronomy trials to be conducted	1988	2.1. Availability and adoption of improved agronomic practices such as fertilizer rates, planting densities, seed treatment with Marshall 25 ST tied ridging, timing of fertilizer application for extra-early varieties, etc.	1990 1991	2.1. Increase in production and productivity in all Network member countries.
		 On-farm trials initiated in most NARS. 	1990	3.1. Funds made available to conduct on-farm research in selected NARS.	1990 3	1.1. Increase in adoption rate by Farmers of participating Network countries.
		4. Seed multiplication	1990 [.]	 Seed made available by Network to NARS. 	1991	4.1. Same as 3.1.
		encouraged.		4.2. Training of techni- cians in seed production.		

ACT	IVITY I	ATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
8.0	HARMONIZATION OF THE SAFGRA AND CORAF NETWORKS NETWORK		1. Meeting of SAFG and CORAF Networks to harmonize activities. 2. Harmonization Committee set up 3. Harmonization committee recommended that the executive bodie of the two netw	1990 1 es	 SAFGRAD Network assigned responsibility for semi-arid zone. CORAF Network assigned responsibility for for humid zones and irrigated maize in semi-arid zone. Common production constraints in the mandate areas were identified, prioritized and responsibilities assigned to the two 	1990 1990 1990	1. Duplication of activities of SAFGRAD and CORAF Networks avoided. 2. Meetings of both Networks planted so that there are no conflicts of interests on. 3. Anglophone maize scientists made members of CORAF Network.
		should explore of marging the networks within two years from date of the meeting	ways two	Networks. 4. A calendar of activities of each Network was prepared. 5. Meetings of each Network to be attended by coordinators of both Networks. 6. Training needs of the two networks identified 7. Request for Anglophone maize scientists to be members of the CORAF Network.	1990 1990 1990 1990		

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ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
9.0 SAFGRAD IMPACT ASSESSMENT STUDY	1991	1. Cameroon, Ghana, Nigeria, Togo, Benin, Mali and Burkina Faso should be visited for the impact assessment study.	1992	1. Ghana, Cameroon, Burkina Faso, Niger, Mali, and Nigeria visited.	1992	Not yet.
		2. Parameters such as diseases and pest, yield stability should be taken into consideration in the impact assessment besid yield.	n			
		3. Flow of germplas through trial stages should include populatidevelopment and progeny testing	ion	Decisions were taken into consideration in the preparation of the technical data collection forms.		Not yet.
		4. Emphasis should placed not only the transfer of germplasm from to NARS but also between NARS.	on IARC's			

ACTIVITY	DATE	MAIN DECISIONS	DATE	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
Discussion on ways to improve Network performance	1991	1. IPTT to be conducted in specific research areas such as Striga resistance/tolerance	1992 [.]	Yet to be taken.		None
		selection. 2. Improvement in data collection by NARS	1992	ur II		None
		suggested. 3. Format for reports on collaborative research	1992	11 17		None
		standardized. 4. Redifinition of Lead Centers, associate centers and weak centers.	1992	п н		None

ACTIVITY	!DATE!	MAIN DECISIONS	! DATE!	MAIN ACTION/OUTPUTS	!DATE!	MAIN IMPACTS
- Idenfitication of net- work research priorities for sorghum & millets	!1986!	Lead NARS research approach was recom- mended	! 1986! ! !	! - Sudan & Ethiopia for ' ! Striga ! - Sudan & Kenya for ! drought ! - Uganda & Somalia for ! Stalk borer	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	- More efficient way of utilising NARS institutions - Ready access of materials and services leads to enhanced NARS capabilities
- Characterization of different sorghum growing environments	!!!	Each country send agro-climatic data to R.C.	!	! — Data collected and ! sent to ICRISA! ! — Environments were !identified and classified		! - The process of identifying ! suitable varieties was ! hastened !
- Documentation of existing acreage under sorghum in each NARS	!!!!	Each country - estimate area under sorghum - estimate area potential for sorghum	! 1986 ! !	! — Crop zonation in effected ! !	! ! !	! - Proportion of research ! effort for each zone is defined ! !
- Strenghening the nationa capacity For research thru degree and in-service training	1!1986 ! !	! ! !	! ! !	! ! !	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	! ! !
- Collaborative research Project approach	!	! Resistant lines to* ! be contributed by ! Scientists from NARS	! 1987 ! !	! ! !	! ! !	! !

^{*} Steering Committee

^{*} different stress factors

ACTIVITY	!DATE!	. MAIN DECISIONS	! DATE	MAIN ACTION/OUTPUTS	! DATE	! MAIN IMPACTS
- Review of 5 th EARSAM regional W/shop resolutions in Bujumbura	į į	Organize a short course in 1989 on Crop protection and Seed production	! 1987! ! 1987!		·! ! ! !	!
- Discussed the orgazation of the 6th Workshop and monitoring tour	! ! ! !	- W/shop to be in Somalia - Tour also to be held during the workshop		- 6th Workshop held - 59 people atteded - 40 papers presented - Monitoring tour was conducted	! ! !	!
- High degree training and ! short course on seed produc! ! !		·		- No funds currently for B.Cs, M.Sc or Ph.D training - Short course was held and 50 people atteded	! 1987 . ! !	! Increased awareness of good ! seed was felt. !
- Germplasm movement and ! evaluation !	19884	Formulation of regio- nal test nurseries and trials	! ! ! ! ! ! ! !	One prelim trial with more then 100 entries and three advanced trials — sorghum 41 entries — p.millet 16 entries and — f.millet 16 entries were planted	!!!	Vast numbers of introductions made available to network scientists
- Training course on crop ! protection !	į	- Course to be in Kenya (entomology) & India (Pathology)	!1989! !!!		! ! ! !	

^{*} Steering Committee

SUMMARY INDICATORS OF PERFORMANCE AND MANAGEMENT 1987 -92

ACTIVITY	!DATE! MAIN DECISION	ONS !DATE! MAIN ACTION/OUTPUT	rs !DATE!	MAIN IMPACTS
The regional workshop	!1988! - To be held in ! !! in 1990 !!	Kenya !1988! - Workshop held in Ken !!- 79 people atteded !!- 42 papers presented	nya !1990! ! !	
Collaborative projects	!1988! - Solicit assista ! ! from ICIPE and SA ! ! ICRISAT for stalk ! ! borer work ! ! - Eight new proje ! ! be designated to ! ! national programs ! !	ADCC/!! to other NARS !! as observation nurseri !! — No collaborative ects !1988! projects on : !! finger millet blast	!!!	
- Monitoring tour	!1988! - To be held in S ! ! during ARC Sudan, ! ! INTSORMIL Sorghum ! ! workshop in 1989 !1988! - R.C. to develop ! ! format	' !!	! ! ! ! ! ! ! ! ! !	

* Steering Committee

ACTIVITY	!DATE!	MAIN DECISIONS	!DATE	MAIN ACTION/OUTPUTS	!DATE!	MAIN IMPACTS
Manpower development in the region	1989! ! ! ! ! ! ! ! ! ! !	- Train more people to sustain agric. research - Training of techni- cians to B Sc level - each country's res- ponsibility	! 1989! ! ! ! ! ! ! ! !	- Currect and required manpower quantified for 1991-95 Curent: 14 Ph.D 26 M.Sc 34 B.Sc Required: 24 Ph.D 29 B.Sc	!! ! 1989! ! ! ! ! ! !	Linkages between national programs in the network
Prioritizing short course topics		- Following were suggested . Utilization . Post harvest tech Breeding techniques . Data collection & analysis R.C. to investigate with KIRDI & food research centre in Sudan on dates to conduct food tech. course	!1989! ! ! ! ! ! ! ! ! ! ! ! !			- Clear focus on network research priorities - Complete package for techno logy transfer

^{*} Steering Committee

ACTIVITY	!DATE!	MAIN DECISIONS	!DATE!	MAIN ACTION/OUTPUTS	!DATE!	MAIN IMPACTS
Gerplasm generation and technology transfer		Suggested to include diverse sorghums & millets with specific adaptation	! 1989! ! 1989! ! !	- Germplasm flow chart was develped amd adopted	! !	NARS Scientists followed same pattern for germplasm transfer.
	! ! ! ! ! !			 A list of sorghum and millet varieties released and pre-released was up-dated 	! !	Assistance in the release or proposal for reslease of varieties.
Collaborative research projects		Recommended that research proposals be submitted to S.C. for approval	!!!	S.C. developed formats for collaborative research projects and subsequent progress reports.	1 1	Effective monitoring system of collaborative research projects
	; ;] ! ! ! ! !	Review, evaluate and up-date current C.R.P.		 Criteria for selecting lead research centres for specific common problems developed. 		Concept of a working together relationship

^{*} Steering Committee

SUMMARY INDICATORS OF PERFORMANCE AND MANAGEMENT 1987 -92

ACTIVITY	!DATE!	MAIN DECISIONS	!DATE!	MAIN ACTION/OUTPUTS	!DATE!	MAIN IMPACTS
	- ! !		- : : ! ! ! !	- Concept of TPN and TAN arrived at.	!1989! ! !	
National research support	! ! of ! ! fu ! ! TA	suggested that 20 % f the NARS support unds be allocated to AN for running egional trials.		- Procedure developed for NARS willing to receive funds for regional trials.	! ! ! ! ! ! ! !	- Logistical support improved expt plot management
	! ! 80 ! ! fu ! ! to	Recommended that 0% of network support unds be allocated to NARS with on-going .R. Projects	!!!	- A national approach for resource allocation between programs arrived at	! 1989! ! ! ! ! ! ! ! !	
Collaborative research projects	! ! co ! ! S. ! ! 1e ! ! pr	Recommended that ountry reps in the .C. should ensure that ead scientists sign roposal forms and preare progress reports f C.R. Projects.				

* Steering Committee

TPN: Technology Production NARS TAN: Technology Adopting NARS

ACTIVITY	!DATE!	MAIN DECISIONS	!DATE!	MAIN ACTION/OUTPUTS	!DATE!	MAIN IMPACTS
National research support	-!! !1990! ! ! ! ! ! ! ! !		! ! ! ! ! ! ! !! ! !!	allocation of USD 3,000 per year for a NARS with on-going C.R.P.	! 1990 ! ! ! ! ! ! ! ! ! ! 1990 ! ! !	
! ! Monitoring tour ! ! !	!!!	Recommended to take place in Ethiopia in 1990	i !	- The tour was conducted - Sorghum selections were made from the Ethiopian program	! 1990! ! ! ! !	
! ! Short course ! !	! ! ! !	Suggested that a short course on breeding technique be held in Kenya in 1991 for 2 weeks	1 !	- Course was held but scientists from Ethiopia and Somalia could not attend	! ! ! ! ! !	Enhanced data recording and analysis leading to good and reliable results and interpretation - Improved data recovery from NARS of about 70 %

^{*} Steering Committee

SAFGRAD IMPACT ASSESSMENT

ENTITY: RENACO Steering Committee

ACTIVITY	DATE		MAIN DECISIONS	DA'	re	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
Workshop	23-27 March 1987		. To create the Cowpea Research Network for West and Central Africa.	23-27 March 1987	i.	The Network became operational	23-27 March 1987	National scientists in West & Central Africa are actively involved in Techno-
		ii	. Establish cowpea Steering Committee.	23-27 March 1987		Steering Committee was established.		logy development research to date.
First Steering Committee Meeting.	23-27 March /987		Review major cowpea pro- duction constraints in the sub-region.	23-27 March 1987	i	. Common production constraints were identified	23-27 March 1987	i. Proposition of new varieties for regional trials in 1989 by Burkina Faso and Nigeria.
		ii.	Inventorize strengths of each national program.		ii	. Four national pro- grams were given res- ponsibilities for		Feedback on regional trials received for 56 out of 92 sets sent.
		iii.	Allocate technology develop- ment research to national pro- grams.			technology develop- ment research (Burkina Faso, Cameroon, Niger, Nigeria, and Senegal). There was reservation for Niger.	,	
		iv.	Review technology available within the sub-region and identify those suitable for regional trials.					

v. Recommended need for training and exchange of scientific information.

Nigeria including IITA.

- vi. Network Coordinator was requested to provide evidence that Niger could serve as Lead Center. .
- iii. Seven regional trials in 92 sets were sent to national programs upon request
- iv. Training needs were identified in March 1988 and a monitoring tour was organized in September, 1988. Decision was taken in March 1988.
- iii. Increased on-station experiments in member countries in 1989
- IV Technolog- development
 rescondo adinties with
 spellown to all menter wounting
 fore being conducted by
 VENACO Lead Centers

Seminar for scien- tists	9-12 Nov., 1987	Scientiststs from Nigeria (3), Niger (1), Senegal (2), Burkina Faso (1), Cameroon (2), to be invited for Seminar.	9-12 Nov., 1987	A Seminar for scientists from Nigeria (4), Niger (2), Senegal (2) Burkina (2), Cameroon (1) and Ghana (1) was organized at IITA in November, 1988.	14-25 Nov., 1988	New varieties were nominated by Burkina Faso, Niger, Senegal, Nigeria and Ghana for regional testing in 1991.
Cowpea Monitoring tour	9-12 Nov., 1987	Decision was taken to organize a cowpea monitoring tour with participants from Mauritania, Cape Verde, Guinea-Bissau, Guinea Conakry, Chad, Côte d' Ivoire, The Gambia, Senegal and Mali. Countries to be toured were Burkina Faso, Niger and	9-12 Nov., 1987	Scientists from six countries (Burkina, Cape Verde, Guinea-Bissau, Guinea Conakry, Senegal and Niger) participated in a monitoring tour in September, 1988.	Sept. 1988	Increased adaptive research in participating countries and identification of new varieties, adapted to the respective countries.

Workshop	9-12 Nov., 1987	A decision was taken to hold a 5-day workshop in the last wee of March either in Togo or Cameroon.		A workshop was held in Lome, Togo from 20-24 March, 1989.	20-24 March 1989	Forty-three scientists from 15 countries attended. Fifteen scientific papers were presented and discussed all member countries presented country reports. The Steering Committee was reviewed and regional trials were formulated and requested for.
Long- term training & supple- mentary funds	9-12 Nov., 1987	A decision was taken that the Network Coordinator should ask member countries to submit supplementary budget that will include long-term training as well as relevant cowpea research activities.	9-12 Nov., 1987	A supplementary budget proposal totalling US \$2,682,500.00 was drafted in March,1988 and submitted to the Special Programme for African Agricultural Research (SPAAR) of the World Bank through IITA Headquarters in Ibadan.	March 1988	To date, no support was given by SPAAR.
Allocation of Funds to National Programs.	9-12 Nov., 1987	A decision was taken to allo- cate funds to Lead Centers and Technology Adopting Centers.	9-12 Nov., 1987;	Funds were allocated for 1988 season as follows: Cameroon: \$2,000.00 Niger \$2,000.00 Nigeria: \$4,000.00 Senegal: \$3,000.00 All remaining countries in the network received \$580.00 each. Funds were sent on request.	May- Nov., 1988	Lead Centers and Technology Adopting Centers were able to carry out smoothly their assigned research activities in 1988.
Regional trials	,	The following decisions were made with regards to regional trials: Scietists wishing to nominate new technology for regional trial should present relevant data in support or the technology during the biennial workshop.	9-12 Nov., 1987	Since 1988 the network has been putting together regional trials enother on the basis of data presented during the biennial workshop. Such trials were dispatched in 1989 1991.	1988 to date	The work load in terms of amount of technology to be tested by member countries was reduced in favour of technology with high probability of adoption by national programs.

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- ii. National programs wishing to test such technologies were advised to do so during the following two years for appraisal of the new technology.
- iii. Breeders wishing to nominate early genration material for evaluation by Lead Centers were requested to send them to the network Coordinatator who } will put up observation nurseries on yearly basis and dispatch them to member countries upon request.

training Nov	.2 A decision was taken to organize ., in-service trining for field .7 technicians from technology adopting Centers.
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28-31

March

1987

Collabo-

research

activities

rative

Lead Centers and technology adopting centers are to be assessed continuously on their capacity to develop new technologies.

Ten participants from seven · 9-12 member-countries attended Nov., a training on appropriate 1987 technology development and transfer at INERA, Kamboinse from 10-24 Sept. 1989. The countries include: Benin, Côte d'Ivoire, Guinea-Bissau, Guinea Conakry, Mali, and Niger.

confirmed.

128-31

March

1988

In March 1989 all national

centers were assessed. The

five Lead Centers were

Lead Center, Ghana was

re-confirmed and a sixth

added while two associate

centers (Benin, and Mali)

were established. Aløso in

were reassessed and those

Improvement of 10-24 identification Sept., and development 1989 in membercountries.

March 1989 and March 1991 March 1991 all Lead Centers arid zone was improved. given the responsibility in in the previous year were re-

The assessment of new cultivars for adaptation in the main ecology of the sub-region was improved. Similarly the assessment of cultivars parported to be resistant to Striga in the semi-

•••••	:-31 :rch 88	It was decided that the SAFGRAD Internation! Coordinator should write to the Directors of Research of member countries to commit the allocated funds to research and not to expect reimburment for any amount spent above the approved sum.	28-31 March 1988	The SAFGRAD International Coordinator wrote member countries and the Network Coordinator sent allocated funds to member countries.	May - Sept. 1988	Funds were provided to the national programs which enabled them to do their assigned research activities.
Work Plans 28- Mar 198	ırch	COmpace and accur. one	28-31 March 1988	In March of each year the Lead Centers submit their work plans for review by members of the Steering Committee.	March of each year.	Research activities relevant to the objectives of the network were conducted by Lead Centers and this resulted in the generation of new technologies in 1989 and 1991.
Training 7-1 Nov 198	988 :	with regards to training of either scientists or field technicians the Committee decided that both types of training should be conducted depending on the need of each individidual country.	Nov., 1988	Two Seminars for research scientists were organized November 1988 and January 1991. One training segsion for scientists and technicians () from technology adopting centers was organized in September, 1989.	Nov. 1988; Jan. 1991 and Sept. 1989	Research capability of cowpea workers in memeber countries was enhanced.
- w	988 :	With regards to using funds allocated to national programs to sponsor the visit of scientists from neighbouring countries to help in establishing regional trials in such weak countries it was decided that funds allocated to national programs should be used in purchasing small equipment and payment of labourers.	.o .n	Funds allocated to national programs within the network were used to purchase equipment, payment of labour bills, and visit national multilocation trials.		Funds allocated to national programs contributed to the capacity of the national programs not only to carry out research trials but to monitor them at the different locations.

Countries with the 1989 Since 1989 the Lead Centers, 7-11 It was decided that a list and Intersouthern Guinea Nigeria, Ghana, Burkina Faso to description of materials national Nov., sub-humid and Coaster date and the Associate Center, included in International trials 1988 trials ecologies received Benin have been conducting by IITA should be sent in advance from IITA reduced number of International trials from to national programs to enable them highly performing IITA and proposing promising indicate their choice. Few seeds of and disease resistant varieties for Regional chosen materials should be sent to cowpea varieties from testing during the biennial Lead Centers to enable them plant IITA, Ibadan out of workshop. about two rows. Promising materials which they selected the tested by Lead Centers would be best suited to their proposed for regional testing by environment. member countries. A reedback was received on Six regional trials were May-20-24 The Steering Committee noted from 20-24 Regional 44 out of 63 sets and June designed in 63 sets and March Burkina Faso seven cultivars trials March national scientists were 1989 dispatched to member resistant to Striga, six cultivars 1989 1989 able to select new cultivars countries based on request. resistant to aphids, two cultivars for national testing. resistant to bruchids and four cultivars with multiple disease resistance. From Nigeria, two cultivars that were dual purpose; cultivars resistant to brown blotch were noted. One cultivar combining resistance to bruchids, insect pests, virus and bacterial blight was noted from Senegal. Three extra-early cowpea varieties and two medium maturing varieteis were noted from Niger. All above varieties were decided to be regionally tested within the network. With the opening up of Kano The strategy was re-Nov. The Committee recommended that IITA 20-24 IITA new 1989 March discussed in November, should provide necessary resources March strategy 1989 as a result members & to strengthen Lead Centers in order 1989 to better 1989 suited to the Sudan and of the Steering Committee Feb/ to avoid duplication instead of March northern Guinea. This enabled serve were invited to IITA GLIP setting up several testing sites national Work Plan in Feb/March, within the sub-region. programs. to be included directedly

1990. IITA opened up a station in Kano-Nigeria in the Sudan savanna

sub-station, IITA was in a position to develop varieties varieties developed by IITA in breeding nurseries in

in 1991.

The Chairman of the Committee was man-Supple-6-10 dated to write the SAFGRAD Internamentary Nov., 1989 tional Coordinator to remind him about Budget the recommendation made during the 3rd Proposal Steering Committee meeting that he should look for alternative funds since SPAAR alone may not be in a position to provide all the needed funds. The need to have information on the 6-10 Adopactual hectrage cultivated to new tion of Nov., research 1989 improved varieties in each country was highlighted. The committee results by decided that a survey should be farmers. conducted as soon as possible to obtain all relevant information.

A letter was written to 1989 Nov., the SAFGRAD International Coordinator by the Chairman 1989 of the Steering Committee as requested.

The SAFGRAD Nov. International Coordinator informed the Steering Committee that the Afrivan Dev. Bank and Organization of African Unity are interested in funding the network. Indeed since 1990, SAFGRAD Coordination Office has been receiving yearly \$100,000 for on-farm testing of new improved cultivars.

6-10 Ouestioneers were sent to Nov., sent to member countries in late 1990/early 1991 requesting for information on the name of new technology released to farmers after 1987, the area in which they have been used, name of new varieties, seed increase and distribution and names of new varieties adopted by NARS but which are under the various stage of testing after 1987.

Feedback was received from all member-1989 countries for varieties which have been early released and those 1990 under on-farm testing. Because of logistic reasons the area and production fitures, graves were not provided and when provided were unreliable.

Resource and manquirements

6-10 The Committee observed that the future Nov. resource and manpower needs of the netpower re- 1989 work could be obtained from the draft proposal submitted to SPAAR for supplementary funds. The Coordinator was asked to request each country to update the proposal.

The list of national 6-10 1989 scientists working on cowpea in the sub-region was updated during the March 1991 workshop held at Niamey, Niger.

A total of 66 national March scientists are involved 1991 in cowpea work in the sub-region, they interact with each other and know much about each other's activities.

Late

to

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on use of	Nov.,	The Committee decided that the SAFGRAD Coordination should contract CRSP for assistance in the areas of man-power development and the use of MSTAT Computer programme for data analysis.	D 6-10 Nov. 1989	., to Dr. R.D. Freed of Michi-	ty se r nd ze	Twenty scientists and technicians from six countries attended the raining course at IITA. Their capability in data analysis was enhanced.
the March	Nov.	The Network Coordinator was requested to explore the possibility of holding the March 1990 meeting either in Benin or Burkina Faso	6-10 Nov., 1989	Because of political unrest in Benin in March, 1990, the Stee- ring Committee met in Burkina Faso. However, the November, 1990 meeting of the Committee was held at Cotonou, Republic of Benin.	Nov. (a	The administrators and agricultural scientists 90 in Benin were given the opportunity to interact with cowpea etwork Steering Committee members as well SAFGRAD officials.
action 1			1990	Dr. H. Rossel of IITA visited IAR, ABU-Zaria, Nigeria in September, 1990 and Crop Research Institute, Kumasi-Ghana in March 1991. Dr. K. Cardwell also of IITA visited northern Nigeria, Niger Burkina Faso, Togo and Benin i September/October, 1991. A tea of four IITA GLIP scientist le Drs. B.B. Singh & Florini visi Burkina Faso in Agust, 1992.	ed by	Interaction between IITA scientists and RENACO scientists was enhanced.

Improving 26-30 the colla-March boration 1990 of Niger in the network.

The Committee mandated the Chairman and the Network Coordinator to March visit Niger in May/June, 1990 to hold discussions with the Director of Research on the non-responsiveness of Niger to the network. A similar decision was taken in March, 1991.

26-30

The Chairman of the Steering Committee, Dr. J. Detongnon and the Network Coordinator paid a visit to Niger National Program in June, 1990. A similar visit was paid by Dr. O.O. Olufajo (Chairman) and the Network Coordinator in August, 1991.

June Research work plan and justification of 1990 funds received by Niger from RENACO in 1990 Aug. and 1991 were given 1991 to the Network Coordinator. There was an improvement in the relationshipbetween Niger and RENACO, but much still has to be done.

Allo-26-30 March cation of funds 1990 to Associate Centers

The Committee decided that depending on availability of funds the allocation to Benin and Mali (Associate Centers could be increased from \$500 to \$1000 each to enable them operate as associate centers for Striga research and other crucial adaptation research activities.

26-30 Mali received \$1000 in 1990 and March \$2000 in 1991 and 1992. Benin has been receiving \$1000 every ₹ 1990 vear since 1990.

1990 The capacity of both countries in conducting validation tests in date Striga resistance was enhanced.

to

26 - 30Fund request March 1990 national programs

The Network Coordinator was asked to find out why some national programs were not receiving their funds or sending justifications. He should also make the national programs aware that unless justifications are returned, funds will not be released.

26-30 Fund allocation to member countries is made each year by a letter written to all member countries specifying that fund disbursement will be effected only upon receipt of the justification of the previous allocated funds. An attempt was made in June 1990 and August 1991 to find out why justifications were not received from Niger. The reason was found out to be the heavy bureaucracy of the headquarters of the national research system.

The number of countries 1990 receiving funds increased to because of the justificadate tion being sent. With the exception of the Gambia, all countries are receiving their funds.

1990 Cowpea Moni- toring tour	Nov., 1 1990 d	After receiving the report of the 1990 cowpea monitoring tour, the 1990 committee took the following ecisions: 1) There is need for a full-time cowpea agronomist in Burkina national program.	5-9 i Nov., 1990	Denomination Burkina Faso, a junior agronomist has been assigned to grain legume research activities since 1989 and a senior agronomist is being considered in 1992 for assignment to grain legumes.	1990 The capacity of the to national cowpea prodate gram to address the problem of cowpea production in the subregion is being enhanced. The capacity of IITA to address the
		1) IITA should reconsider the termination of its program in Sadore, Niger because this might weaken Niger's national cowpea program. There is a need for a pathologist and an entomologist in the Kano IITA program and also a need for the IAR, Samaru-Nigeria breeder to have the opportunity to work fully with Dr. B.B. Singh in IITA Kano sub-station for one cropping season.		Cowpea research activities in Sadore, Niger are being continued by IITA under the supervision of Dr. B.B. Singh; a cooperation with the cowpea program of INRAN, Niger is also being sort. The IITA Kano substation now has a pathologist and an agronomist. In 1992 the cowpea breeder of Nigeria, Mr. A.A. Zaria visited the IITA Kano sub-station for one week during the cropping season.	cowpea production constraints in the semi-arid zone of the sub-region and to better serve the national programs is being enhanced. Similarly the capacity of cowpea breeding program of Nigeria to address production constraints, such as Striga resistance and adaptation to drought and disease tolerance is being enhanced.
Esta- blishment of working groups	5-9 Nov. g 1990	The Committee recommended that wo groups should be established in the following areas: breeding, agrono entomology and pathology including Striga.	: 5-9 my, Nov	The working groups were initia- May, ted during the March, 1991 Work-) shop at Niamey, Niger. Because of the end of SAFGRAD-II Project in August 1991 and in the absence of a tangible extension period these working groups have not ye become operational.	on the need to provide a quick solution to common production pro- blems in the sub-region.
Documen- tation of the achiev ment of th Network.		The Committee recommended that the Network Cordinator should write to national programs to provide a lis of varieties that have been releas and those that are about to be released and if possible, provide approximate areas of production.	Nov. t 1990	In addition to the questioneers sent by the Network Coordinator in 1990/91, more elaborate table designed by the SAFGRAD/USAID Impact Assessment Team were sent to national programs in August 1992	Aug. questioneers sent to

May The Network is still i) A letter was written to the 13-14 After critical review of the report 13-14 Assessand benefiting from Director-General of IRA, March of the Panel set up to assess Lead March ment of Aug research output in Cameroon to enquire about Centers the Committee decided that: 1991 Lead 1991 cowpea storage from the capacity of the cowpea i) The Network Coordinator and Mrs. Centers Bean CRSP-Cameroon program in Cameroon to conduct C. Dabire should visit Cameroon cowpea storage research in the Collaborative to assess the achievements and research project. absence of Mr. G. N'Toukam who ascertain the status of the cowwent for Ph.D studies in the pea storage project. They should USA. The reply was that arrangealso visit northern Ghana to ment was being made for an expainspect available facilities for triate cowpea breeder and an storage work. entomologist to continue cowpea storage research in Cameroon. ii) Ghana should continue with the responsibilities assigned to it ii) Mrs. Dabire and the Network in 1989, pending the outcome of Coordinator visited northern the proposed visit of the Network Ghana in August 1991 to assess Coordidnator and Mrs. Dabire to the capacity of Ghana to conduct Cameroon and Ghana. cowpea storage research in the Sudan savanna zone. It was found that although The expertise exists the facilities for such research activities were yet to be built and equipment procured. Feeback is This is being brought to the 13 - 14The Committee recommended that Training 13-14 being awaited. attention of SAFGRAD/USAID Impact Oct. March higher degree training should be March Assessment Team for consideration. 1992 1992 included in the next phase of 1991 SAFGRAD. Feedback is No action was taken because the 11-14 i) In view of the recent outbreak 11-14 Working being awaited. SAFGRAD project ended in August of cowpea diseases in the northern Nov., Nov. group 1991. Although it was extended, Guinea savanna and the devastating 1991 1991 only limited fund was available effect of Striga, the Committee for maintenance of collaborative recommended that the working group research activities and Regional of breeders, pathologists, entomolotrials. There was no provision gists and Striga and Alectra speciafor training activities. This lists be convened latest by March,

1992 to devise ways of tack in maling

tive research.

the problems and to plan collabora-

matter is brought to the atten-

Assessment Team for consideration.

tion of SAFGRAD/USAID Impact

ii) Considering the fact that the scientists working on cowpea Striga are presently using different methodologies, the Committee recommended that IITA should assist the network by organizing a training workshop on pot culture and related methodologies for scientists working on Striga in the sub-region, such training may take place in the Institute for Agricultural Research, Samaru as well as IITA.

* ! —— !	ACTIVITY	! DATE	! MAIN DECISIONS	!DATE!		DATE	! MAIN IMPACTS
! !Tr !	aining workshop	! !Oct. !1987 !	!!Striga control workshop !Ouagadougou 5-10 Oct.1987 !	! 1987 : !	!! !12 scientists and technicians !got trained to conduct !research on striga	! ! !	!Competence developped in the !region to better tackle the !striga problem
! !Tr ! !			!Training course on Agronomy !and on-farm testing !9 - 29 Sept. 1989 !	!	!Representatives of 9 countries !participated to improve their !skills inconducting agronomy !and on-farm tests	! ! !	!Improvement of technology !transfert by better tests in !agronomy and on-farm !
!!	<i>i</i>	!Oct. !1991 ! May !1989	1	!	!3 scientists worked with the !WASIP/Mali specialists to !run a research program. !	! ! !	!Increased NARS competence in !crop protection specialities !entomology pathology and weed !science

^{*/}Steering Committee

SUMMARY INDICATORS OF PERFORMANCE AND MANAGEMENT 1987 - 92

<u> </u>	ACTIVITY	! DATE	MAIN DECISIONS	!DATE!	MAIN ACTION/OUTPUTS	! DATE	MAIN IMPACTS
Moni	toring Tours	!Oct.	Exchange of : - experiences - materials - technologies	!!!	Visit of National programs of: - Burkina Faso - ICRISAT/Regional by 11 scientists from 11 countries	!	! Acquaintance with germplasm ! ! and technologies available ! ! in the region share of ! ! experience !
	·	!Oct. !1988 ! !Dec. !1987 !	! ! !		Visit of National programs of: - Mali - Burkina Faso - Niger by 10 scientists from 7 countries		! Know-how, and techniques !! circulation of gerplasm !! material !! !!
!		!10-12 !Oct. !1991 !	ŀ	!!!	Visit of the Mali National Program and ICRISAT/WASIP by 3 scientists from 3 national programs	!!!	! ! ! !

* Steering Committee

- 2 **-**

ACTIVITY	! DATE	MAIN DECISIONS	!DATE!	MAIN ACTION/OUTPUTS	DATE	MAIN IMPACTS
Gerplasm conservation		Need to conduct local gerplasm collection in all countries, and organize gerplasm conservation at regional and national	!!	collections of local gerplasm in many countries to save genetic resources		!Saving of invaluable genetic ! resources use of local ! adapted gerplasm in breeding ! improved varieties. !
Workshops		! 1. Production of workshop ! proceeding ! 2. Formation of the ! network objectives ! 3. Regional trials		3. See separate sheet	<u>[</u> <u> </u> <u> </u> - -	! In general the workshops ! brought scientists from NARS ! together to exchange ideas ! and discuss their recents ! results.
	! ! 1988 ! !	! ! 1. Organize agronomy and ! and on-farm testing in- ! service training		participants from 9 countries	!9-29 !Sept. !1989 !	!
·	: ! !	: ! 2. Monitoring tour in 1989 ! !	į į	 Held in Mali, Burkina Faso and Niger 7 participants from 7 countries 	!9-18 !Oct. !1989	!
<u> </u>	! !	: ! 3. Germination tests after ! howesty regional trials	-i i	3. None	!	!!

^{*} Steering Committee

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!-	ACTIVITY	!DATE	MAIN DECISIONS	!DATE!	MAIN ACTION/OUTPUTS	DATE !	MAIN IMPACTS
! ! ! !!		- ! !	4.To explose possibilities for financial assistance NARS		4. A proposal for funding presented to SPAAR in month 1989	! March!! ! 1989 !	
	Workshops (continued)	! 1985 ! ! ! ! ! ! ! !	! ! For regional trials ! ! ! ! ! ! ! ! ! ! ! ! !	1 1	Varietial trials, medum and and hybrid tristorted in 1986. Regional discare nursey added in 1987 and striga trial in 1988. Thus from 1988, five regional trials conducted.		Based on eight responses to a questionnaire develop by WECASORN, 34 varieties and the the hybrid in various levels of use in NARS. There were in the regional trials 38 % being tested in former fields in 3 countries; 12 % at on-station in two countries; 3% in demonstration in the country. 3 % in test in the country 15% in pre-release in four countries; 3% released in the country 59% used in Four varieties are used in solid food in four countries, two varieties used in pre-paration of beversyes in
!		!	! !	!!!		! !	three countries. Of the 34 varieties, 15 or from NARS

^{*} Steering Committee

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! À ACTIVITY	! DATE	MAIN DECISIONS	!DATE!	MAIN ACTION/OUTPUTS	DATE!	MAIN IMPACTS !
		4.To explose possibilities for financial assistance NARS	! ! ! !		March! 1989 !	!
Workshops (continued) ! ! ! ! ! ! ! ! ! ! ! ! !	! !1985 ! ! ! ! ! ! ! !	! ! For regional trials ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	!!!!	Varietial trials, early and medium maturing cycle and hybrid trials storted in 1986. Regional discare nursey added in 1987 and striga trial in 1988. Thus from 1988, five regional trials conducted.		Based on eight responses to ! a questionnaire develop by ! WECASORN, 34 varieties and ! the the hybrid in various ! levels of use in NARS. There ! were in the regional trials ! 38 % being tested in former ! fields in 3 countries; 12 % ! at on-station in two ! countries; 3% in demonstra-! tion in the country. 3 % in ! multilocational test in the ! country 15% in pre-release in! four countries; 3% released ! the country 59% used in ! Four varieties are used in ! solid food in four countries,! two varieties used in pre- ! paration of beversyes in ! three countries. Of the 34
! · !	! !	! !	: :			! varieties, 15 or from NARS

^{*} Steering Committee

ACTIVITY	!DATE!	! MAIN DECISIONS	!DATE!	MAIN ACTION/OUTPUTS	!DATE	! MAIN IMPACTS !
! Collaborative research ! Projects !	! 1992 !	!	! !	Head bug-screeming technique development - screeming of breeding material	!!!	! Screeming technique for head ! ! bug resistance is made ! ! available to breeders in the ! ! region (this described in a ! ! booklet published by the ! ! Network) !
		! ! ! ! !	!!!!	Anthracnose: Of sources of resistance in local material Development of a regional nursery	! ! ! !	! Source of resistance are made! ! available to NARS ! ! ! !
		! ! ! ! !		! Sorghum-wheat composite flour ! Sorghum-wheat composite flour ! project. Producted acceptable ! flour with upto 50% to ! substition of sorghum. ! Addition of 0,5% carsaou ! storch produced breed nurse ! spacy.	! ! !	! ! From limital sales, the ! sorghum wheat flour develop ! ! by the project was successful! ! and cost with could benefit ! !low income group. ! !

^{*} Steering Committee

Annex 7 Current Research Manpower in Food Grain Improvement in West, Central and Eastern Africa (1990).

Network		Number of NARS	Number of re- search and level	1 '	t Research Time		
			of training.	FT	PT	Remarks	
i)	The West and Central Afr- ica Sorghum Research Network	18	Ph.D. 18 Ms.C. 22 B.Sc. 30	38	32	About 25% of qua- lified resear- chers are based at Lead NARS.	
- i i)	The West and Central Afr- ica Maize Network	17	Ph.D. 20 M.Sc. 25 B.Sc. 35	60	40	About 50% of the qualified resear- chers are based at Lead NARS.	
111)	The Eastern Africa Sorg- hum and Mil- let Network	8	Ph.D. 24 M.Sc. 30 B.Sc. 21	70	30	Close to 35% of researchers are based in two countries.	
iv)	The West and Central Afr- ica Cowpea Network	17	Ph.D. 20 M.Sc. 30 B.Sc. 25	35	65	Close to 60% of researchers are based at six NARS Centres.	

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1990

ANALYSIS OF THE PERFORMANCE OF RESEARCH INSTITUTIONS

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